Bulletin de veille

« Focus sur 12 pathologies graves »

Août 2010

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École des hautes études en santé publique
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Bulletin de veille – Août 2010
« Focus sur 12 pathologies graves »

Ce bulletin de veille est une **publication mensuelle** qui recueille les publications scientifiques autour des **pathologies** suivantes :

- Bronchite chronique obstructive
- Cancer du poumon
- Dengue
- Dépression
- Diabète
- Grippe A
- Maladie d'Alzheimer
- Maladies cardio-vasculaires
- Maladies liées à l'alcool
- Paludisme
- Pathologies liées à l'obésité
- SIDA
- Tuberculose

La recherche documentaire est effectuée dans la **base de données Medline** et porte sur les **12 titres de revues** suivants :

- American journal of epidemiology
- American journal of public health
- BMC public health
- BMJ (Clinical research ed.) - British medical journal
- International journal of epidemiology
- JAMA : the journal of the American Medical Association
- Lancet
- Nature
- Risk analysis : an official publication of the Society for Risk Analysis
- Science
- Social science & medicine
- The New England journal of medicine

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Articles scientifiques issus de l'interrogation de la base Medline (interrogée le 12/08/2010)

Rapports , dossiers en ligne et articles supplémentaires

Articles scientifiques

Bronchite chronique obstructive

sommaire

(1) CAO Q, SONG WM, SY A, TAO LN. **[Applications of a rat model of chronic bronchitis on toxicity of PM2.5]**. Wei Sheng Yan Jiu. 2005 Nov., vol. 34, n° 6, pp.667-670
http://www.ncbi.nlm.nih.gov/pubmed/16535831

OBJECTIVE: To study the acute toxicity of PM2.5 to the rats with chronic bronchitis and the control rats and the difference between the model rats and the control rats on PM2.5 toxicity. METHODS: With the use of an intratracheal instillation, both groups were exposed to suspensions of PM2.5. After three times, the levels of ALB, LDH, AKP, MDA and GSH in bronchoalveolar lavage fluid (BALF) were analyzed. RESULTS: PM2.5 could induce the acute toxicity to both model rats and control rats, and dose-response relationships were observed in all indexes. In model rats, the levels of ALB, LDH, AKP, and MDA were higher in control rats($P < 0.05$), while the levels of GSH were lower in control rats ($P < 0.05$). CONCLUSION: PM2.5 could have acute toxic effects on both model rats and health rats, and the rats with chronic bronchitis are more susceptible to PM2.5 than health rats

(2) GAFAROV NI, ZAKHARENKOV VV, PANEV NI, BURDEIN AV, *et al.* **[Chronic occupational bronchitis in workers of coal extracting enterprises in Kouzbass: role of endogenous factors]**. Med Tr Prom Ekol. 2010, n° 3, pp.37-40
http://www.ncbi.nlm.nih.gov/pubmed/20480820

The authors studied distribution of biochemical markers for HP, GC, EsD, AcP genes, polymorphism of GSTT1 (GST-theta 1), GSTM1 (GST-mu 1), locus WNTR of NOS3 gene (alleles A/B) in chronic dust bronchitis patients and in apparently healthy individuals. Genotypes EsD 1-2 and AcP bb individuals were proved to be most prone to the disease. Endogenous resistent factors for chronic dust bronchitis are genotypes GC 1-1, EsD 1-1, AcP bc

(3) MALANICHEVA TG, ZIATDINOVA NV, AKHMADIEVA LF. **[Bioparox efficiency for recurrent bronchitis of frequently ill children with fungal and bacterial colonization of the nasopharynx]**. Vestn Otorinolaringol. 2010, n° 1, pp.76-77
http://www.ncbi.nlm.nih.gov/pubmed/20524263

(4) XIANG L, GUO DY, JIANG ZF, LIU SY, *et al.* **[Effects of budesonide on chronic airway inflammation in guinea pigs sensitized with repeated exposure to allergen]**. Zhonghua Er Ke Za Zhi. 2005 June, vol. 43, n° 6, pp.414-417
http://www.ncbi.nlm.nih.gov/pubmed/16053723

OBJECTIVE: Inhaled glucocorticosteroids (ICS) remains the first line controller medication for chronic airway inflammation in asthma till now. If the impact of allergen could not be eliminated, how would the improvement of airway inflammation be achieved with inhaled glucocorticosteroids therapy? What was its effect on airway remodeling? In this study, an animal model of asthma was established and the effects of budesonide on airway allergic inflammation and extracellular matrix (ECM) deposition in sensitized guinea pigs with repeated exposure to allergen were investigated. METHODS: Thirty-two male Hartley guinea pigs were randomly divided into four groups with 8 in each group: (A) Group of repeated exposure to ovalbumin (OVA), (B) Group of repeated exposure to OVA plus budesonide (BUD) intervention, (C) Group of stopping repeated exposure to OVA plus stopping BUD intervention, (D) Control group. At 24 h after the last OVA challenge (8 weeks after the first OVA challenge), bronchoalveolar lavage fluid (BALF) was collected from each animal. Total and differential leukocyte counts in BALF was performed on cell suspension smear stained with May-Grunwald-Giemsa (MGG) method. The upper lobe of right lung was removed and regularly fixed, then paraffin embedded lung tissues sections were prepared. The count of

eosinophils infiltrated in the airway wall was performed on H&E stained lung tissue sections with LEICA Q500IW computerized image analysis system. Fibronectin and collagen type III (Col-III) deposited in the airway wall were detected by immunohistochemical staining on the paraffin embedded lung tissues sections. The intensity of positive reaction of fibronectin or Col-III deposited in the airway wall was analyzed with LEICA Q500IW computerized image analysis system. RESULTS: The count of eosinophils in BALF (x 10(5)/ml) of group A and B were higher than that of group C and D (35.70 +/- 25.22, 11.49 +/- 5.51 vs. 1.00 +/- 0.90, 1.02 +/- 0.78, P < 0.01), the difference between group A and B, group B and C was significant. The count of eosinophils infiltrated at each level of airway wall in group A and B were higher than that of group C and D (large airway: 6.95 +/- 2.28, 1.54 +/- 1.09 vs. 0.76 +/- 0.45, 0.88 +/- 0.25; medial airway: 9.22 +/- 3.89, 3.99 +/- 2.3 vs. 1.25 +/- 1.20, 0.64 +/- 0.36; small airway: 11.56 +/- 4.02, 2.67 +/- 1.15 vs. 1.32 +/- 0.83, 0.43 +/- 0.24, P < 0.01), the difference between group A and B, group B and C was significant. The gray values of fibronectin deposited in medial and small airway of group A and B were lower than those of group C and D (medial airway 122 +/- 22, 174 +/- 23 vs. 219 +/- 34, 229 +/- 20; small airway 135 +/- 29, 165 +/- 41 vs. 236 +/- 20, 220 +/- 16, P < 0.05), the difference between group A and B, group B and C was significant. The gray values of Col-III deposited in medial and small airway of group A and B were lower than those of group C and D (medial airway 153 +/- 21, 174 +/- 22 vs. 189 +/- 14, 200 +/- 18; small airway 133 +/- 23, 176 +/- 20 vs. 191 +/- 14, 198 +/- 20, P < 0.05), the difference between group A and B was significant. CONCLUSION: Inhaled budesonide could partially inhibit allergic inflammation and ECM deposition in airway wall in guinea pig chronic asthma model with repeated exposure to allergen. Early inhaled budesonide combined with avoidance of OVA exposure could completely inhibit allergic inflammation and ECM deposition. These results suggest that the inhibitory effect on airway allergic inflammation and airway remodeling of inhaled glucocorticosteroids would be limited when the allergen factor could not be avoided

Cancer du poumon

sommaire

(1) BOIKO AD, RAZORENOVA OV, VAN DE RM, SWETTER SM, *et al.* **Human melanoma-initiating cells express neural crest nerve growth factor receptor CD271**. Nature. 2010 July 1, vol. 466, n° 7302, pp.133-137
http://dx.doi.org/10.1038/nature09161 (**accès payant**)

The question of whether tumorigenic cancer stem cells exist in human melanomas has arisen in the last few years. Here we show that in melanomas, tumour stem cells (MTSCs, for melanoma tumour stem cells) can be isolated prospectively as a highly enriched CD271(+) MTSC population using a process that maximizes viable cell transplantation. The tumours sampled in this study were taken from a broad spectrum of sites and stages. High-viability cells isolated by fluorescence-activated cell sorting and re-suspended in a matrigel vehicle were implanted into T-, B- and natural-killer-deficient Rag2(-/-)gammac(-/-) mice. The CD271(+) subset of cells was the tumour-initiating population in 90% (nine out of ten) of melanomas tested. Transplantation of isolated CD271(+) melanoma cells into engrafted human skin or bone in Rag2(-/-)gammac(-/-) mice resulted in melanoma; however, melanoma did not develop after transplantation of isolated CD271(-) cells. We also show that in mice, tumours derived from transplanted human CD271(+) melanoma cells were capable of metastatsis in vivo. CD271(+) melanoma cells lacked expression of TYR, MART1 and MAGE in 86%, 69% and 68% of melanoma patients, respectively, which helps to explain why T-cell therapies directed at these antigens usually result in only temporary tumour shrinkage

(2) LIPS EH, GABORIEAU V, MCKAY JD, CHABRIER A, *et al.* **Association between a 15q25 gene variant, smoking quantity and tobacco-related cancers among 17 000 individuals**. Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.563-577
http://dx.doi.org/10.1093/ije/dyp288 (**accès réservé EHESP**)

BACKGROUND: Genetic variants in 15q25 have been identified as potential risk markers for lung cancer (LC), but controversy exists as to whether this is a direct association, or whether the 15q

variant is simply a proxy for increased exposure to tobacco carcinogens. METHODS: We performed a detailed analysis of one 15q single nucleotide polymorphism (SNP) (rs16969968) with smoking behaviour and cancer risk in a total of 17 300 subjects from five LC studies and four upper aerodigestive tract (UADT) cancer studies. RESULTS: Subjects with one minor allele smoked on average 0.3 cigarettes per day (CPD) more, whereas subjects with the homozygous minor AA genotype smoked on average 1.2 CPD more than subjects with a GG genotype (P < 0.001). The variant was associated with heavy smoking (>20 CPD) [odds ratio (OR) = 1.13, 95% confidence interval (CI) 0.96-1.34, P = 0.13 for heterozygotes and 1.81, 95% CI 1.39-2.35 for homozygotes, P < 0.0001]. The strong association between the variant and LC risk (OR = 1.30, 95% CI 1.23-1.38, P = 1 x 10(-18)), was virtually unchanged after adjusting for this smoking association (smoking adjusted OR = 1.27, 95% CI 1.19-1.35, P = 5 x 10(-13)). Furthermore, we found an association between the variant allele and an earlier age of LC onset (P = 0.02). The association was also noted in UADT cancers (OR = 1.08, 95% CI 1.01-1.15, P = 0.02). Genome wide association (GWA) analysis of over 300 000 SNPs on 11 219 subjects did not identify any additional variants related to smoking behaviour. CONCLUSIONS: This study confirms the strong association between 15q gene variants and LC and shows an independent association with smoking quantity, as well as an association with UADT cancers

(3) PRESTON SH, GLEI DA, WILMOTH JR. **A new method for estimating smoking-attributable mortality in high-income countries**. Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.430-438
http://dx.doi.org/10.1093/ije/dyp360 (**accès réservé EHESP**)

BACKGROUND: Cigarette smoking is responsible for a massive loss of life in both developed and developing countries. This article develops an alternative to the Peto-Lopez method for estimating the number or fraction of smoking-attributable deaths in high-income countries. METHODS: We use lung cancer death rates as an indicator of the damage caused by smoking. Using administrative data for the population aged > or =50 years from 20 high-income countries in the period from 1950 to 2006, we estimate a negative binomial regression model that predicts mortality from causes other than lung cancer as a function of lung cancer mortality and other variables. Using this regression model, we estimate smoking-attributable deaths based on the difference between observed death rates from lung cancer and expected rates among non-smokers. RESULTS: Combining the estimated number of excess deaths from lung cancer with those from other causes, we find that among males in 1955 the smoking-attributable fraction was highest in Finland (18%); among women, no country exceeded 1%. By 2003, Hungary had the highest fraction of smoking-attributable deaths among males (32%), whereas the USA held that position among women (24%). Our estimates are remarkably similar to those produced by the Peto-Lopez method, a result that supports the validity of each approach. CONCLUSIONS: We provide a simple and straightforward method for estimating the proportion of deaths attributable to smoking in high-income countries. Our results demonstrate that smoking has played a central role in levels, trends and international differences in mortality over the past half century

(4) THORGEIRSSON TE, STEFANSSON K. **Commentary: gene-environment interactions and smoking-related cancers**. Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.577-579
http://dx.doi.org/10.1093/ije/dyp385 (**accès réservé EHESP**)

(5) TSITSIKAS DA, VINICOMBE S, SHEAFF M, ELLIS S, *et al.* **A patient with CLL and a dry cough**. BMJ. 2010, vol. 340, p.c3051
http://www.ncbi.nlm.nih.gov/pubmed/20591962 (**accès libre, collection papier de la bibliothèque**)

Dengue

sommaire

(1) TONG P, YEOH CJ, YONG EL. **Abdominal mass and a forgotten haemorrhagic fever**. Lancet. 2010 July 10, vol. 376, n° 9735, p.140
http://dx.doi.org/10.1016/S0140-6736(10)60671-X (**accès réservé EHESP**)

Diabète

sommaire

(1) **Type 2 diabetes--time to change our approach**. Lancet. 2010 June 26, vol. 375, n° 9733, p.2193
http://dx.doi.org/10.1016/S0140-6736(10)61011-2 (**accès réservé EHESP**)

(2) ARIF S, COX P, AFZALI B, LOMBARDI G, *et al.* **Anti-TNFalpha therapy--killing two birds with one stone?** Lancet. 2010 June 26, vol. 375, n° 9733, p.2278
http://dx.doi.org/10.1016/S0140-6736(10)60394-7 (**accès réservé EHESP**)

(3) BAILEY CJ, GROSS JL, PIETERS A, BASTIEN A, *et al.* **Effect of dapagliflozin in patients with type 2 diabetes who have inadequate glycaemic control with metformin: a randomised, double-blind, placebo-controlled trial**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2223-2233
http://dx.doi.org/10.1016/S0140-6736(10)60407-2 (**accès réservé EHESP**)

BACKGROUND: Correction of hyperglycaemia and prevention of glucotoxicity are important objectives in the management of type 2 diabetes. Dapagliflozin, a selective sodium-glucose cotransporter-2 inhibitor, reduces renal glucose reabsorption in an insulin-independent manner. We assessed the efficacy and safety of dapagliflozin in patients who have inadequate glycaemic control with metformin. METHODS: In this phase 3, multicentre, double-blind, parallel-group, placebo-controlled trial, 546 adults with type 2 diabetes who were receiving daily metformin (>/=1500 mg per day) and had inadequate glycaemic control were randomly assigned to receive one of three doses of dapagliflozin (2.5 mg, n=137; 5 mg, n=137; or 10 mg, n=135) or placebo (n=137) orally once daily. Randomisation was computer generated and stratified by site, implemented with a central, telephone-based interactive voice response system. Patients continued to receive their pre-study metformin dosing. The primary outcome was change from baseline in haemoglobin A(1c)(HbA(1c)) at 24 weeks. All randomised patients who received at least one dose of double-blind study medication and who had both a baseline and at least one post-baseline measurement (last observation carried forward) were included in the analysis. Data were analysed by use of ANCOVA models. This trial is registered with ClinicalTrials.gov, number NCT00528879. FINDINGS: 534 patients were included in analysis of the primary endpoint (dapagliflozin 2.5 mg, n=135; dapagliflozin 5 mg, n=133; dapagliflozin 10 mg, n=132; placebo, n=134). At week 24, mean HbA(1c) had decreased by -0.30% (95% CI -0.44 to -0.16) in the placebo group, compared with -0.67% (-0.81 to -0.53, p=0.0002) in the dapagliflozin 2.5 mg group, -0.70% (-0.85 to -0.56, p<0.0001) in the dapagliflozin 5 mg group, and -0.84% (-0.98 to -0.70, p<0.0001) in the dapagliflozin 10 mg group. Symptoms of hypoglycaemia occurred in similar proportions of patients in the dapagliflozin (2-4%) and placebo groups (3%). Signs, symptoms, and other reports suggestive of genital infections were more frequent in the dapagliflozin groups (2.5 mg, 11 patients [8%]; 5 mg, 18 [13%]; 10 mg, 12 [9%]) than in the placebo group (seven [5%]). 17 patients had serious adverse events (four in each of the dapagliflozin groups and five in the placebo group). INTERPRETATION: Addition of dapagliflozin to metformin provides a new therapeutic option for treatment of type 2 diabetes in patients who have inadequate glycaemic control with metformin alone. FUNDING: Bristol-Myers Squibb and AstraZeneca

(4) BAILEY CJ, BARNETT AH. **Inhaled insulin: new formulation, new trial**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2199-2201
http://dx.doi.org/10.1016/S0140-6736(10)60885-9 (**accès réservé EHESP**)

(5) BERGENSTAL RM, TAMBORLANE WV, AHMANN A, BUSE JB, *et al.* **Effectiveness of sensor-augmented insulin-pump therapy in type 1 diabetes**. N Engl J Med. 2010 July 22, vol. 363, n° 4, pp.311-320
http://dx.doi.org/10.1056/NEJMoa1002853 (**accès réservé EHESP**)

BACKGROUND: Recently developed technologies for the treatment of type 1 diabetes mellitus include a variety of pumps and pumps with glucose sensors. METHODS: In this 1-year, multicenter, randomized, controlled trial, we compared the efficacy of sensor-augmented pump therapy (pump therapy) with that of a regimen of multiple daily insulin injections (injection therapy) in 485 patients (329 adults and 156 children) with inadequately controlled type 1 diabetes. Patients received recombinant insulin analogues and were supervised by expert clinical teams. The primary end point was the change from the baseline glycated hemoglobin level. RESULTS: At 1 year, the baseline mean glycated hemoglobin level (8.3% in the two study groups) had decreased to 7.5% in the pump-therapy group, as compared with 8.1% in the injection-therapy group (P<0.001). The proportion of patients who reached the glycated hemoglobin target (<7%) was greater in the pump-therapy group than in the injection-therapy group. The rate of severe hypoglycemia in the pump-therapy group (13.31 cases per 100 person-years) did not differ significantly from that in the injection-therapy group (13.48 per 100 person-years, P=0.58). There was no significant weight gain in either group. CONCLUSIONS: In both adults and children with inadequately controlled type 1 diabetes, sensor-augmented pump therapy resulted in significant improvement in glycated hemoglobin levels, as compared with injection therapy. A significantly greater proportion of both adults and children in the pump-therapy group than in the injection-therapy group reached the target glycated hemoglobin level. (Funded by Medtronic and others; ClinicalTrials.gov number, NCT00417989.)

(6) BOONMAN-DE WINTER LJ, RUTTEN FH, CRAMER MJ, LIEM AH, *et al.* **Early recognition of heart failure in patients with diabetes type 2 in primary care. A prospective diagnostic efficiency study. (UHFO-DM2)**. BMC Public Health. 2009, vol. 9, p.479
http://dx.doi.org/10.1186/1471-2458-9-479 (**accès libre**)

BACKGROUND: We hypothesize that the prevalence of unknown heart failure in diabetic patients aged 60 years and over is relatively high (15% or more) and that a cost-effective strategy can be developed to detect heart failure in these patients. The strategy is expected to include some signs and symptoms (such as dyspnoea, orthopnoea, pulmonary crepitations and laterally displaced apical beat), natriuretic peptide measurements (Amino-terminal B-type natriuretic peptide) and possibly electrocardiography. In a subset of patients straightforward echocardiography may show to be cost-effective. With information from our study the detection of previously unknown heart failure in diabetic patients could be improved and enable the physician to initiate beneficial morbidity and mortality reducing heart failure treatment more timely. PRIMARY OBJECTIVES: - To assess the prevalence of (previously unrecognised) heart failure in primary care patients with diabetes type 2.- To establish the most cost-effective diagnostic strategy to detect unrecognised heart failure in these patients. SECONDARY OBJECTIVES: - To assess the impact of heart failure, and the combination of a new diagnosis with accordingly treatment in patients with diabetes type 2 on health status. METHODS/DESIGN: Design: A prospective diagnostic efficiency study.Patient population: Patients aged 60 years and older with diabetes type 2 from primary care, enlisted with the diabetes service of the Diagnostic Center in Etten-Leur (SHL)All participants will be investigated at the cardiology out-patient department of the regional hospital (Oosterschelde Hospital in Goes, Zeeland, the Netherlands) during a single 1.5 hour standardised diagnostic assessment, including history taking, physical examination, electrocardiography, echocardiography, blood tests, and Health status questionnaires. Patients will be asked if we can contact them afterwards for follow-up and for repeating the questionnaires after three and 12 months.Main study parameters/endpoints: Prevalence (with exact 95% confidence intervals) of (previously unrecognised) heart failure (systolic and 'isolated' diastolic) and the diagnostic value of signs and symptoms, NT-proBNP, electrocardiography and a combination of these items. The cost-effectiveness of different diagnostic strategies. Impact of heart failure and the combination of a new diagnosis with accordingly treatment on health status. TRIAL REGISTRATION: CCMO register NL2271704108

(7) BUCHANAN TA, XIANG AH. **Preventing type 2 diabetes with low-dose combinations**. Lancet. 2010 July 10, vol. 376, n° 9735, pp.72-74
http://dx.doi.org/10.1016/S0140-6736(10)60900-2 (**accès réservé EHESP**)

(8) CHAN F, SLATER C, SYED AA. **Diabetes and Ramadan. Fasts after bariatric surgery**. BMJ. 2010, vol. 341, p.c3706
http://www.ncbi.nlm.nih.gov/pubmed/20659987 (**accès libre, collection papier de la bibliothèque**)

(9) CHENG MH. **Asia-Pacific faces diabetes challenge**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2207-2210
http://www.ncbi.nlm.nih.gov/pubmed/20626091 (**accès réservé EHESP**)(**accès réservé EHESP**)

(10) CHENG MH. **Juliana Chan--helping patients live with diabetes**. Lancet. 2010 June 26, vol. 375, n° 9733, p.2212
http://dx.doi.org/S0140-6736(10)10.1016/S0140-6736(10)61016-1 (**accès réservé EHESP**)

(11) CHEUNG N, MITCHELL P, WONG TY. **Diabetic retinopathy**. Lancet. 2010 July 10, vol. 376, n° 9735, pp.124-136
http://dx.doi.org/10.1016/S0140-6736(09)62124-3 (**accès réservé EHESP**)

Diabetic retinopathy is a common and specific microvascular complication of diabetes, and remains the leading cause of preventable blindness in working-aged people. It is identified in a third of people with diabetes and associated with increased risk of life-threatening systemic vascular complications, including stroke, coronary heart disease, and heart failure. Optimum control of blood glucose, blood pressure, and possibly blood lipids remains the foundation for reduction of risk of retinopathy development and progression. Timely laser therapy is effective for preservation of sight in proliferative retinopathy and macular oedema, but its ability to reverse visual loss is poor. Vitrectomy surgery might occasionally be needed for advanced retinopathy. New therapies, such as intraocular injection of steroids and antivascular endothelial growth-factor agents, are less destructive to the retina than are older therapies, and could be useful in patients who respond poorly to conventional therapy. The outlook for future treatment modalities, such as inhibition of other angiogenic factors, regenerative therapy, and topical therapy, is promising

(12) CHEW EY, AMBROSIUS WT, DAVIS MD, DANIS RP, *et al.* **Effects of medical therapies on retinopathy progression in type 2 diabetes**. N Engl J Med. 2010 July 15, vol. 363, n° 3, pp.233-244
http://dx.doi.org/10.1056/NEJMoa1001288 (**accès réservé EHESP**)

BACKGROUND: We investigated whether intensive glycemic control, combination therapy for dyslipidemia, and intensive blood-pressure control would limit the progression of diabetic retinopathy in persons with type 2 diabetes. Previous data suggest that these systemic factors may be important in the development and progression of diabetic retinopathy. METHODS: In a randomized trial, we enrolled 10,251 participants with type 2 diabetes who were at high risk for cardiovascular disease to receive either intensive or standard treatment for glycemia (target glycated hemoglobin level, <6.0% or 7.0 to 7.9%, respectively) and also for dyslipidemia (160 mg daily of fenofibrate plus simvastatin or placebo plus simvastatin) or for systolic blood-pressure control (target, <120 or <140 mm Hg). A subgroup of 2856 participants was evaluated for the effects of these interventions at 4 years on the progression of diabetic retinopathy by 3 or more steps on the Early Treatment Diabetic Retinopathy Study Severity Scale (as assessed from seven-field stereoscopic fundus photographs, with 17 possible steps and a higher number of steps indicating greater severity) or the development of diabetic retinopathy necessitating laser photocoagulation or vitrectomy. RESULTS: At 4 years, the rates of progression of diabetic retinopathy were 7.3% with intensive glycemia treatment, versus 10.4% with standard therapy

(adjusted odds ratio, 0.67; 95% confidence interval [CI], 0.51 to 0.87; P=0.003); 6.5% with fenofibrate for intensive dyslipidemia therapy, versus 10.2% with placebo (adjusted odds ratio, 0.60; 95% CI, 0.42 to 0.87; P=0.006); and 10.4% with intensive blood-pressure therapy, versus 8.8% with standard therapy (adjusted odds ratio, 1.23; 95% CI, 0.84 to 1.79; P=0.29). CONCLUSIONS: Intensive glycemic control and intensive combination treatment of dyslipidemia, but not intensive blood-pressure control, reduced the rate of progression of diabetic retinopathy. (Funded by the National Heart, Lung, and Blood Institute and others; ClinicalTrials.gov numbers, NCT00000620 for the ACCORD study and NCT00542178 for the ACCORD Eye study.)

(13) CHUANG JY. **Diminished pain perception in schizophrenia**. Lancet. 2010 July 10, vol. 376, n° 9735, pp.87-88
http://dx.doi.org/10.1016/S0140-6736(10)61067-7 (**accès réservé EHESP**)

(14) CLARK RH, MCTAGGART JS, WEBSTER R, MANNIKKO R, *et al.* **Muscle dysfunction caused by a KATP channel mutation in neonatal diabetes is neuronal in origin**. Science. 2010 July 23, vol. 329, n° 5990, pp.458-461
http://dx.doi.org/science.10.1126/science.1186146 (**accès réservé EHESP**)

Gain-of-function mutations in Kir6.2 (KCNJ11), the pore-forming subunit of the adenosine triphosphate (ATP)-sensitive potassium (KATP) channel, cause neonatal diabetes. Many patients also suffer from hypotonia (weak and flaccid muscles) and balance problems. The diabetes arises from suppressed insulin secretion by overactive KATP channels in pancreatic beta-cells, but the source of the motor phenotype is unknown. By using mice carrying a human Kir6.2 mutation (Val59-->Met59) targeted to either muscle or nerve, we show that analogous motor impairments originate in the central nervous system rather than in muscle or peripheral nerves. We also identify locomotor hyperactivity as a feature of KATP channel overactivity. These findings suggest that drugs targeted against neuronal, rather than muscle, KATP channels are needed to treat the motor deficits and that such drugs require high blood-brain barrier permeability

(15) CLIFTON P. **Nutrition in people with poorly controlled type 2 diabetes**. BMJ. 2010, vol. 341, p.c3393
http://www.ncbi.nlm.nih.gov/pubmed/20647286 (**accès libre**, **collection papier de la bibliothèque**)

(16) COOPER-DEHOFF RM, GONG Y, HANDBERG EM, BAVRY AA, *et al.* **Tight blood pressure control and cardiovascular outcomes among hypertensive patients with diabetes and coronary artery disease**. JAMA. 2010 July 7, vol. 304, n° 1, pp.61-68
http://dx.doi.org/10.1001/jama.2010.884 (**accès réservé EHESP**)

CONTEXT: Hypertension guidelines advocate treating systolic blood pressure (BP) to less than 130 mm Hg for patients with diabetes mellitus; however, data are lacking for the growing population who also have coronary artery disease (CAD). OBJECTIVE: To determine the association of systolic BP control achieved and adverse cardiovascular outcomes in a cohort of patients with diabetes and CAD. DESIGN, SETTING, AND PATIENTS: Observational subgroup analysis of 6400 of the 22,576 participants in the International Verapamil SR-Trandolapril Study (INVEST). For this analysis, participants were at least 50 years old and had diabetes and CAD. Participants were recruited between September 1997 and December 2000 from 862 sites in 14 countries and were followed up through March 2003 with an extended follow-up through August 2008 through the National Death Index for US participants. INTERVENTION: Patients received first-line treatment of either a calcium antagonist or beta-blocker followed by angiotensin-converting enzyme inhibitor, a diuretic, or both to achieve systolic BP of less than 130 and diastolic BP of less than 85 mm Hg. Patients were categorized as having tight control if they could maintain their systolic BP at less than 130 mm Hg; usual control if it ranged from 130 mm Hg to less than 140 mm Hg; and uncontrolled if it was 140 mm Hg or higher. MAIN OUTCOME MEASURES: Adverse cardiovascular outcomes, including the primary outcomes which was the first occurrence of all-cause death, nonfatal myocardial infarction, or nonfatal stroke. RESULTS:

During 16,893 patient-years of follow-up, 286 patients (12.7%) who maintained tight control, 249 (12.6%) who had usual control, and 431 (19.8%) who had uncontrolled systolic BP experienced a primary outcome event. Patients in the usual-control group had a cardiovascular event rate of 12.6% vs a 19.8% event rate for those in the uncontrolled group (adjusted hazard ratio [HR], 1.46; 95% confidence interval [CI], 1.25-1.71; P < .001). However, little difference existed between those with usual control and those with tight control. Their respective event rates were 12.6% vs 12.7% (adjusted HR, 1.11; 95% CI, 0.93-1.32; P = .24). The all-cause mortality rate was 11.0% in the tight-control group vs 10.2% in the usual-control group (adjusted HR, 1.20; 95% CI, 0.99-1.45; P = .06); however, when extended follow-up was included, risk of all-cause mortality was 22.8% in the tight control vs 21.8% in the usual control group (adjusted HR, 1.15; 95% CI, 1.01-1.32; P = .04). CONCLUSION: Tight control of systolic BP among patients with diabetes and CAD was not associated with improved cardiovascular outcomes compared with usual control. TRIAL REGISTRATION: clinicaltrials.gov Identifier: NCT00133692

(17) COPPELL KJ, KATAOKA M, WILLIAMS SM, CHISHOLM AW, *et al.* **Nutritional intervention in patients with type 2 diabetes who are hyperglycaemic despite optimised drug treatment--Lifestyle Over and Above Drugs in Diabetes (LOADD) study: randomised controlled trial**. BMJ. 2010, vol. 341, p.c3337
http://www.ncbi.nlm.nih.gov/pubmed/20647285 (**accès libre**, **collection papier de la bibliothèque**)

OBJECTIVE: To determine the extent to which intensive dietary intervention can influence glycaemic control and risk factors for cardiovascular disease in patients with type 2 diabetes who are hyperglycaemic despite optimised drug treatment. DESIGN: Randomised controlled trial. SETTING: Dunedin, New Zealand. PARTICIPANTS: 93 participants aged less than 70 years with type 2 diabetes and a glycated haemoglobin (HbA(1c)) of more than 7% despite optimised drug treatments plus at least two of overweight or obesity, hypertension, and dyslipidaemia. INTERVENTION: Intensive individualised dietary advice (according to the nutritional recommendations of the European Association for the Study of Diabetes) for six months; both the intervention and control participants continued with their usual medical surveillance. MAIN OUTCOME MEASURES: HbA(1c) was the primary outcome. Secondary outcomes included measures of adiposity, blood pressure, and lipid profile. RESULTS: After adjustment for age, sex, and baseline measurements, the difference in HbA(1c) between the intervention and control groups at six months (-0.4%, 95% confidence interval -0.7% to -0.1%) was highly statistically significant (P=0.007), as were the decreases in weight (-1.3 kg, -2.4 to -0.1 kg; P=0.032), body mass index (-0.5, -0.9 to -0.1; P=0.026), and waist circumference (-1.6 cm, -2.7 to -0.5 cm; P=0.005). A decrease in saturated fat (-1.9% total energy, -3.3% to -0.6%; P=0.006) and an increase in protein (1.6% total energy, 0.04% to 3.1%; P=0.045) in the intervention group were the most striking differences in nutritional intake between the two groups. CONCLUSIONS: Intensive dietary advice has the potential to appreciably improve glycaemic control and anthropometric measures in patients with type 2 diabetes and unsatisfactory HbA(1c) despite optimised hypoglycaemic drug treatment. TRIAL REGISTRATION: Clinical trials NCT00124553

(18) DIAMANT M, VAN GL, STRANKS S, NORTHRUP J, *et al.* **Once weekly exenatide compared with insulin glargine titrated to target in patients with type 2 diabetes (DURATION-3): an open-label randomised trial**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2234-2243
http://dx.doi.org/10.1016/S0140-6736(10)60406-0 (**accès réservé EHESP**)

BACKGROUND: Diabetes treatments are needed that are convenient, provide effective glycaemic control, and do not cause weight gain. We aimed to test the hypothesis that improvement in haemoglobin A(1c) (HbA(1c)) achieved with once weekly exenatide was superior to that achieved with insulin glargine titrated to glucose targets. METHODS: In this 26-week, open-label, randomised, parallel study, we compared exenatide with insulin glargine in adults with type 2 diabetes who had suboptimum glycaemic control despite use of maximum tolerated doses of blood-glucose-lowering drugs for 3 months or longer. Patients were randomly assigned to add exenatide (2 mg, once-a-week injection) or insulin glargine (once-daily injection, starting dose 10 IU, target glucose range 4.0-5.5 mmol/L) to their blood-glucose-lowering regimens. Randomisation was with a one-to-one allocation and block size four, stratified according to

country and concomitant treatment (70% metformin only; 30% metformin plus sulphonylurea). Participants and clinical investigators were not masked to assignment, but investigators analysing data were. The primary endpoint was change in HbA(1c) from baseline, and analysis of this outcome was by modified intention to treat for all patients who received at least one dose of study drug. This trial is registered at ClinicalTrials.gov, number NCT00641056. FINDINGS: 456 patients were randomly allocated to treatment and were included in the modified intention-to-treat analysis (233 exenatide, 223 insulin glargine). Participants who received at least one dose of study drug and for whom baseline and at least one postbaseline measurement of HbA(1c) were available were included in the primary efficacy analysis. Change in HbA(1c) at 26 weeks was greater in patients taking exenatide (n=228; -1.5%, SE 0.05) than in those taking insulin glargine (n=220; -1.3%, 0.06; treatment difference -0.16%, 0.07, 95% CI -0.29 to -0.03). 12 (5%) of 233 patients allocated to exenatide and two (1%) of 223 taking insulin glargine discontinued participation because of adverse events (p=0.012). A planned extension period (up to 2.5 years' duration) is in progress. INTERPRETATION: Once weekly exenatide is an important therapeutic option for patients for whom risk of hypoglycaemia, weight loss, and convenience are particular concerns. FUNDING: Amylin Pharmaceuticals; Eli Lilly and Company

(19) GENZ J, HAASTERT B, MEYER G, STECKELBERG A, *et al.* **Blood glucose testing and primary prevention of diabetes mellitus type 2--evaluation of the effect of evidence based patient information**. BMC Public Health. 2010, vol. 10, p.15
http://dx.doi.org/10.1186/1471-2458-10-15 (**accès libre**)

BACKGROUND: Evidence-based patient information (EBPI) has been recognised as important tool for informed choice in particular in the matter of preventive options. An objective, on the best scientific evidence-based consumer information about subthreshold elevated blood glucose levels (impaired fasting glucose and impaired glucose tolerance) and primary prevention of diabetes, is not available yet. Thus we developed a web-based EBPI and aim to evaluate its effects on informed decision making in people 50 years or older. METHODS/DESIGN: We conduct a web-based randomised-controlled trial to evaluate the effect of information about elevated blood glucose levels and diabetes primary prevention on five specific outcomes: (i) knowledge of elevated blood glucose level-related issues (primary outcome); (ii) attitudes to a metabolic testing; (iii) intention to undergo a metabolic testing; (iv) decision conflict; (v) satisfaction with the information. The intervention group receives a specially developed EBPI about subthreshold elevated blood glucose levels and diabetes primary prevention, the control group information about this topic, available in the internet.The study population consists of people between 50 and 69 years of age without known diabetes. Participants will be recruited via the internet page of the cooperating health insurance company, Techniker Krankenkasse (TK), and the internet page of the German Diabetes Centre. Outcomes will be measured through online questionnaires. We expect better informed participants in the intervention group. DISCUSSION: The design of this study may be a prototype for other web-based prevention information and their evaluation. TRIAL REGISTRATION: Current Controlled Trial: ISRCTN22060616

(20) GERSTEIN HC. **More insights on the dysglycaemia-cardiovascular connection**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2195-2196
http://dx.doi.org/10.1016/S0140-6736(10)60973-7 (**accès réservé EHESP**)

(21) GIUGLIANO D, ESPOSITO K. **Adding noninsulin antidiabetic drugs to metformin therapy for type 2 diabetes**. JAMA. 2010 July 28, vol. 304, n° 4, pp.405-407
http://dx.doi.org/10.1001/jama.2010.1020 (**accès réservé EHESP**)

(22) GRAHAM DJ, OUELLET-HELLSTROM R, MACURDY TE, ALI F, *et al.* **Risk of acute myocardial infarction, stroke, heart failure, and death in elderly Medicare patients treated with rosiglitazone or pioglitazone**. JAMA. 2010 July 28, vol. 304, n° 4, pp.411-418
http://dx.doi.org/jama.210.1001/jama.2010.920 (**accès réservé EHESP**)

CONTEXT: Studies have suggested that the use of rosiglitazone may be associated with an

increased risk of serious cardiovascular events compared with other treatments for type 2 diabetes. OBJECTIVE: To determine if the risk of serious cardiovascular harm is increased by rosiglitazone compared with pioglitazone, the other thiazolidinedione marketed in the United States. DESIGN, SETTING, AND PATIENTS: Nationwide, observational, retrospective, inception cohort of 227,571 Medicare beneficiaries aged 65 years or older (mean age, 74.4 years) who initiated treatment with rosiglitazone or pioglitazone through a Medicare Part D prescription drug plan from July 2006-June 2009 and who underwent follow-up for up to 3 years after thiazolidinedione initiation. MAIN OUTCOME MEASURES: Individual end points of acute myocardial infarction (AMI), stroke, heart failure, and all-cause mortality (death), and composite end point of AMI, stroke, heart failure, or death, assessed using incidence rates by thiazolidinedione, attributable risk, number needed to harm, Kaplan-Meier plots of time to event, and Cox proportional hazard ratios for time to event, adjusted for potential confounding factors, with pioglitazone as reference. RESULTS: A total of 8667 end points were observed during the study period. The adjusted hazard ratio for rosiglitazone compared with pioglitazone was 1.06 (95% confidence interval [CI], 0.96-1.18) for AMI; 1.27 (95% CI, 1.12-1.45) for stroke; 1.25 (95% CI, 1.16-1.34) for heart failure; 1.14 (95% CI, 1.05-1.24) for death; and 1.18 (95% CI, 1.12-1.23) for the composite of AMI, stroke, heart failure, or death. The attributable risk for this composite end point was 1.68 (95% CI, 1.27-2.08) excess events per 100 person-years of treatment with rosiglitazone compared with pioglitazone. The corresponding number needed to harm was 60 (95% CI, 48-79) treated for 1 year. CONCLUSION: Compared with prescription of pioglitazone, prescription of rosiglitazone was associated with an increased risk of stroke, heart failure, and all-cause mortality and an increased risk of the composite of AMI, stroke, heart failure, or all-cause mortality in patients 65 years or older

(23) HANEFELD M, FORST T. **Dapagliflozin, an SGLT2 inhibitor, for diabetes**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2196-2198
http://dx.doi.org/10.1016/S0140-6736(10)60749-0 (**accès réservé EHESP**)

(24) HUI E, BRAVIS V, HASSANEIN M, HANIF W, *et al.* **Management of people with diabetes wanting to fast during Ramadan**. BMJ. 2010, vol. 340, p.c3053
http://www.ncbi.nlm.nih.gov/pubmed/20570867 (**accès libre, collection papier de la bibliothèque**)

(25) JUURLINK DN. **Rosiglitazone and the case for safety over certainty**. JAMA. 2010 July 28, vol. 304, n° 4, pp.469-471
http://dx.doi.org/jama.210.1001/jama.2010.954 (**accès réservé EHESP**)

(26) KAHN R, GALE EA. **Gridlocked guidelines for diabetes**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2203-2204
http://dx.doi.org/10.1016/S0140-6736(10)60714-3 (**accès réservé EHESP**)

(27) KEAN S. **Drug safety. Planned study of Avandia in doubt after FDA review**. Science. 2010 July 23, vol. 329, n° 5990, p.375
http://dx.doi.org/10.1126/science.329.5990.375 (**accès réservé EHESP**)

(28) KLEIN BE. **Reduction in risk of progression of diabetic retinopathy**. N Engl J Med. 2010 July 15, vol. 363, n° 3, pp.287-288
http://dx.doi.org/NEJMe10.1056/NEJMe1005667 (**accès réservé EHESP**)

(29) LAWTON J, RANKIN D. **How do structured education programmes work? An ethnographic investigation of the dose adjustment for normal eating (DAFNE) programme for type 1 diabetes patients in the UK**. Soc Sci Med. 2010 Aug., vol. 71, n° 3, pp.486-493
http://dx.doi.org/10.1016/j.socscimed.2010.04.030 (**accès réservé EHESP**)

Structured education programmes (SEPs) for patients with diabetes and other chronic diseases are being widely adopted across the UK and elsewhere. Trials suggest they are more efficacious than didactic approaches, with patients showing improvements in learning, blood glucose control and quality of life. However, the reasons for these improvements are not well understood. To establish how, and why, SEPs work, we undertook a qualitative investigation of the Dose Adjustment for Normal Eating (DAFNE) programme. DAFNE is a well-established SEP for type 1 diabetes patients in the UK, which teaches them to alter their insulin doses in order to improve dietary freedom and blood glucose control. Six five-day courses were observed and in-depth interviews conducted with 30 patients aged 18-59 years on completion of the courses. Prior to their courses, many patients had developed protective behaviours and risk-avoiding strategies, such as running blood glucose levels high to avoid hypoglycaemia, or low to avoid developing complications. Implementing the insulin dose adjustments recommended on the course often required patients to move out of comfort zones and take what they had perceived, initially at least, as risks. In order to understand and explain course dynamics and outcomes, we draw upon Adams' concept of the risk-thermostat - which presupposes that all individuals are equipped with an internal instrument by which they gauge and respond to risk - and add a corporeal dimension to it. In doing so, we highlight the dynamic ways in which (embodied) group interactions and experiences, and their enmeshment with other aspects of course delivery, such as educator surveillance and employment of course rules, helped to enhance learning and promote patients' transformations into insulin dose adjusting subjects. This included inter-corporeal processes through which patients recalibrated their risk thermostats in light of the insulin dose adjustment experiences of others

(30) LIMA-COSTA MF, CESAR CC, PEIXOTO SV, RIBEIRO AL. **Plasma {beta}-type natriuretic peptide as a predictor of mortality in community-dwelling older adults with Chagas disease: 10-Year follow-up of the Bambui Cohort Study of Aging**. Am J Epidemiol. 2010 July 15, vol. 172, n° 2, pp.190-196
http://dx.doi.org/10.1093/aje/kwq106 (**accès réservé EHESP**)

In this study, the authors aimed to investigate the prognostic value of beta-type natriuretic peptide (BNP) for all-cause mortality among persons with Chagas disease, a parasitic disease caused by the protozoan Trypanosoma cruzi. The authors used data on 1,398 participants (37.5% infected with T. cruzi) aged 60 years and over from the Bambui Cohort Study of Aging in Brazil. From 1997 to 2007, 512 participants died, leading to 12,406 person-years of observation. The hazard ratio for death was 1.27 for each unit of log-transformed BNP level (95% confidence interval (CI: 1.11, 1.45) among infected persons, independent of potentially confounding factors. Infected persons with baseline BNP levels in the top quartile had a risk of death twice that of persons in the bottom quartile (hazard ratio = 2.07, 95% CI: 1.29, 3.32). The discriminatory ability of BNP in predicting mortality (C = 0.69, 95% CI: 0.66, 0.71) was similar to that of an electrocardiogram (C = 0.68, 95% CI: 0.65, 0.71), with reasonably stable risk discrimination over time. BNP is a strong predictor of mortality in older adults with Chagas disease. Although the usefulness of BNP for risk stratification in this parasitic disease remains a topic of debate, this study found that BNP-based risk discrimination is at least comparable to that of an electrocardiogram

(31) LUTSEY PL, VIRNIG BA, DURHAM SB, STEFFEN LM, *et al.* **Correlates and consequences of venous thromboembolism: The Iowa Women's Health Study**. Am J Public Health. 2010 Aug., vol. 100, n° 8, pp.1506-1513
http://dx.doi.org/10.2105/AJPH.2008.157776 (**accès réservé EHESP**)

OBJECTIVES: We sought to document incidence, case-fatality, and recurrence rates of venous thromboembolism (VTE) in women and to explore the relationship of demographic, lifestyle, and anthropometric factors to VTE incidence. METHODS: Data from participants aged 55 to 69 years in the Iowa Women's Health Study were linked to Medicare data for 1986 through 2004 (n = 40

377) to identify hospitalized VTE patients. RESULTS: A total of 2137 women developed VTE, yielding an incidence rate of 4.04 per 1000 person-years. The 28-day case-fatality rate was 7.7%, and the 1-year recurrence rate was 3.4%. Educational attainment, physical activity, and age at menopause were inversely associated with VTE. Risk of secondary (particularly cancer-related) VTE was higher among smokers than among those who had never smoked. Body mass index, waist circumference, waist-to-hip ratio, height, and diabetes were positively associated with VTE risk. Hormone replacement therapy use was associated with increased risk of idiopathic VTE. CONCLUSIONS: VTE is a significant source of morbidity and mortality in older women. Risk was elevated among women who were smokers, physically inactive, overweight, and diabetic, indicating that lifestyle contributes to VTE risk

(32) LUTSEY PL, PEREIRA MA, BERTONI AG, KANDULA NR, *et al.* **Interactions between race/ethnicity and anthropometry in risk of incident diabetes: the multi-ethnic study of atherosclerosis**. Am J Epidemiol. 2010 July 15, vol. 172, n° 2, pp.197-204
http://dx.doi.org/10.1093/aje/kwq100 (**accès réservé EHESP**)

This study examined how adiposity influences racial/ethnic differences in diabetes incidence by exploring whether relations between anthropometric measures and incident diabetes vary by race/ethnicity. Data from the Multi-Ethnic Study of Atherosclerosis initiated in 2000 (n = 5,446 US men and women aged 45-84 years) were analyzed by using proportional hazards and Poisson regression. The diabetes incidence rate was 2/100 person-years (n = 479 cases). Interactions were present between race and anthropometry (P-interaction((race x body mass index)) = 0.002). The slope of incident diabetes per anthropometric unit was greatest for Chinese, less for whites and Hispanics, and still less for blacks. For small waist, risk of incident diabetes was <1/100 person-years for all racial/ethnic groups. At intermediate waist levels, Chinese had the highest and whites the lowest rates of incident diabetes. At the respective 95th percentiles of waist circumference, risk of incident diabetes per 100 person-years was 3.9 for Chinese (104 cm), 3.5 for whites (121 cm), 5.0 for blacks (125 cm), and 5.3 for Hispanics (121 cm). Adiposity influenced relative diabetes occurrence across racial/ethnic groups, in that Chinese had a steeper diabetes risk per unit of adiposity. However, the generally low level of adiposity in Chinese led to a relatively low diabetes occurrence

(33) MATTEI J, DEMISSIE S, FALCON LM, ORDOVAS JM, *et al.* **Allostatic load is associated with chronic conditions in the Boston Puerto Rican Health Study**. Soc Sci Med. 2010 June, vol. 70, n° 12, pp.1988-1996
http://dx.doi.org/10.1016/j.socscimed.2010.02.024 (**accès réservé EHESP**)

Puerto Ricans living in the United States mainland present multiple disparities in prevalence of chronic diseases, relative to other racial and ethnic groups. Allostatic load (AL), or the cumulative wear and tear of physiological responses to stressors such as major life events, social and environmental burden, has been proposed as a possible mechanism for the inequalities observed in minority groups, but has not been studied in Puerto Ricans. The aim of this study was to determine the association of AL to six chronic diseases (abdominal obesity, hypertension, diabetes, and self-reported cardiovascular disease (CVD), arthritis and cancer) in Puerto Ricans, and to contrast AL to metabolic syndrome (MetS). Participants of the Boston Puerto Rican Health Study (n=1116, ages 45-75 years) underwent a home-based interview, where questionnaires were completed and biological samples collected. A summary definition of AL was constructed using clinically-defined cutoffs and medication use for 10 physiological parameters in different body systems. Logistic regression models were run to determine associations between AL score and disease status, controlling for age, sex, smoking, alcohol use, physical activity, total fat intake and energy intake. Parallel models were also run with MetS score replacing AL. We found that increasing categories of AL score were significantly associated with abdominal obesity, hypertension, diabetes and self-reported cardiovascular disease (CVD) and arthritis, but not with self-reported cancer. The strength of associations of AL with all conditions, except diabetes and cancer, was similar to or larger than those of MetS score. In conclusion, Puerto Rican older adults experienced physiological dysregulation that was associated with increased odds of chronic conditions. AL was more strongly associated with most conditions, compared to MetS, suggesting

that this cumulative measure may be a better predictor of disease. These results have prospective research implications for Puerto Ricans and other ethnic groups

(34) MBANYA JC, MOTALA AA, SOBNGWI E, ASSAH FK, *et al.* **Diabetes in sub-Saharan Africa**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2254-2266
http://dx.doi.org/10.1016/S0140-6736(10)60550-8 (**accès réservé EHESP**)

In Sub-Saharan Africa, prevalence and burden of type 2 diabetes are rising quickly. Rapid uncontrolled urbanisation and major changes in lifestyle could be driving this epidemic. The increase presents a substantial public health and socioeconomic burden in the face of scarce resources. Some types of diabetes arise at younger ages in African than in European populations. Ketosis-prone atypical diabetes is mostly recorded in people of African origin, but its epidemiology is not understood fully because data for pathogenesis and subtypes of diabetes in sub-Saharan African communities are scarce. The rate of undiagnosed diabetes is high in most countries of sub-Saharan Africa, and individuals who are unaware they have the disorder are at very high risk of chronic complications. Therefore, the rate of diabetes-related morbidity and mortality in this region could grow substantially. A multisectoral approach to diabetes control and care is vital for expansion of socioculturally appropriate diabetes programmes in sub-Saharan African countries

(35) MELLO MM, WOLF LE. **The Havasupai Indian tribe case--lessons for research involving stored biologic samples**. N Engl J Med. 2010 July 15, vol. 363, n° 3, pp.204-207
http://dx.doi.org/NEJMp10.1056/NEJMp1005203 (**accès réservé EHESP**)

(36) MISRA A, JOSHI S. **Longacting exenatide in diabetes: DURATION-3**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2198-2199
http://dx.doi.org/10.1016/S0140-6736(10)60836-7 (**accès réservé EHESP**)

(37) OH DY, OLEFSKY JM. **Medicine. Wnt fans the flames in obesity**. Science. 2010 July 23, vol. 329, n° 5990, pp.397-398
http://dx.doi.org/10.1126/science.1193404 (**accès réservé EHESP**)

(38) PEEK ME, ODOMS-YOUNG A, QUINN MT, GORAWARA-BHAT R, *et al.* **Race and shared decision-making: perspectives of African-Americans with diabetes**. Soc Sci Med. 2010 July, vol. 71, n° 1, pp.1-9
http://dx.doi.org/(10)10.1016/j.socscimed.2010.03.014 (**accès réservé EHESP**)

Shared decision-making (SDM) is an important component of patient-centered healthcare and is positively associated with improved health outcomes (e.g. diabetes and hypertension control). In shared decision-making, patients and physicians engage in bidirectional dialogue about patients' symptoms and treatment options, and select treatment plans that address patient preferences. Existing research shows that African-Americans experience SDM less often than whites, a fact which may contribute to racial disparities in diabetes outcomes. Yet little is known about the reasons for racial disparities in shared decision-making. We explored patient perceptions of how race may influence SDM between African-American patients and their physicians. We conducted in-depth interviews (n=24) and five focus groups (n=27) among a purposeful sample of African-American diabetes patients aged over 21 years, at an urban academic medical center in Chicago. Each interview/focus group was audio-taped, transcribed verbatim and imported into Atlas.ti software. Coding was conducted iteratively; each transcription was independently coded by two research team members. Although there was heterogeneity in patients' perceptions about the influence of race on SDM, in each of the SDM domains (information-sharing, deliberation/physician recommendations, and decision-making), participants identified a range of race-related issues that may influence SDM. Participants identified physician bias/discrimination and/or cultural discordance as issues that may influence physician-related SDM behaviors (e.g. less likely to share information such as test results and more likely to be domineering with African-American patients). They identified mistrust of white physicians, negative attitudes and

internalized racism as patient-related issues that may influence African-American patients' SDM behaviors (e.g. less forthcoming with physicians about health information, more deference to physicians, less likely to adhere to treatment regimens). This study suggests that race-related patient and physician-related barriers may serve as significant barriers to shared decision-making between African-American patients and their physicians. Finding innovative ways to address such communication barriers is an important area of future research

(39) RENEHAN A, SMITH U, KIRKMAN MS. **Linking diabetes and cancer: a consensus on complexity**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2201-2202
http://dx.doi.org/10.1016/S0140-6736(10)60706-4 (**accès réservé EHESP**)

(40) RODBARD HW, JELLINGER PS. **Adding noninsulin antidiabetic drugs to metformin therapy for type 2 diabetes**. JAMA. 2010 July 28, vol. 304, n° 4, pp.405-406
http://dx.doi.org/10.1001/jama.2010.1021 (**accès réservé EHESP**)

(41) ROEHR B. **FDA committee urges tight restrictions on rosiglitazone**. BMJ. 2010, vol. 341, p.c3862
http://www.ncbi.nlm.nih.gov/pubmed/20639290 (**accès libre, collection papier de la bibliothèque**)

(42) ROSENSTOCK J, LORBER DL, GNUDI L, HOWARD CP, *et al.* **Prandial inhaled insulin plus basal insulin glargine versus twice daily biaspart insulin for type 2 diabetes: a multicentre randomised trial**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2244-2253
http://dx.doi.org/10.1016/S0140-6736(10)60632-0 (**accès réservé EHESP**)

BACKGROUND: Insulin therapy is often a delayed strategy in patients with type 2 diabetes mellitus because it is associated with weight gain, hypoglycaemia, and the need for subcutaneous injections. We aimed to assess the efficacy and safety of prandial Technosphere inhaled insulin compared with twice daily biaspart insulin. METHODS: In this randomised, open-label, parallel-group study, adult patients with type 2 diabetes mellitus and poor glycaemic control despite insulin therapy, with or without oral antidiabetes drugs, were enrolled from ten countries between Feb 23, 2006, and Aug 8, 2007. Patients were randomly allocated in a 1:1 ratio to receive 52 weeks' treatment with: prandial Technosphere inhaled insulin powder plus bedtime insulin glargine; or twice daily premixed biaspart insulin (70% insulin aspart protamine suspension and 30% insulin aspart of rDNA origin). The primary endpoint was a comparison of change in glycosylated haemoglobin (HbA(1c)) from baseline to week 52 between treatment groups; the non-inferiority margin was 0.4%. Analysis was by per protocol for non-inferiority testing of the primary endpoint. This study is registered with ClinicalTrials.gov, number NCT00309244. FINDINGS: 334 patients were allocated to inhaled insulin plus insulin glargine, and 343 to biaspart insulin; 107 patients on inhaled insulin plus insulin glargine and 85 on biaspart insulin discontinued the trial. 211 patients on inhaled insulin plus insulin glargine and 237 on biaspart insulin were included in per-protocol analyses. Change in HbA(1c) with inhaled insulin plus insulin glargine (-0.68%, SE 0.077, 95% CI -0.83 to -0.53) was similar and non-inferior to that with biaspart insulin (-0.76%, 0.071, -0.90 to -0.62). The between-group difference was 0.07% (SE 0.102, 95% CI -0.13 to 0.27). Patients had significantly lower weight gain and had fewer mild-to-moderate and severe hypoglycaemic events on inhaled insulin plus insulin glargine than on biaspart insulin. The safety and tolerability profile was similar for both treatments, apart from increased occurrence of cough and change in pulmonary function in the group receiving inhaled insulin plus insulin glargine. INTERPRETATION: This study is part of a large clinical development programme addressing the efficacy and tolerability of use of Technosphere inhaled insulin in a wide variety of patients. FUNDING: MannKind

(43) SAMUEL VT, PETERSEN KF, SHULMAN GI. **Lipid-induced insulin resistance: unravelling the mechanism**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2267-2277
http://dx.doi.org/10.1016/S0140-6736(10)60408-4 (**accès réservé EHESP**)

Insulin resistance has long been associated with obesity. More than 40 years ago, Randle and colleagues postulated that lipids impaired insulin-stimulated glucose use by muscles through inhibition of glycolysis at key points. However, work over the past two decades has shown that lipid-induced insulin resistance in skeletal muscle stems from defects in insulin-stimulated glucose transport activity. The steatotic liver is also resistant to insulin in terms of inhibition of hepatic glucose production and stimulation of glycogen synthesis. In muscle and liver, the intracellular accumulation of lipids-namely, diacylglycerol-triggers activation of novel protein kinases C with subsequent impairments in insulin signalling. This unifying hypothesis accounts for the mechanism of insulin resistance in obesity, type 2 diabetes, lipodystrophy, and ageing; and the insulin-sensitising effects of thiazolidinediones

(44) SARWAR N, GAO P, SESHASAI SR, GOBIN R, *et al.* **Diabetes mellitus, fasting blood glucose concentration, and risk of vascular disease: a collaborative meta-analysis of 102 prospective studies**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2215-2222
http://dx.doi.org/10.1016/S0140-6736(10)60484-9 (**accès réservé EHESP**)

BACKGROUND: Uncertainties persist about the magnitude of associations of diabetes mellitus and fasting glucose concentration with risk of coronary heart disease and major stroke subtypes. We aimed to quantify these associations for a wide range of circumstances. METHODS: We undertook a meta-analysis of individual records of diabetes, fasting blood glucose concentration, and other risk factors in people without initial vascular disease from studies in the Emerging Risk Factors Collaboration. We combined within-study regressions that were adjusted for age, sex, smoking, systolic blood pressure, and body-mass index to calculate hazard ratios (HRs) for vascular disease. FINDINGS: Analyses included data for 698 782 people (52 765 non-fatal or fatal vascular outcomes; 8.49 million person-years at risk) from 102 prospective studies. Adjusted HRs with diabetes were: 2.00 (95% CI 1.83-2.19) for coronary heart disease; 2.27 (1.95-2.65) for ischaemic stroke; 1.56 (1.19-2.05) for haemorrhagic stroke; 1.84 (1.59-2.13) for unclassified stroke; and 1.73 (1.51-1.98) for the aggregate of other vascular deaths. HRs did not change appreciably after further adjustment for lipid, inflammatory, or renal markers. HRs for coronary heart disease were higher in women than in men, at 40-59 years than at 70 years and older, and with fatal than with non-fatal disease. At an adult population-wide prevalence of 10%, diabetes was estimated to account for 11% (10-12%) of vascular deaths. Fasting blood glucose concentration was non-linearly related to vascular risk, with no significant associations between 3.90 mmol/L and 5.59 mmol/L. Compared with fasting blood glucose concentrations of 3.90-5.59 mmol/L, HRs for coronary heart disease were: 1.07 (0.97-1.18) for lower than 3.90 mmol/L; 1.11 (1.04-1.18) for 5.60-6.09 mmol/L; and 1.17 (1.08-1.26) for 6.10-6.99 mmol/L. In people without a history of diabetes, information about fasting blood glucose concentration or impaired fasting glucose status did not significantly improve metrics of vascular disease prediction when added to information about several conventional risk factors. INTERPRETATION: Diabetes confers about a two-fold excess risk for a wide range of vascular diseases, independently from other conventional risk factors. In people without diabetes, fasting blood glucose concentration is modestly and non-linearly associated with risk of vascular disease. FUNDING: British Heart Foundation, UK Medical Research Council, and Pfizer

(45) SELIGMAN HK, SCHILLINGER D. **Hunger and socioeconomic disparities in chronic disease**. N Engl J Med. 2010 July 1, vol. 363, n° 1, pp.6-9
http://dx.doi.org/10.1056/NEJMp1000072 (**accès réservé EHESP**)

(46) SHINTANI F. **Diminished pain perception in schizophrenia**. Lancet. 2010 July 10, vol. 376, n° 9735, pp.87-88
http://dx.doi.org/10.1016/S0140-6736(10)61066-5 (**accès réservé EHESP**)

(47) SUROLIA I, PIRNIE SP, CHELLAPPA V, TAYLOR KN, *et al.* **Functionally defective germline variants of sialic acid acetylesterase in autoimmunity**. Nature. 2010 July 8, vol. 466, n° 7303, pp.243-247

http://dx.doi.org/10.1038/nature09115 (**accès payant**)

Sialic acid acetylesterase (SIAE) is an enzyme that negatively regulates B lymphocyte antigen receptor signalling and is required for the maintenance of immunological tolerance in mice. Heterozygous loss-of-function germline rare variants and a homozygous defective polymorphic variant of SIAE were identified in 24/923 subjects of European origin with relatively common autoimmune disorders and in 2/648 controls of European origin. All heterozygous loss-of-function SIAE mutations tested were capable of functioning in a dominant negative manner. A homozygous secretion-defective polymorphic variant of SIAE was catalytically active, lacked the ability to function in a dominant negative manner, and was seen in eight autoimmune subjects but in no control subjects. The odds ratio for inheriting defective SIAE alleles was 8.6 in all autoimmune subjects, 8.3 in subjects with rheumatoid arthritis, and 7.9 in subjects with type I diabetes. Functionally defective SIAE rare and polymorphic variants represent a strong genetic link to susceptibility in relatively common human autoimmune disorders

(48) UNWIN N, WHITING D, ROGLIC G. **Social determinants of diabetes and challenges of prevention**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2204-2205
http://dx.doi.org/10.1016/S0140-6736(10)60840-9 (**accès réservé EHESP**)

(49) WISE J. **New drugs should be judged on "willingness to pay" basis, says leading economist**. BMJ. 2010, vol. 341, p.c3899
http://www.ncbi.nlm.nih.gov/pubmed/20643712 (**accès libre, collection papier de la bibliothèque**)

(50) WOLPERT HA. **Continuous glucose monitoring--coming of age**. N Engl J Med. 2010 July 22, vol. 363, n° 4, pp.383-384
http://dx.doi.org/NEJMe10.1056/NEJMe1006098 (**accès réservé EHESP**)

(51) ZHANG X, LUO H, GREGG EW, MUKHTAR Q, *et al.* **Obesity prevention and diabetes screening at local health departments**. Am J Public Health. 2010 Aug., vol. 100, n° 8, pp.1434-1441
http://dx.doi.org/10.2105/AJPH.2009.168831 (**accès réservé EHESP**)

OBJECTIVES: We assessed whether local health departments (LHDs) were conducting obesity prevention programs and diabetes screening programs, and we examined associations between LHD characteristics and whether they conducted these programs. METHODS: We used the 2005 National Profile of Local Health Departments to conduct a cross-sectional analysis of 2300 LHDs nationwide. We used multivariate logistic regressions to calculate odds ratios (ORs) and 95% confidence intervals (CIs). RESULTS: Approximately 56% of LHDs had obesity prevention programs, 51% had diabetes screening programs, and 34% had both. After controlling for other factors, we found that employing health educators was significantly associated with LHDs conducting obesity prevention programs (OR = 2.08; 95% CI = 1.54, 2.81) and diabetes screening programs (OR = 1.63; 95% CI = 1.23, 2.17). We also found that conducting chronic disease surveillance was significantly associated with LHDs conducting obesity prevention programs (OR = 1.66; 95% CI = 1.26, 2.20) and diabetes screening programs (OR = 2.44; 95% CI = 1.90, 3.15). LHDs with a higher burden of diabetes prevalence were more likely to conduct diabetes screening programs (OR = 1.20; 95% CI = 1.11, 1.31) but not obesity prevention programs. CONCLUSIONS: The presence of obesity prevention and diabetes screening programs was significantly associated with LHD structural capacity and general performance. However, the effectiveness and cost-effectiveness of both types of programs remain unknown

(52) ZINMAN B, HARRIS SB, NEUMAN J, GERSTEIN HC, *et al.* **Low-dose combination therapy with rosiglitazone and metformin to prevent type 2 diabetes mellitus (CANOE trial): a double-blind randomised controlled study**. Lancet. 2010 July 10, vol. 376, n° 9735, pp.103-111

http://dx.doi.org/10.1016/S0140-6736(10)60746-5 (**accès réservé EHESP**)

BACKGROUND: The evolving epidemic of type 2 diabetes has challenged health-care providers to assess the safety and efficacy of various diabetes prevention strategies. The CANOE (CAnadian Normoglycemia Outcomes Evaluation) trial investigated whether low-dose combination therapy would affect development of type 2 diabetes. METHODS: In this double-blind, randomised controlled trial undertaken in clinics in Canadian centres, 207 patients with impaired glucose tolerance were randomly assigned to receive combination rosiglitazone (2 mg) and metformin (500 mg) twice daily or matching placebo for a median of 3.9 years (IQR 3.0-4.6). Randomisation was computer-generated in blocks of four, with both participants and investigators masked to treatment allocation. The primary outcome was time to development of diabetes, measured by an oral glucose tolerance test or two fasting plasma glucose values of 7.0 mmol/L or greater. Analysis was by intention to treat. This study is registered with ClinicalTrials.gov, number NCT00116932. FINDINGS: 103 participants were assigned to rosiglitazone and metformin, and 104 to placebo; all were analysed. Vital status was obtained in 198 (96%) participants, and medication compliance (taking at least 80% of assigned medication) was 78% (n=77) in the metformin and rosiglitazone group and 81% (n=80) in the placebo group. Incident diabetes occurred in significantly fewer individuals in the active treatment group (n=14 [14%]) than in the placebo group (n=41 [39%]; p<0.0001). The relative risk reduction was 66% (95% CI 41-80) and the absolute risk reduction was 26% (14-37), yielding a number needed to treat of 4 (2.70-7.14). 70 (80%) patients in the treatment group regressed to normal glucose tolerance compared with 52 (53%) in the placebo group (p=0.0002). Insulin sensitivity decreased by study end in the placebo group (median -1.24, IQR -2.38 to -0.08) and remained unchanged with rosiglitazone and metformin treatment (-0.39, -1.30 to 0.84; p=0.0006 between groups). The change in beta-cell function, as measured by the insulin secretion-sensitivity index-2, did not differ between groups (placebo -252.3, -382.2 to -58.0 vs rosiglitazone and metformin -221.8, -330.4 to -87.8; p=0.28). We recorded an increase in diarrhoea in participants in the active treatment group compared with the placebo group (16 [16%] vs 6 [6%]; p=0.0253). INTERPRETATION: Low-dose combination therapy with rosiglitazone and metformin was highly effective in prevention of type 2 diabetes in patients with impaired glucose tolerance, with little effect on the clinically relevant adverse events of these two drugs. FUNDING: GlaxoSmithKline

Dépression

sommaire

(1) DE GR, RADOVANOVIC M, VAN LM, FAIRMAN B, *et al.* **Early cannabis use and estimated risk of later onset of depression spells: Epidemiologic evidence from the population-based World Health Organization World Mental Health Survey Initiative**. Am J Epidemiol. 2010 July 15, vol. 172, n° 2, pp.149-159
http://dx.doi.org/10.1093/aje/kwq096 (**accès réservé EHESP**)

Early-onset cannabis use is widespread in many countries and might cause later onset of depression. Sound epidemiologic data across countries are missing. The authors estimated the suspected causal association that links early-onset (age <17 years) cannabis use with later-onset (age > or =17 years) risk of a depression spell, using data on 85,088 subjects from 17 countries participating in the population-based World Health Organization World Mental Health Survey Initiative (2001-2005). In all surveys, multistage household probability samples were evaluated with a fully structured diagnostic interview for assessment of psychiatric conditions. The association between early-onset cannabis use and later risk of a depression spell was studied using conditional logistic regression with local area matching of cases and controls, controlling for sex, age, tobacco use, and other mental health problems. The overall association was modest (controlled for sex and age, risk ratio = 1.5, 95% confidence interval: 1.4, 1.7), was statistically robust in 5 countries, and showed no sex difference. The association did not change appreciably with statistical adjustment for mental health problems, except for childhood conduct problems, which reduced the association to nonsignificance. This study did not allow differentiation of levels of cannabis use; this issue deserves consideration in future research

(2) Jørgen G. Bramness, Fredrik A. Walby, Vidar Hjellvik, *et al.* **Self-reported Mental Health and Its Gender Differences as a Predictor of Suicide in the Middle-Aged.** Am J Epidemiol. 2010 July 15, vol. 172, n° 2, pp.160-166
http://dx.doi.org/10.1093/aje/kwq091 (**accès réservé EHESP**)

Studies of clinical cohorts and retrospective reports have identified psychiatric disorders as paramount risk factors for suicide. Much less is known about how self-reported mental health is related to completed suicide. To study the relation between self-reported mental health and risk of completed suicide, the authors prospectively followed a population-based Norwegian cohort of 61,588 men and 69,774 women aged 39–44 years for an average of 10.4 years between 1994 and 2007. Self-reported mental health was measured using an instrument based on the Hopkins Symptom Checklist and the General Health Questionnaire. Completed suicides were registered in the official Norwegian Cause of Death Registry. Females reported higher levels of mental distress than males. In comparison with persons reporting the fewest mental health symptoms, the adjusted hazard ratio for suicide increased from 1.8 (95% confidence interval (CI): 1.1, 2.9) in the moderately depressed group to 8.9 (95% CI: 4.4, 18.2) in the most depressed group. The risk difference was greatest in males. At each level of the mental health index, males had double the risk of suicide of females (hazard ratio = 2.3, 95% CI: 1.5, 3.3). This study shows a dose-response effect of self-reported mental health problems on completed suicide and replicates the gender paradox observed in the general population with prospective data

(3) Mika Kivimäki*, Jussi Vahtera, Ichiro Kawachi, *et al.* **Psychosocial Work Environment as a Risk Factor for Absence With a Psychiatric Diagnosis: An Instrumental-Variables Analysis.** Am J Epidemiol. 2010 July 15, vol. 172, n° 2, pp.167-172
http://dx.doi.org/10.1093/aje/kwq094 (**accès réservé EHESP**)

Recent reviews show that self-reported psychosocial factors related to work, such as job demands and job control, are associated with employee mental health, but it is not known whether this association is attributable to reporting bias. The authors examined this question using objectively measured hospital ward overcrowding as an instrument. The extent of overcrowding provided a strong instrument for self-reported job demands but not for job control, and it was used to examine unbiased associations between self-reported job demands and sickness absence with a psychiatric diagnosis among 2,784 female nurses working in somatic illness wards in Finland. During the 12-month follow-up period (2004–2005), 102 nurses had an absence with a psychiatric diagnosis, 33 with a diagnosis of depressive disorder. Both greater extent of overcrowding and higher self-reported job demands were associated with increased risk of psychiatric absence. The latter association was stronger but less precisely estimated in an instrumental-variables analysis which took into account only the variation in self-reported job demands that was explained by overcrowding. Repeating these analyses with absence due to depressive disorders as the outcome led to similar results. Findings from this instrumental-variables analysis support the status of high self-reported job demands as a risk factor for absence with a psychiatric diagnosis.

(4) GROSS R. **Socioeconomic position and mortality**. JAMA. 2010 July 21, vol. 304, n° 3, p.270
http://dx.doi.org/304/10.1001/jama.2010.985 (**accès réservé EHESP**)

(5) HONG SI, MORROW-HOWELL N. **Health outcomes of Experience Corps: a high-commitment volunteer program**. Soc Sci Med. 2010 July, vol. 71, n° 2, pp.414-420 http://dx.doi.org/10.1016/j.socscimed.2010.04.009 (**accès réservé EHESP**)

Experience Corps (EC) is a high-commitment US volunteer program that brings older adults into public elementary schools to improve academic achievement of students. It is viewed as a health promotion program for the older volunteers. We evaluated the effects of the EC program on older adults' health, using a quasi-experimental design. We included volunteers from 17 EC sites across the US. They were pre-tested before beginning their volunteer work and post-tested after two years of service. We compared changes over time between the EC participants (n = 167) and a matched comparison group of people from the US Health and Retirement Study (2004, 2006). We developed the comparison group by using the nearest available Mahalanobis metric matching within calipers combined with the boosted propensity scores of those participating in the EC. We corrected for clustering effects via survey regression analyses with robust standard errors and calculated adjusted post-test means of health outcomes, controlling for all covariates and the boosted propensity score of EC participants. We found that compared to the comparison group, the EC group reported fewer depressive symptoms and functional limitations after two years of participation in the program, and there was a statistical trend toward the EC group reporting less decline in self-rated health. Results of this study add to the evidence supporting high-intensity volunteering as a social model of health promotion for older adults

(6) INOUE A, KAWAKAMI N. **Interpersonal conflict and depression among Japanese workers with high or low socioeconomic status: findings from the Japan Work Stress and Health Cohort Study**. Soc Sci Med. 2010 July, vol. 71, n° 1, pp.173-180 http://dx.doi.org/10.1016/j.socscimed.2010.02.047 (**accès réservé EHESP**)

Research that focuses on the relationship between interpersonal conflict at work (i.e., intragroup conflict and intergroup conflict) and depression that also considers differences in socioeconomic status (SES) is limited. The purpose of the current study is to investigate the relationship between interpersonal conflict at work and depression at different levels of SES. A cross-sectional study was conducted with a total of 17,390 males and 2923 females employed in nine factories located in several regions of Japan. These participants were surveyed using a self-administered questionnaire that included self-reported measures of interpersonal conflict at work (intragroup conflict and intergroup conflict), SES (education and occupation), worksite support (supervisor support and coworker support), depression (assessed using the Center for Epidemiologic Studies Depression [CES-D] scale), and other demographic covariates. Those who had scores of 16 + on the CES-D scale (4066 males and 873 females) were classified as experiencing depression. The association of interpersonal conflict with depression was significantly greater among males of a high SES (i.e., higher educational status and non-manual workers) than males of a low SES (i.e., lower educational status and manual workers) after adjusting for demographic variables, supervisor support, and coworker support. More specifically, the association of intergroup conflict with depression was significantly greater among males of a high SES than males of a low SES. However, this pattern was not observed in females. The current study suggests that males of a higher SES are more vulnerable to interpersonal conflict at work in terms of developing depression than males of a lower SES

(7) JAGANNATHAN R, CAMASSO MJ, SAMBAMOORTHI U. **Experimental evidence of welfare reform impact on clinical anxiety and depression levels among poor women**. Soc Sci Med. 2010 July, vol. 71, n° 1, pp.152-160 http://dx.doi.org/10.1016/j.socscimed.2010.02.044 (**accès réservé EHESP**)

In this paper, we employ a classical experiment to determine if welfare reform causes poor women to experience increased levels of clinical anxiety and depression. We organize our analyses around the insights provided by lifestyle change and ecosocial theories of illness. Our data come from the New Jersey Family Development Program (FDP), one of the most highly publicized welfare experiments in the U.S. A sample of 8393 women was randomly assigned into two groups, one which stressed welfare-to-work and the other which offered traditional welfare benefits. These women were followed from 1992 through 1996 and information on clinical

diagnoses was collected quarterly from physician treatment claims to the government Medicaid program. Our intention-to-treat estimates show that for short-term welfare recipients FDP decreased the prevalence of anxiety by 40% and increased depression by 8%. For black women both anxiety and depression diagnoses declined while Hispanic women experienced a 68% increase in depression. We discuss several public policy implications which arise from our work

(8) JOHNSON K, SCOTT J, RUGHITA B, KISIELEWSKI M, *et al.* **Association of sexual violence and human rights violations with physical and mental health in territories of the Eastern Democratic Republic of the Congo**. JAMA. 2010 Aug. 4, vol. 304, n° 5, pp.553-562 http://dx.doi.org/10.1001/jama.2010.1086 (**accès réservé EHESP**)

CONTEXT: Studies from the Eastern Region of the Democratic Republic of the Congo (DRC) have provided anecdotal reports of sexual violence. This study offers a population-based assessment of the prevalence of sexual violence and human rights abuses in specific territories within Eastern DRC. OBJECTIVE: To assess the prevalence of and correlations with sexual violence and human rights violations on residents of specific territories of Eastern DRC including information on basic needs, health care access, and physical and mental health. DESIGN, SETTING, AND PARTICIPANTS: A cross-sectional, population-based, cluster survey of 998 adults aged 18 years or older using structured interviews and questionnaires, conducted over a 4-week period in March 2010. MAIN OUTCOME MEASURES: Sexual violence prevalence and characteristics, symptoms of major depressive disorder (MDD) and posttraumatic stress disorder (PTSD), human rights abuses, and physical and mental health needs among Congolese adults in specific territories of Eastern DRC. RESULTS: Of the 1005 households surveyed 998 households participated, yielding a response rate of 98.9%. Rates of reported sexual violence were 39.7% (95% confidence interval [CI], 32.2%-47.2%; n = 224/586) among women and 23.6% (95% CI, 17.3%-29.9%; n = 107/399) among men. Women reported to have perpetrated conflict-related sexual violence in 41.1% (95% CI, 25.6%-56.6%; n = 54/148) of female cases and 10.0% (95% CI, 1.5%-18.4%; n = 8/66) of male cases. Sixty-seven percent (95% CI, 59.0%-74.5%; n = 615/998) of households reported incidents of conflict-related human rights abuses. Forty-one percent (95% CI, 35.3%-45.8%; n = 374/991) of the represented adult population met symptom criteria for MDD and 50.1% (95% CI, 43.8%-56.3%; n = 470/989) for PTSD. CONCLUSION: Self-reported sexual violence and other human rights violations were prevalent in specific territories of Eastern DRC and were associated with physical and mental health outcomes

(9) JOLIVET A, CAROLY S, EHLINGER V, KELLY-IRVING M, *et al.* **Linking hospital workers' organisational work environment to depressive symptoms: A mediating effect of effort-reward imbalance? The ORSOSA study**. Soc Sci Med. 2010 Aug., vol. 71, n° 3, pp.534-540 http://dx.doi.org/10.1016/j.socscimed.2010.04.003 (**accès réservé EHESP**)

Few studies have analysed the association between the organisational work environment and depression in hospital workers and we still have little understanding of how processes in the practice environment are related to depressive disorders. However, individual perception of an imbalance between efforts made and expected rewards has been associated with incident depression. The main goal of this study was to test the hypothesis that some organisational constraints at the work-unit level may be related to depressive symptoms in hospital workers, either directly or through individual perceptions of effort-reward imbalance (ERI). In 2006, 3316 female registered nurses and nursing aids working in 190 work units in seven French university hospitals, recruited from the baseline screening of an epidemiological cohort study (the ORSOSA study), responded in 2006 to valid self-report questionnaires (CES-D, ERI). The organisational work environment was assessed with the self-rated Nursing Work Index - Extended Organisation (NWI-EO) aggregated at the work unit level. Multilevel models were used. We found that poor relations between workers within work units were associated with higher CES-D score, independently of perceived ERI. Low level of communication between workers in the unit was associated with individual perceptions of ERI and indirectly associated with depressive symptoms. Understaffing and non-respect of planned days off and vacations were associated with perceived ERI but these organisational constraints were not associated with depressive symptoms. Our study allowed us to identify and quantify organisational factors that have a direct effect on hospital workers' depressive symptoms, or an indirect effect through perceived ERI. Better understanding

of the effect of organisational factors on health through perceived ERI would provide targets for successful interventions. Organisational approaches may be more effective in improving mental health at work and may also have a longer-lasting impact than individual approaches

(10) KROENKE K, THEOBALD D, WU J, NORTON K, *et al.* **Effect of telecare management on pain and depression in patients with cancer: a randomized trial**. JAMA. 2010 July 14, vol. 304, n° 2, pp.163-171
http://dx.doi.org/10.1001/jama.2010.944 (**accès réservé EHESP**)

CONTEXT: Pain and depression are 2 of the most prevalent and treatable cancer-related symptoms, yet they frequently go unrecognized, undertreated, or both. OBJECTIVE: To determine whether centralized telephone-based care management coupled with automated symptom monitoring can improve depression and pain in patients with cancer. DESIGN, SETTING, AND PATIENTS: Randomized controlled trial conducted in 16 community-based urban and rural oncology practices involved in the Indiana Cancer Pain and Depression (INCPAD) trial. Recruitment occurred from March 2006 through August 2008 and follow-up concluded in August 2009. The participating patients had depression (Patient Health Questionnaire-9 score > or = 10), cancer-related pain (Brief Pain Inventory [BPI] worst pain score > or = 6), or both. INTERVENTION: The 202 patients randomly assigned to receive the intervention and 203 to receive usual care were stratified by symptom type. Patients in the intervention group received centralized telecare management by a nurse-physician specialist team coupled with automated home-based symptom monitoring by interactive voice recording or Internet. MAIN OUTCOME MEASURES: Blinded assessment at baseline and at months 1, 3, 6, and 12 for depression (20-item Hopkins Symptom Checklist [HSCL-20]) and pain (BPI) severity. RESULTS: Of the 405 participants enrolled in the study, 131 had depression only, 96 had pain only, and 178 had both depression and pain. Of the 274 patients with pain, 137 patients in the intervention group had greater improvements in BPI pain severity over the 12 months of the trial whether measured as a continuous severity score or as a categorical pain responder (> or = 30% decrease in BPI) than the 137 patients in the usual-care group (P < .001 for both). Similarly, of the 309 patients with depression, the 154 patients in the intervention group had greater improvements in HSCL-20 depression severity over the 12 months of the trial whether measured as a continuous severity score or as a categorical depression responder (> or = 50% decrease in HSCL) than the 155 patients in the usual care group (P < .001 for both). The standardized effect size for between-group differences at 3 and 12 months was 0.67 (95% confidence interval [CI], 0.33-1.02) and 0.39 (95% CI, 0.01-0.77) for pain, and 0.42 (95% CI, 0.16-0.69) and 0.41 (95% CI, 0.08-0.72) for depression. CONCLUSION: Centralized telecare management coupled with automated symptom monitoring resulted in improved pain and depression outcomes in cancer patients receiving care in geographically dispersed urban and rural oncology practices. TRIAL REGISTRATION: clinicaltrials.gov Identifier: NCT00313573

(11) MAIR C, EZ ROUX AV, OSYPUK TL, RAPP SR, *et al.* **Is neighborhood racial/ethnic composition associated with depressive symptoms? The multi-ethnic study of atherosclerosis**. Soc Sci Med. 2010 Aug., vol. 71, n° 3, pp.541-550
http://dx.doi.org/10.1016/j.socscimed.2010.04.014 (**accès réservé EHESP**)

The racial/ethnic composition of a neighborhood may be related to residents' depressive symptoms through differential levels of neighborhood social support and/or stressors. We used the Multi-Ethnic Study of Atherosclerosis to investigate cross-sectional associations of neighborhood racial/ethnic composition with the Center for Epidemiologic Studies-Depression (CES-D) scale in adults aged 45-84. The key exposure was a census-derived measure of the percentage of residents of the same racial/ethnic background in each participant's census tract. Two-level multilevel models were used to estimate associations of neighborhood racial/ethnic composition with CES-D scores after controlling for age, income, marital status, education and nativity. We found that living in a neighborhood with a higher percentage of residents of the same race/ethnicity was associated with increased CES-D scores in African American men ($p < 0.05$), and decreased CES-D scores in Hispanic men and women and Chinese women, although these differences were not statistically significant. Models were further adjusted for neighborhood-level covariates (social cohesion, safety, problems, aesthetic quality and socioeconomic factors)

derived from survey responses and census data. Adjusting for other neighborhood characteristics strengthened protective associations amongst Hispanics, but did not change the significant associations in African American men. These results demonstrate heterogeneity in the associations of race/ethnic composition with mental health and the need for further exploration of which aspects of neighborhood environments may contribute to these associations

(12) NICOLAIDIS C, TIMMONS V, THOMAS MJ, WATERS AS, *et al.* **"You don't go tell White people nothing": African American women's perspectives on the influence of violence and race on depression and depression care**. Am J Public Health. 2010 Aug., vol. 100, n° 8, pp.1470-1476
http://dx.doi.org/10.2105/AJPH.2009.161950 (**accès réservé EHESP**)

OBJECTIVES: We sought to understand how African American women's beliefs regarding depression and depression care are influenced by racism, violence, and social context. METHODS: We conducted a focus group study using a community-based participatory research approach. Participants were low-income African American women with major depressive disorder and histories of violence victimization. RESULTS: Thirty women participated in 4 focus groups. Although women described a vicious cycle of violence, depression, and substance abuse that affected their health, discussions about health care revolved around their perception of racism, with a deep mistrust of the health care system as a "White" system. The image of the "strong Black woman" was seen as a barrier to both recognizing depression and seeking care. Women wanted a community-based depression program staffed by African Americans that addressed violence and drug use. CONCLUSIONS: Although violence and drug use were central to our participants' understanding of depression, racism was the predominant issue influencing their views on depression care. Providers should develop a greater appreciation of the effects of racism on depression care. Depression care programs should address issues of violence, substance use, and racism

(13) PATTERSON AC, VEENSTRA G. **Loneliness and risk of mortality: a longitudinal investigation in Alameda County, California**. Soc Sci Med. 2010 July, vol. 71, n° 1, pp.181-186
http://dx.doi.org/10.1016/j.socscimed.2010.03.024 (**accès réservé EHESP**)

We investigated the prospective impact of self-reported loneliness on all-cause mortality, mortality from ischemic disease and mortality from other cardiovascular diseases. We tested these effects through GEE binomial regression models applied to longitudinal data from the Alameda County Study of persons aged 21 and over arranged into person-years. Controlling for age and gender, the chances of all-cause mortality were significantly higher among respondents reporting that they often feel lonely compared to those who report that they never feel lonely. Frequent loneliness was not significantly associated with mortality from ischemic heart disease but more than doubled the odds of mortality from other ailments of the circulatory system in models controlling for age and gender. Subsequent models showed that physical activity and depression may be important mediators of loneliness-mortality associations. Finally, we find support for the contention that chronic loneliness significantly increases risk of mortality but also find reason to believe that relatively recent changes in feelings of loneliness increase risk of mortality as well

(14) QUESNEL-VALLEE A, DEHANEY S, CIAMPI A. **Temporary work and depressive symptoms: a propensity score analysis**. Soc Sci Med. 2010 June, vol. 70, n° 12, pp.1982-1987
http://dx.doi.org/10.1016/j.socscimed.2010.02.008 (**accès réservé EHESP**)

Recent decades have seen a tremendous increase in the complexity of work arrangements, through job sharing, flexible hours, career breaks, compressed work weeks, shift work, reduced job security, and part-time, contract and temporary work. In this study, we focus on one specific group of workers that arguably most embodies non-standard employment, namely temporary workers, and estimate the effect of this type of employment on depressive symptom severity. Accounting for the possibility of mental health selection into temporary work through propensity score analysis, we isolate the direct effects of temporary work on depressive symptoms with varying lags of time since exposure. We use prospective data from the U.S. National Longitudinal Survey of Youth 1979 (NLSY79), which has followed, longitudinally, from 1979 to the present, a

nationally representative cohort of American men and women between 14 and 22 years of age in 1979. Three propensity score models were estimated, to capture the effect of different time lags (immediately following exposure, and 2 and 4 years post exposure) between the period of exposure to the outcome. The only significant effects were found among those who had been exposed to temporary work in the two years preceding the outcome measurement. These workers report 1.803 additional depressive symptoms from having experienced this work status (than if they had not been exposed). Moreover, this difference is both statistically and substantively significant, as it represents a 50% increase from the average level of depressive symptoms in this population

(15) SMITH JP, SMITH GC. **Long-term economic costs of psychological problems during childhood**. Soc Sci Med. 2010 July, vol. 71, n° 1, pp.110-115
http://dx.doi.org/10.1016/j.socscimed.2010.02.046 (**accès réservé EHESP**)

Childhood psychological conditions including depression and substance abuse are a growing concern among American children, but their long-term economic costs are unknown. This paper uses unique data from the US Panel Study of Income Dynamics (PSID) following groups of siblings and their parents for up to 40 years prospectively collecting information on education, income, work, and marriage. Following siblings offers an opportunity to control for unobserved family and neighborhood effects. A retrospective child health history designed by the author was placed into the 2007 PSID wave measuring whether respondents had any of 14 childhood physical illnesses or suffered from depression, substance abuse, or other psychological conditions. Large effects are found on the ability of affected children to work and earn as adults. Educational accomplishments are diminished, and adult family incomes are reduced by 20% or $10,400 per year with $18,000 less family household assets. Lost income is partly a consequence of seven fewer weeks worked per year. There is also an 11% point lower probability of being married. Controlling for physical childhood diseases shows that these effects are not due to the co-existence of psychological and physical diseases, and estimates controlling for within-sibling differences demonstrate that these effects are not due to unobserved common family differences. The long-term economic damages of childhood psychological problems are large-a lifetime cost in lost family income of approximately $300,000, and total lifetime economic cost for all those affected of 2.1 trillion dollars

(16) SZANTON SL, THORPE RJ, WHITFIELD K. **Life-course financial strain and health in African-Americans**. Soc Sci Med. 2010 July, vol. 71, n° 2, pp.259-265ou
http://dx.doi.org/10.1016/j.socscimed.2010.04.001 (**accès réservé EHESP**)

Differential exposure to financial strain may explain some differences in population health. However, few studies have examined the cumulative health effect of financial strain across the life-course. Studies that have are limited to self-reported health measures. Our objective was to examine the associations between childhood, adulthood, and life-course, or cumulative, financial strain with disability, lung function, cognition, and depression. In a population-based cross-sectional cohort study of adult African-American twins enrolled in the US Carolina African American Twin Study of Aging (CAATSA), we found that participants who reported financial strain as children and as adults are more likely to be physically disabled, and report more depressive symptoms than their unstrained counterparts. Participants who reported childhood financial strain had lower cognitive functioning than those with no childhood financial strain. We were unable to detect a difference in lung function beyond the effect of actual income and education in those who reported financial strain compared to those who did not. Financial strain in adulthood was more consistently associated with poor health than was childhood financial strain, a finding that suggests targeting adult financial strain could help prevent disability and depression among African-American adults

(17) TAFT AJ, HEGARTY KL. **Intimate partner violence against women: what outcomes are meaningful?** JAMA. 2010 Aug. 4, vol. 304, n° 5, pp.577-579
http://dx.doi.org/10.1001/jama.2010.1093 (**accès réservé EHESP**)

(18) TIWARI A, FONG DY, YUEN KH, YUK H, *et al.* **Effect of an advocacy intervention on mental health in Chinese women survivors of intimate partner violence: a randomized controlled trial**. JAMA. 2010 Aug. 4, vol. 304, n° 5, pp.536-543
http://dx.doi.org/10.1001/jama.2010.1052 ((accès réservé EHESP))

CONTEXT: Intimate partner violence (IPV) against women can have negative mental health consequences for survivors; however, the effect of interventions designed to improve survivors' depressive symptoms is unclear. OBJECTIVE: To determine whether an advocacy intervention would improve the depressive symptoms of Chinese women survivors of IPV. DESIGN, SETTING, AND PARTICIPANTS: Assessor-blinded randomized controlled trial of 200 Chinese women 18 years or older with a history of IPV, conducted from February 2007 to June 2009 in a community center in Hong Kong, China. INTERVENTION: The intervention group (n = 100) received a 12-week advocacy intervention comprising empowerment and telephone social support. The control group (n = 100) received usual community services including child care, health care and promotion, and recreational programs. MAIN OUTCOME MEASURES: Primary outcome was change in depressive symptoms (Chinese version of the Beck Depression Inventory II) between baseline and 9 months. Secondary outcomes were changes in IPV (Chinese Revised Conflict Tactics Scales), health-related quality of life (12-Item Short Form Health Survey), and perceived social support (Interpersonal Support Evaluation List) between baseline and 9 months. Usefulness of the intervention and usual community services was evaluated at 9 months. RESULTS: At 3 months, the mean change in depressive symptom score was 11.6 (95% CI, 9.5 to 13.7) in the control group and 14.9 (95% CI, 12.4 to 17.5) in the intervention group; respective changes at 9 months were 19.6 (95% CI, 16.6 to 22.7) and 23.2 (95% CI, 20.4 to 26.0). Intervention effects at 3 and 9 months were not significantly different (P = .86). The intervention significantly reduced depressive symptoms by 2.66 (95% CI, 0.26 to 5.06; P = .03) vs the control, less than the 5-unit minimal clinically important difference. Statistically significant improvement was found in partner psychological aggression (-1.87 [95% CI, -3.34 to -0.40]; mean change at 3 months, 1.5 [95% CI, -1.0 to 3.9] in the control group and 0.3 [95% CI, -0.7 to 1.4] in the intervention group; mean change at 9 months, -6.4 [95% CI, -7.8 to -5.0] and -8.9 [95% CI, -10.6 to -7.2]) and perceived social support (2.18 [95% CI, 0.48 to 3.89]; mean change at 3 months, 6.4 [95% CI, 4.9 to 7.8] and 9.2 [95% CI, 7.7 to 10.8]; mean change at 9 months, 12.4 [95% CI, 10.5 to 14.3] and 14.4 [95% CI, 12.7 to 16.1]) but not in physical assault, sexual coercion, or health-related quality of life. By end of study, more women in the intervention group found the advocacy intervention useful or extremely useful in improving intimate relationships vs those in the control group receiving usual community services (93.8% vs 81.7%; difference, 12.1% [95% CI, 2.1% to 22.0%]; P = .02) and in helping them to resolve conflicts with their intimate partners (97.5% vs 84.1%; difference, 13.4% [95% CI, 4.7% to 22.0%]; P = .001). CONCLUSION: Among community-dwelling abused Chinese women, an advocacy intervention did not result in a clinically meaningful improvement in depressive symptoms. TRIAL REGISTRATION: clinicaltrials.gov Identifier: NCT01054898

(19) VAN D, V, BRACKE P, LEVECQUE K. **Gender differences in depression in 23 European countries. Cross-national variation in the gender gap in depression**. Soc Sci Med. 2010 July, vol. 71, n° 2, pp.305-313=
http://dx.doi.org/10.1016/j.socscimed.2010.03.035 (accès réservé EHESP)

One of the most consistent findings in the social epidemiology of mental health is the gender gap in depression. Depression is approximately twice as prevalent among women as it is among men. However, the absence of comparable data hampers cross-national comparisons of the prevalence of depression in general populations. Using information about the frequency and severity of depressive symptoms from the third wave of the European Social Survey (ESS-3), we are able to fill the gap the absence of comparable data leaves. In the ESS-3, depression is measured with an eight-item version of the Center for Epidemiological Studies-Depression Scale. In the current study, we examine depression among men and women aged 18-75 in 23 European countries. Our results indicate that women report higher levels of depression than men do in all countries, but there is significant cross-national variation in this gender gap. Gender differences in depression are largest in some of the Eastern and Southern European countries and smallest in Ireland, Slovakia and some Nordic countries. Hierarchical linear models show that socioeconomic as well

as family-related factors moderate the relationship between gender and depression. Lower risk of depression is associated in both genders with marriage and cohabiting with a partner as well as with having a generally good socioeconomic position. In a majority of countries, socioeconomic factors have the strongest association with depression in both men and women. This research contributes new findings, expanding the small existing body of literature that presents highly comparable data on the prevalence of depression in women and men in Europe

(20) VAN RJ, DE JP. **Insurance and financial concerns among patients seeking care for acute myocardial infarction**. JAMA. 2010 Aug. 4, vol. 304, n° 5, pp.523-524
http://dx.doi.org/10.1001/jama.2010.1070 (**accès réservé EHESP**)

(21) VINCK P, PHAM PN. **Association of exposure to violence and potential traumatic events with self-reported physical and mental health status in the Central African Republic**. JAMA. 2010 Aug. 4, vol. 304, n° 5, pp.544-552
http://dx.doi.org/10.1001/jama.2010.1065 (**accès réservé EHESP**)

CONTEXT: For decades, the Central African Republic (CAR) has experienced violence, economic stagnation, and institutional failure. The latest wave of violence erupted in 2001 and continues to this day in some areas. Yet there has been little attention to the conflict and even less research to document and quantify the conflict's human cost. OBJECTIVE: To study levels of violence in CAR, including mortality levels, and the association between exposure to violence and traumatic events with self-reported physical and mental health status. DESIGN, SETTING, AND PARTICIPANTS: Multistage stratified cluster random survey of 1879 adults 18 years or older in selected households conducted in 5 administrative units of CAR (3 in the south, which has been free from recent violence, and 2 in the north, in which violence continues) between October and December 2009. MAIN OUTCOME MEASURES: Mortality, morbidity, exposure to potential traumatic events, sense of insecurity, and meeting of symptom criteria for depression and anxiety using the Hopkins Symptom Checklist-25 with a cut-off score of 1.75. RESULTS: The crude mortality rate (CMR) was 4.9 deaths (95% confidence interval [CI], 4.6-5.1) per 1000 population per month and self-reported CMR due to violence was 0.8 deaths (95% CI, 0.6-1.0) per 1000 population per month. Thirty-five percent reported their physical health status as being good or very good while 29% described it as bad or very bad. Respondents in northern prefectures reported higher rates of mortality, exposure to trauma, and insecurity and lower levels of physical health and access to health services compared with those in the south. The estimated prevalences of symptoms of depression and anxiety were 55.3% (95% CI, 51.6%-59.0%) and 52.5% (95% CI, 48.1%-56.8%), respectively. Exposure to violence and self-reported physical health were statistically associated with mental health outcomes ($P < .001$). Anxiety symptom scores were higher for respondents in the northern prefectures than those in the south ($t = 2.54$, $P = .01$). CONCLUSION: A high proportion of adult respondents in CAR reported witnessing or having personally experienced traumatic events over the course of the conflicts, and more than half met symptom criteria for depression and anxiety

(22) WU FC, TAJAR A, BEYNON JM, PYE SR, *et al.* **Identification of late-onset hypogonadism in middle-aged and elderly men**. N Engl J Med. 2010 July 8, vol. 363, n° 2, pp.123-135
http://dx.doi.org/10.1056/NEJMoa0911101 (**accès réservé EHESP**)

BACKGROUND: The association between aging-related testosterone deficiency and late-onset hypogonadism in men remains a controversial concept. We sought evidence-based criteria for identifying late-onset hypogonadism in the general population on the basis of an association between symptoms and a low testosterone level. METHODS: We surveyed a random population sample of 3369 men between the ages of 40 and 79 years at eight European centers. Using questionnaires, we collected data with regard to the subjects' general, sexual, physical, and psychological health. Levels of total testosterone were measured in morning blood samples by mass spectrometry, and free testosterone levels were calculated with the use of Vermeulen's formula. Data were randomly split into separate training and validation sets for confirmatory analyses. RESULTS: In the training set, symptoms of poor morning erection, low sexual desire, erectile dysfunction, inability to perform vigorous activity, depression, and fatigue were

significantly related to the testosterone level. Increased probabilities of the three sexual symptoms and limited physical vigor were discernible with decreased testosterone levels (ranges, 8.0 to 13.0 nmol per liter [2.3 to 3.7 ng per milliliter] for total testosterone and 160 to 280 pmol per liter [46 to 81 pg per milliliter] for free testosterone). However, only the three sexual symptoms had a syndromic association with decreased testosterone levels. An inverse relationship between an increasing number of sexual symptoms and a decreasing testosterone level was observed. These relationships were independently confirmed in the validation set, in which the strengths of the association between symptoms and low testosterone levels determined the minimum criteria necessary to identify late-onset hypogonadism. CONCLUSIONS: Late-onset hypogonadism can be defined by the presence of at least three sexual symptoms associated with a total testosterone level of less than 11 nmol per liter (3.2 ng per milliliter) and a free testosterone level of less than 220 pmol per liter (64 pg per milliliter)

Grippe A

sommaire

(1) AKAN H, GUROL Y, IZBIRAK G, OZDATLI S, *et al.* **Knowledge and attitudes of university students toward pandemic influenza: a cross-sectional study from Turkey**. BMC Public Health. 2010, vol. 10, n° 1, p.413
http://dx.doi.org/10.1186/1471-2458-10-413 (**accès libre**)

ABSTRACT: BACKGROUND: During an influenza pandemic, higher education institutions with large populations of young adults can become serious outbreak centers. Since outbreak management is essential to disease control, we aimed to examine university students' knowledge of and attitudes toward the pandemic influenza A/H1N1 and vaccination and other preventive measures. METHODS: A cross-sectional study was conducted among 402 first year university students at Yeditepe University in Istanbul, Turkey between 1st and 30th of November 2009. Data regarding socio-demographic characteristics of the students, perceptions, level of knowledge and attitudes toward influenza pandemic and prevention measures were collected by means of a self-administered questionnaire. The questionnaire was distributed by the students affiliated with SANITAS, a university club of students in health related sciences. RESULTS: 25.1% (101/402) of the study group perceived their personal risk of influenza as "high", while 40.5% (163/402) perceived it as "moderate", 20.6% (107/402) viewed it as "low" and 7.7% (31/402) indicated that it was "unknown". The risk perception of males was significantly lower than that of females (p = 0.004) and the risk perception among the students of health sciences was significantly lower than that of students of other sciences (p = 0.037). Within the study group, 72.1% (290/402) indicated that their main information source regarding H1N1 was the mass media. Health sciences students tended to rely more on the internet as an information source than other students (p = 0.015). The vast majority (92.8%; 373/402) of those interviewed indicated that they would not be vaccinated. The major concerns regarding vaccination had to do with the safety and side effects of the vaccine. Most of the participants (343/402, 85.3%) were carrying out one of prevention measures and the vast majority believed that hand washing, face mask and quarantina were effective measures for prevention. CONCLUSION: The participants had enough knowledge about H1N1 pandemic about the disease although there were still gaps and confusions in some areas. In the future, when planning management strategies regarding pandemics or outbreaks in higher education institutions, new strategies should be developed to promote positive health behaviour among university students compatible with the international guidelines. Main information source is mass media, so it seems that new policies must be developed to attract attention of students to use different and more scientific-based information sources

(2) BENTLEY RA, ORMEROD P. **A rapid method for assessing social versus independent interest in health issues: a case study of 'bird flu' and 'swine flu'**. Soc Sci Med. 2010 Aug., vol. 71, n° 3, pp.482-485
http://dx.doi.org/10.1016/j.socscimed.2010.03.042 (**accès réservé EHESP**)

Effective communication strategies regarding health issues are affected by the way in which the public obtain their knowledge, particularly whether people become interested independently, or through their social networks. This is often investigated through localized ethnography or surveys. In rapidly-evolving situations, however, there may also be a need for swift, case-specific assessment as a guide to initial strategy development. With this aim, we analyze real-time online data, provided by the new 'Google Trends' tool, concerning Internet search frequency for health-related issues. To these data we apply a simple model to characterise the effective degree of social transmission versus decisions made individually. As case examples, we explore two rapidly-evolved issues, namely the world-wide interest in avian influenza, or 'bird flu', in 2005, and in H1N1, or 'swine flu', from late April to early May 2009. The 2005 'bird flu' scare demonstrated almost pure imitation for two months initially, followed by a spike of independent decision that corresponded with an announcement by US president George Bush. For 'swine flu' in 2009, imitation was the more prevalent throughout. Overall, the results show how interest in health scares can spread primarily by social means, and that engaging more independent decisions at the population scale may require a dramatic announcement to push a populace over the 'tipping point'

(3) BUTLER D. **Flu experts rebut conflict claims**. Nature. 2010 June 10, vol. 465, n° 7299, pp.672-673
http://dx.doi.org/10.1038/465672a (**accès payant**)

(4) COHEN D, CARTER P. **Questioning the timeline of H1N1 flu vaccination contracts**. Nature. 2010 July 15, vol. 466, n° 7304, p.315
http://dx.doi.org/10.1038/466315a (**accès payant**)

(5) KON P. **WHO and pandemic flu. GlaxoSmithKline UK responds**. BMJ. 2010, vol. 340, p.c3464
http://www.ncbi.nlm.nih.gov/pubmed/20587574 (**accès libre, collection papier de la bibliothèque**)

(6) KUEHN BM. **FDA: Benefits of rotavirus vaccination outweigh potential contamination risk**. JAMA. 2010 July 7, vol. 304, n° 1, pp.30-31
http://dx.doi.org/10.1001/jama.2010.863 (**accès réservé EHESP**)

(7) LAURELL AC, HERRERA JR. **WHO and pandemic flu. What happened in Mexico**. BMJ. 2010, vol. 340, p.c3465
http://www.ncbi.nlm.nih.gov/pubmed/20587575 (**accès libre, collection papier de la**

(8) LAW R. **WHO and pandemic flu. There was also no new subtype**. BMJ. 2010, vol. 340, p.c3460
http://www.ncbi.nlm.nih.gov/pubmed/20587571 (**accès libre, collection papier de la bibliothèque**)

(9) LOPERT R, NOLAN T. **Child influenza vaccination. Panvax febrile reactions not a predictor**. BMJ. 2010, vol. 341, p.c3714
http://www.ncbi.nlm.nih.gov/pubmed/20659989 (**accès libre, collection papier de la bibliothèque**)

(10) MITKA M. **H1N1 influenza virus reassorting in pigs, poses unknown risk to human health**. JAMA. 2010 Aug. 11, vol. 304, n° 6, pp.626-627
http://dx.doi.org/10.1001/jama.2010.1056 (**accès réservé EHESP**)

(11) PFEIL A, MUTSCH M, HATZ C, SZUCS TD. **A cross-sectional survey to evaluate knowledge, attitudes and practices (KAP) regarding seasonal influenza vaccination among European travellers to resource-limited destinations**. BMC Public Health. 2010, vol. 10, p.402
http://dx.doi.org/10.1186/1471-2458-10-402 (**accès libre**)

BACKGROUND: Influenza is one of the most common vaccine-preventable diseases in travellers. By performing two cross-sectional questionnaire surveys during winter 2009 and winter 2010 among European travellers to resource-limited destinations, we aimed to investigate knowledge, attitudes and practices (KAP) regarding seasonal influenza vaccination. METHODS: Questionnaires were distributed in the waiting room to the visitors of the University of Zurich Centre for Travel' Health (CTH) in January and February 2009 and January 2010 prior to travel health counselling (CTH09 and CTH10). Questions included demographic data, travel-related characteristics and KAP regarding influenza vaccination. Data were analysed by using SPSS version 14.0 for Windows. Differences in proportions were compared using the Chi-square test and the significance level was set at p <or = 0.05. Predictors for seasonal and pandemic influenza vaccination were determined by multiple logistic regression analyses. RESULTS: With a response rate of 96.6%, 906 individuals were enrolled and 868 (92.5%) provided complete data. Seasonal influenza vaccination coverage was 13.7% (n = 119). Only 43 (14.2%) participants were vaccinated against pandemic influenza A/H1N1, mostly having received both vaccines simultaneously, the seasonal and pandemic one. Job-related purposes (44, 37%), age > 64 yrs (25, 21%) and recommendations of the family physician (27, 22.7%) were the most often reported reasons for being vaccinated. In the multiple logistic regression analyses of the pooled data increasing age (OR = 1.03, 95% CI 1.01 - 1.04), a business trip (OR = 0.39, 95% CI 0.17 - 0.92) and seasonal influenza vaccination in the previous winter seasons (OR = 12.91, 95% CI 8.09 - 20.58) were independent predictors for seasonal influenza vaccination in 2009 or 2010.Influenza vaccination recommended by the family doctor (327, 37.7%), travel to regions with known high risk of influenza (305, 35.1%), and influenza vaccination required for job purposes (233, 26.8%) were most frequently mentioned to consider influenza vaccination. CONCLUSIONS: Risk perception and vaccination coverage concerning seasonal and pandemic influenza was very poor among travellers to resource-limited destinations when compared to traditional at-risk groups. Previous access to influenza vaccination substantially facilitated vaccinations in the subsequent year. Information strategies about influenza should be intensified and include health professionals, e.g. family physicians, travel medicine practitioners and business enterprises

(12) RUBIN GJ, AMLOT R, CARTER H, LARGE S, *et al.* **Reassuring and managing patients with concerns about swine flu: Qualitative interviews with callers to NHS Direct**. BMC Public Health. 2010, vol. 10, p.451
http://dx.doi.org/10.1186/1471-2458-10-451 (**accès libre**)

ABSTRACT: BACKGROUND: During the early stages of the 2009 swine flu (influenza H1N1) outbreak, the large majority of patients who contacted the health services about the illness did not have it. In the UK, the NHS Direct telephone service was used by many of these patients. We used qualitative interviews to identify the main reasons why people approached NHS Direct with concerns about swine flu and to identify aspects of their contact which were reassuring, using a framework approach. METHODS: 33 patients participated in semi-structured interviews. All patients had telephoned NHS Direct between 11 and 14 May with concerns about swine flu and had been assessed as being unlikely to have the illness. RESULTS: Reasons for seeking advice about swine flu included: the presence of unexpectedly severe flu-like symptoms; uncertainties about how one can catch swine flu; concern about giving it to others; pressure from friends or employers; and seeking 'peace of mind.' Most participants found speaking to NHS Direct reassuring or useful. Helpful aspects included: having swine flu ruled out; receiving an alternative explanation for symptoms; clarification on how swine flu is transmitted; and the perceived credibility of NHS Direct. No-one reported anything that had increased their anxiety and only one

participant subsequently sought additional advice about swine flu from elsewhere. CONCLUSIONS: Future major incidents involving other forms of chemical, biological or radiological hazards may also cause large numbers of unexposed people to seek health advice. Our data suggest that providing telephone triage and information is helpful in such instances, particularly where advice can be given via a trusted, pre-existing service

(13) WEI CJ, BOYINGTON JC, MCTAMNEY PM, KONG WP, *et al.* **Induction of Broadly Neutralizing H1N1 Influenza Antibodies by Vaccination**. Science. 2010 July 15, http://dx.doi.org/10.1126/science.1192517 (**accès réservé EHESP**)

The rapid dissemination of the 2009 pandemic influenza virus underscores the need for universal influenza vaccines that elicit protective immunity to diverse viral strains. Here, we show that vaccination with plasmid DNA encoding H1N1 influenza hemagglutinin (HA) and boosting with seasonal vaccine or replication-defective adenovirus 5 (rAd5) vector encoding HA stimulated the production of broadly neutralizing influenza antibodies. This prime-boost combination increased neutralization of diverse H1N1 strains from 1934 to 2007 compared to either component alone and conferred protection against divergent H1N1 viruses in mice and ferrets. These antibodies were directed to the conserved stem region of HA and were also elicited in nonhuman primates. Cross-neutralization of H1N1 subtypes elicited by this approach provides a basis for development of a universal influenza vaccine for humans

(14) YAP J, LEE VJ, YAU TY, NG TP, *et al.* **Knowledge, attitudes and practices towards pandemic influenza among cases, close contacts, and healthcare workers in tropical Singapore: a cross-sectional survey**. BMC Public Health. 2010, vol. 10, p.442 http://dx.doi.org/10.1186/1471-2458-10-442 (**accès libre**)

ABSTRACT: BACKGROUND: Effective influenza pandemic management requires understanding of the factors influencing behavioral changes. We aim to determine the differences in knowledge, attitudes and practices in various different cohorts and explore the pertinent factors that influenced behavior in tropical Singapore. METHODS: We performed a cross-sectional knowledge, attitudes and practices survey in the Singapore military from mid-August to early-October 2009, among 3054 personnel in four exposure groups - laboratory-confirmed H1N1-2009 cases, close contacts of cases, healthcare workers, and general personnel. RESULTS: 1063 (34.8%) participants responded. The mean age was 21.4 (SE 0.2) years old. Close contacts had the highest knowledge score (71.7%, $p = 0.004$) while cases had the highest practice scores (58.8%, $p < 0.001$). There was a strong correlation between knowledge and practice scores ($r = 0.27$, $p < 0.01$) and knowledge and attitudes scores ($r = 0.21$, $p < 0.01$). The significant predictors of higher practice scores were higher knowledge scores ($p < 0.001$), Malay ethnicity ($p < 0.001$), exposure group ($p < 0.05$) and lower education level ($p < 0.05$). The significant predictors for higher attitudes scores were Malay ethnicity ($p = 0.014$) and higher knowledge scores ($p < 0.001$). The significant predictor for higher knowledge score was being a contact ($p = 0.007$). CONCLUSION: Knowledge is a significant influence on attitudes and practices in a pandemic, and personal experience influences practice behaviors. Efforts should be targeted at educating the general population to improve practices in the current pandemic, as well as for future epidemics

(15) ZAROCOSTAS J. **WHO swine flu review committee promises to probe links with drug industry**. BMJ. 2010, vol. 341, p.c3648 http://www.ncbi.nlm.nih.gov/pubmed/20610519 (**accès libre**, **collection papier de la bibliothèque**)

Maladies d'Alzheimer

sommaire

(1) MILLER G. **Epigenetics. A role for epigenetics in cognition**. Science. 2010 July 2, vol. 329, n° 5987, p.27 http://dx.doi.org/10.1126/science.329.5987.27 (**accès réservé EHESP**)

Maladies cardio-vasculaires

sommaire

(1) ABBATE A, VETROVEC G, CREA F. **Low diagnostic yield of elective coronary angiography**. N Engl J Med. 2010 July 1, vol. 363, n° 1, pp.92-93
http://dx.doi.org/10.1056/NEJMc1004220 (**accès réservé EHESP**)

(2) BHASKAR E. **Lenient versus strict rate control in atrial fibrillation**. N Engl J Med. 2010 July 22, vol. 363, n° 4, pp.393-394
http://www.ncbi.nlm.nih.gov/pubmed/20677363 (**accès réservé EHESP**)(**accès réservé EHESP**)

(3) BOLLAND MJ, AVENELL A, BARON JA, GREY A, *et al.* **Effect of calcium supplements on risk of myocardial infarction and cardiovascular events: meta-analysis**. BMJ. 2010, vol. 341, p.c3691
http://www.ncbi.nlm.nih.gov/pubmed/20671013 (**accès libre**, **collection papier de la bibliothèque**)

OBJECTIVE: To investigate whether calcium supplements increase the risk of cardiovascular events. DESIGN: Patient level and trial level meta-analyses. DATA SOURCES: Medline, Embase, and Cochrane Central Register of Controlled Trials (1966-March 2010), reference lists of meta-analyses of calcium supplements, and two clinical trial registries. Initial searches were carried out in November 2007, with electronic database searches repeated in March 2010. STUDY SELECTION: Eligible studies were randomised, placebo controlled trials of calcium supplements (>or=500 mg/day), with 100 or more participants of mean age more than 40 years and study duration more than one year. The lead authors of eligible trials supplied data. Cardiovascular outcomes were obtained from self reports, hospital admissions, and death certificates. RESULTS: 15 trials were eligible for inclusion, five with patient level data (8151 participants, median follow-up 3.6 years, interquartile range 2.7-4.3 years) and 11 with trial level data (11 921 participants, mean duration 4.0 years). In the five studies contributing patient level data, 143 people allocated to calcium had a myocardial infarction compared with 111 allocated to placebo (hazard ratio 1.31, 95% confidence interval 1.02 to 1.67, P=0.035). Non-significant increases occurred in the incidence of stroke (1.20, 0.96 to 1.50, P=0.11), the composite end point of myocardial infarction, stroke, or sudden death (1.18, 1.00 to 1.39, P=0.057), and death (1.09, 0.96 to 1.23, P=0.18). The meta-analysis of trial level data showed similar results: 296 people had a myocardial infarction (166 allocated to calcium, 130 to placebo), with an increased incidence of myocardial infarction in those allocated to calcium (pooled relative risk 1.27, 95% confidence interval 1.01 to 1.59, P=0.038). CONCLUSIONS: Calcium supplements (without coadministered vitamin D) are associated with an increased risk of myocardial infarction. As calcium supplements are widely used these modest increases in risk of cardiovascular disease might translate into a large burden of disease in the population. A reassessment of the role of calcium supplements in the management of osteoporosis is warranted

(4) BROTT TG, HOBSON RW, HOWARD G, ROUBIN GS, *et al.* **Stenting versus endarterectomy for treatment of carotid-artery stenosis**. N Engl J Med. 2010 July 1, vol. 363, n° 1, pp.11-23
http://dx.doi.org/10.1056/NEJMoa0912321 (**accès réservé EHESP**)

BACKGROUND: Carotid-artery stenting and carotid endarterectomy are both options for treating carotid-artery stenosis, an important cause of stroke. METHODS: We randomly assigned patients with symptomatic or asymptomatic carotid stenosis to undergo carotid-artery stenting or carotid endarterectomy. The primary composite end point was stroke, myocardial infarction, or death from any cause during the periprocedural period or any ipsilateral stroke within 4 years after randomization. RESULTS: For 2502 patients over a median follow-up period of 2.5 years, there was no significant difference in the estimated 4-year rates of the primary end point between the stenting group and the endarterectomy group (7.2% and 6.8%, respectively; hazard ratio with stenting, 1.11; 95% confidence interval, 0.81 to 1.51; P=0.51). There was no differential treatment effect with regard to the primary end point according to symptomatic status (P=0.84) or sex

(P=0.34). The 4-year rate of stroke or death was 6.4% with stenting and 4.7% with endarterectomy (hazard ratio, 1.50; P=0.03); the rates among symptomatic patients were 8.0% and 6.4% (hazard ratio, 1.37; P=0.14), and the rates among asymptomatic patients were 4.5% and 2.7% (hazard ratio, 1.86; P=0.07), respectively. Periprocedural rates of individual components of the end points differed between the stenting group and the endarterectomy group: for death (0.7% vs. 0.3%, P=0.18), for stroke (4.1% vs. 2.3%, P=0.01), and for myocardial infarction (1.1% vs. 2.3%, P=0.03). After this period, the incidences of ipsilateral stroke with stenting and with endarterectomy were similarly low (2.0% and 2.4%, respectively; P=0.85). CONCLUSIONS: Among patients with symptomatic or asymptomatic carotid stenosis, the risk of the composite primary outcome of stroke, myocardial infarction, or death did not differ significantly in the group undergoing carotid-artery stenting and the group undergoing carotid endarterectomy. During the periprocedural period, there was a higher risk of stroke with stenting and a higher risk of myocardial infarction with endarterectomy. (ClinicalTrials.gov number, NCT00004732.)

(5) BUCCIARELLI-DUCCI C, PENNELL DJ. **Low diagnostic yield of elective coronary angiography**. N Engl J Med. 2010 July 1, vol. 363, n° 1, pp.94-95
http://www.ncbi.nlm.nih.gov/pubmed/20597151 (**accès réservé EHESP**)

(6) CLELAND JG, WITTE K, STEEL S. **Calcium supplements in people with osteoporosis**. BMJ. 2010, vol. 341, p.c3856
http://www.ncbi.nlm.nih.gov/pubmed/20671014 (**accès libre, collection papier de la bibliothèque**)

(7) COOPER-DEHOFF RM, GONG Y, HANDBERG EM, BAVRY AA, *et al.* **Tight blood pressure control and cardiovascular outcomes among hypertensive patients with diabetes and coronary artery disease**. JAMA. 2010 July 7, vol. 304, n° 1, pp.61-68
http://dx.doi.org/10.1001/jama.2010.884 (**accès réservé EHESP**)

CONTEXT: Hypertension guidelines advocate treating systolic blood pressure (BP) to less than 130 mm Hg for patients with diabetes mellitus; however, data are lacking for the growing population who also have coronary artery disease (CAD). OBJECTIVE: To determine the association of systolic BP control achieved and adverse cardiovascular outcomes in a cohort of patients with diabetes and CAD. DESIGN, SETTING, AND PATIENTS: Observational subgroup analysis of 6400 of the 22,576 participants in the International Verapamil SR-Trandolapril Study (INVEST). For this analysis, participants were at least 50 years old and had diabetes and CAD. Participants were recruited between September 1997 and December 2000 from 862 sites in 14 countries and were followed up through March 2003 with an extended follow-up through August 2008 through the National Death Index for US participants. INTERVENTION: Patients received first-line treatment of either a calcium antagonist or beta-blocker followed by angiotensin-converting enzyme inhibitor, a diuretic, or both to achieve systolic BP of less than 130 and diastolic BP of less than 85 mm Hg. Patients were categorized as having tight control if they could maintain their systolic BP at less than 130 mm Hg; usual control if it ranged from 130 mm Hg to less than 140 mm Hg; and uncontrolled if it was 140 mm Hg or higher. MAIN OUTCOME MEASURES: Adverse cardiovascular outcomes, including the primary outcomes which was the first occurrence of all-cause death, nonfatal myocardial infarction, or nonfatal stroke. RESULTS: During 16,893 patient-years of follow-up, 286 patients (12.7%) who maintained tight control, 249 (12.6%) who had usual control, and 431 (19.8%) who had uncontrolled systolic BP experienced a primary outcome event. Patients in the usual-control group had a cardiovascular event rate of 12.6% vs a 19.8% event rate for those in the uncontrolled group (adjusted hazard ratio [HR], 1.46; 95% confidence interval [CI], 1.25-1.71; P < .001). However, little difference existed between those with usual control and those with tight control. Their respective event rates were 12.6% vs 12.7% (adjusted HR, 1.11; 95% CI, 0.93-1.32; P = .24). The all-cause mortality rate was 11.0% in the tight-control group vs 10.2% in the usual-control group (adjusted HR, 1.20; 95% CI, 0.99-1.45; P = .06); however, when extended follow-up was included, risk of all-cause mortality was 22.8% in the tight control vs 21.8% in the usual control group (adjusted HR, 1.15; 95% CI, 1.01-1.32; P = .04). CONCLUSION: Tight control of systolic BP among patients with diabetes and CAD was not

associated with improved cardiovascular outcomes compared with usual control. TRIAL REGISTRATION: clinicaltrials.gov Identifier: NCT00133692

(8) COSSMAN JS, JAMES WL, COSBY AG, COSSMAN RE. **Underlying causes of the emerging nonmetropolitan mortality penalty**. Am J Public Health. 2010 Aug., vol. 100, n° 8, pp.1417-1419 http://dx.doi.org/10.2105/AJPH.2009.174185 (**accès réservé EHESP**)

The nonmetropolitan mortality penalty results in an estimated 40 201 excessive US deaths per year, deaths that would not occur if nonmetropolitan and metropolitan residents died at the same rate. We explored the underlying causes of the nonmetropolitan mortality penalty by examining variation in cause of death. Declines in heart disease and cancer death rates in metropolitan areas drive the nonmetropolitan mortality penalty. Future work should explore why the top causes of death are higher in nonmetropolitan areas than they are in metropolitan areas

(9) CUCULI F, KHARBANDA R, PRENDERGAST B. **Low diagnostic yield of elective coronary angiography**. N Engl J Med. 2010 July 1, vol. 363, n° 1, pp.93-94 http://www.ncbi.nlm.nih.gov/pubmed/20597150 (**accès réservé EHESP**)(**accès réservé EHESP**)

(10) DAVIS SM, DONNAN GA. **Carotid-artery stenting in stroke prevention**. N Engl J Med. 2010 July 1, vol. 363, n° 1, pp.80-82 http://dx.doi.org/10.1056/NEJMe1005220 (**accès réservé EHESP**)

(11) DEBETTE S, MARKUS HS. **The clinical importance of white matter hyperintensities on brain magnetic resonance imaging: systematic review and meta-analysis**. BMJ. 2010, vol. 341, p.c3666 http://www.ncbi.nlm.nih.gov/pubmed/20660506 (**accès libre, collection papier de la bibliothèque**)

OBJECTIVES: To review the evidence for an association of white matter hyperintensities with risk of stroke, cognitive decline, dementia, and death. DESIGN: Systematic review and meta-analysis. DATA SOURCES: PubMed from 1966 to 23 November 2009. STUDY SELECTION: Prospective longitudinal studies that used magnetic resonance imaging and assessed the impact of white matter hyperintensities on risk of incident stroke, cognitive decline, dementia, and death, and, for the meta-analysis, studies that provided risk estimates for a categorical measure of white matter hyperintensities, assessing the impact of these lesions on risk of stroke, dementia, and death. DATA EXTRACTION: Population studied, duration of follow-up, method used to measure white matter hyperintensities, definition of the outcome, and measure of the association of white matter hyperintensities with the outcome. DATA SYNTHESIS: 46 longitudinal studies evaluated the association of white matter hyperintensities with risk of stroke (n=12), cognitive decline (n=19), dementia (n=17), and death (n=10). 22 studies could be included in a meta-analysis (nine of stroke, nine of dementia, eight of death). White matter hyperintensities were associated with an increased risk of stroke (hazard ratio 3.3, 95% confidence interval 2.6 to 4.4), dementia (1.9, 1.3 to 2.8), and death (2.0, 1.6 to 2.7). An association of white matter hyperintensities with a faster decline in global cognitive performance, executive function, and processing speed was also suggested. CONCLUSION: White matter hyperintensities predict an increased risk of stroke, dementia, and death. Therefore white matter hyperintensities indicate an increased risk of cerebrovascular events when identified as part of diagnostic investigations, and support their use as an intermediate marker in a research setting. Their discovery should prompt detailed screening for risk factors of stroke and dementia

(12) DIAMOND GA, KAUL S. **Low diagnostic yield of elective coronary angiography**. N Engl J Med. 2010 July 1, vol. 363, n° 1, pp.93-95
http://www.ncbi.nlm.nih.gov/pubmed/20597149 (**accès réservé EHESP**)(**accès réservé EHESP**)

(13) EBRAHIM S. **Rapid responses, population prevention and being bored to death**. Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.323-326
http://www.ncbi.nlm.nih.gov/pubmed/20545022 (**accès réservé EHESP**)(**accès réservé EHESP**)

(14) GRAHAM DJ, OUELLET-HELLSTROM R, MACURDY TE, ALI F, *et al.* **Risk of acute myocardial infarction, stroke, heart failure, and death in elderly Medicare patients treated with rosiglitazone or pioglitazone**. JAMA. 2010 July 28, vol. 304, n° 4, pp.411-418
http://dx.doi.org/10.1001/jama.2010.920 (**accès réservé EHESP**)

CONTEXT: Studies have suggested that the use of rosiglitazone may be associated with an increased risk of serious cardiovascular events compared with other treatments for type 2 diabetes. OBJECTIVE: To determine if the risk of serious cardiovascular harm is increased by rosiglitazone compared with pioglitazone, the other thiazolidinedione marketed in the United States. DESIGN, SETTING, AND PATIENTS: Nationwide, observational, retrospective, inception cohort of 227,571 Medicare beneficiaries aged 65 years or older (mean age, 74.4 years) who initiated treatment with rosiglitazone or pioglitazone through a Medicare Part D prescription drug plan from July 2006-June 2009 and who underwent follow-up for up to 3 years after thiazolidinedione initiation. MAIN OUTCOME MEASURES: Individual end points of acute myocardial infarction (AMI), stroke, heart failure, and all-cause mortality (death), and composite end point of AMI, stroke, heart failure, or death, assessed using incidence rates by thiazolidinedione, attributable risk, number needed to harm, Kaplan-Meier plots of time to event, and Cox proportional hazard ratios for time to event, adjusted for potential confounding factors, with pioglitazone as reference. RESULTS: A total of 8667 end points were observed during the study period. The adjusted hazard ratio for rosiglitazone compared with pioglitazone was 1.06 (95% confidence interval [CI], 0.96-1.18) for AMI; 1.27 (95% CI, 1.12-1.45) for stroke; 1.25 (95% CI, 1.16-1.34) for heart failure; 1.14 (95% CI, 1.05-1.24) for death; and 1.18 (95% CI, 1.12-1.23) for the composite of AMI, stroke, heart failure, or death. The attributable risk for this composite end point was 1.68 (95% CI, 1.27-2.08) excess events per 100 person-years of treatment with rosiglitazone compared with pioglitazone. The corresponding number needed to harm was 60 (95% CI, 48-79) treated for 1 year. CONCLUSION: Compared with prescription of pioglitazone, prescription of rosiglitazone was associated with an increased risk of stroke, heart failure, and all-cause mortality and an increased risk of the composite of AMI, stroke, heart failure, or all-cause mortality in patients 65 years or older

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http://dx.doi.org/10.1056/NEJMcpc1004364 (**accès réservé EHESP**)

(16) KERR E, ARULRAJ N, SCOTT M, MCDOWALL M, *et al.* **A telephone hotline for transient ischaemic attack and stroke: prospective audit of a model to improve rapid access to specialist stroke care**. BMJ. 2010, vol. 341, p.c3265
http://www.ncbi.nlm.nih.gov/pubmed/20601699 (**accès libre**, **collection papier de la bibliothèque**)

PROBLEM: Patients with transient ischaemic attack or stroke benefit from early diagnosis, specialist assessment, and treatment with thrombolysis, and from stroke unit care and secondary prevention. The challenge with such patients is to minimise delays and ensure that treatment is appropriate, and to provide this care with the available resources. DESIGN: An ongoing prospective audit of a transient ischaemic attack and stroke clinic (1 January 2005 to 30 September 2009), as part of the Scottish Stroke Care Audit, and a three month targeted audit of

immediate telephone access to a specialist stroke consultant (1 February 2009 to 30 April 2009). SETTING: Stroke and transient ischaemic attack services in Lothian, a region of Scotland with a population of 810,000. KEY MEASURES FOR IMPROVEMENT: Delays to assessment at a rapid access transient ischaemic attack and stroke clinic; delays to appropriate treatment. STRATEGY FOR CHANGE: In February 2007 we introduced a 24 hours a day, seven days a week hotline to a consultant, who provided immediate advice on diagnosis, investigation, and emergency treatment for patients with transient ischaemic attack or stroke, and suggested the most appropriate care pathway, which might include an early appointment in a transient ischaemic attack and stroke clinic. EFFECTS OF CHANGE: The introduction of the hotline was associated with an immediate and sustained reduction in delays to assessment (from 13 to three days) and treatment. The proportion of participants taking statins at the time of visiting the clinic increased from 40% before the introduction of the hotline to 60% after the hotline was in place. Also, the hotline contributed to a reduction in the delay from last event to carotid surgery, from 58 days to 21.5 days. A total of 376 calls were received during the three month audit. Of the 273 (88%) referrers who responded to our questionnaire, 257 (94%) were very satisfied with the advice given over the hotline. LESSONS LEARNT: Although associated with some disruption to the activities of the consultants, a 24 hours a day, seven days a week telephone hotline to a consultant is a feasible and effective means of reducing delays to specialist assessment and treatment of patients with transient ischaemic attack or stroke

(17) KMIETOWICZ Z. **Too few people in UK at high risk of stroke are getting carotid endarterectomies**. BMJ. 2010, vol. 341, p.c3879
http://www.ncbi.nlm.nih.gov/pubmed/20660009 (**accès libre, collection papier de la bibliothèque**)

(18) KRUMHOLZ HM, HAYWARD RA. **Shifting views on lipid lowering therapy**. BMJ. 2010, vol. 341, p.c3531
http://www.ncbi.nlm.nih.gov/pubmed/20667950 (**accès libre, collection papier de la bibliothèque**)

(19) LOUCKS EB, PILOTE L, LYNCH JW, RICHARD H, *et al.* **Life course socioeconomic position is associated with inflammatory markers: the Framingham Offspring Study**. Soc Sci Med. 2010 July, vol. 71, n° 1, pp.187-195
http://dx.doi.org/10.1016/j.socscimed.2010.03.012 (**accès réservé EHESP**)

Associations between life course socioeconomic position (SEP) and novel biological risk markers for coronary heart disease such as inflammatory markers are not well understood. Most studies demonstrate inverse associations of life course SEP with C-reactive protein (CRP), interleukin-6 (IL-6) and fibrinogen, however little is known about associations between life course SEP and other inflammatory markers including intercellular adhesion molecule-1 (ICAM-1), tumor necrosis factor II (TNFR2), lipoprotein phospholipase A2 (Lp-PLA2) activity, monocyte chemoattractant protein-1 (MCP-1) or P-selectin. The objectives of this analysis were to determine whether three life course SEP frameworks ("accumulation of risk", "social mobility" and "sensitive periods") are associated with the aforementioned inflammatory markers. We examined 1413 Framingham Offspring Study participants (mean age 61.2+/-8.6 years, 54% women), using multivariable regression analyses. In age- and sex-adjusted regression analyses, cumulative SEP ("accumulation of risk" SEP framework), for low vs. high SEP, was inversely associated with CRP, IL-6, ICAM-1, TNFR2, Lp-PLA2 activity, MCP-1 and fibrinogen. We found that there were few consistent trends between social mobility trajectories and most inflammatory markers. Own educational attainment was inversely associated with 7 of 8 studied inflammatory markers, while father's education, father's occupation and own occupation were inversely associated with 4, 5 and 4 inflammatory markers, respectively, in age- and sex-adjusted analyses. The strengths of association between SEP and inflammatory markers were typically substantially accounted for by CHD risk markers (smoking, body mass index, systolic blood pressure, total:HDL cholesterol ratio, fasting glucose, medications, depressive symptomatology) suggesting these may be important mechanisms that explain associations between SEP and the studied inflammatory markers

(20) MITKA M. **Some suggest wider therapeutic window for offering alteplase to treat stroke**. JAMA. 2010 July 14, vol. 304, n° 2, p.146
http://dx.doi.org/10.1001/jama.2010.875 (**accès réservé EHESP**)

(21) NORDESTGAARD BG. **Commentary: The Finnish success of cardiovascular risk factor reduction**. Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.518-519
http://dx.doi.org/10.1093/ije/dyq004 (**accès réservé EHESP**)

(22) O'DONNELL MJ, XAVIER D, LIU L, ZHANG H, *et al.* **Risk factors for ischaemic and intracerebral haemorrhagic stroke in 22 countries (the INTERSTROKE study): a case-control study**. Lancet. 2010 July 10, vol. 376, n° 9735, pp.112-123
http://dx.doi.org/10.1016/S0140-6736(10)60834-3 (**accès réservé EHESP**)

BACKGROUND: The contribution of various risk factors to the burden of stroke worldwide is unknown, particularly in countries of low and middle income. We aimed to establish the association of known and emerging risk factors with stroke and its primary subtypes, assess the contribution of these risk factors to the burden of stroke, and explore the differences between risk factors for stroke and myocardial infarction. METHODS: We undertook a standardised case-control study in 22 countries worldwide between March 1, 2007, and April 23, 2010. Cases were patients with acute first stroke (within 5 days of symptoms onset and 72 h of hospital admission). Controls had no history of stroke, and were matched with cases for age and sex. All participants completed a structured questionnaire and a physical examination, and most provided blood and urine samples. We calculated odds ratios (ORs) and population-attributable risks (PARs) for the association of all stroke, ischaemic stroke, and intracerebral haemorrhagic stroke with selected risk factors. FINDINGS: In the first 3000 cases (n=2337, 78%, with ischaemic stroke; n=663, 22%, with intracerebral haemorrhagic stroke) and 3000 controls, significant risk factors for all stroke were: history of hypertension (OR 2.64, 99% CI 2.26-3.08; PAR 34.6%, 99% CI 30.4-39.1); current smoking (2.09, 1.75-2.51; 18.9%, 15.3-23.1); waist-to-hip ratio (1.65, 1.36-1.99 for highest vs lowest tertile; 26.5%, 18.8-36.0); diet risk score (1.35, 1.11-1.64 for highest vs lowest tertile; 18.8%, 11.2-29.7); regular physical activity (0.69, 0.53-0.90; 28.5%, 14.5-48.5); diabetes mellitus (1.36, 1.10-1.68; 5.0%, 2.6-9.5); alcohol intake (1.51, 1.18-1.92 for more than 30 drinks per month or binge drinking; 3.8%, 0.9-14.4); psychosocial stress (1.30, 1.06-1.60; 4.6%, 2.1-9.6) and depression (1.35, 1.10-1.66; 5.2%, 2.7-9.8); cardiac causes (2.38, 1.77-3.20; 6.7%, 4.8-9.1); and ratio of apolipoproteins B to A1 (1.89, 1.49-2.40 for highest vs lowest tertile; 24.9%, 15.7-37.1). Collectively, these risk factors accounted for 88.1% (99% CI 82.3-92.2) of the PAR for all stroke. When an alternate definition of hypertension was used (history of hypertension or blood pressure >160/90 mm Hg), the combined PAR was 90.3% (85.3-93.7) for all stroke. These risk factors were all significant for ischaemic stroke, whereas hypertension, smoking, waist-to-hip ratio, diet, and alcohol intake were significant risk factors for intracerebral haemorrhagic stroke. INTERPRETATION: Our findings suggest that ten risk factors are associated with 90% of the risk of stroke. Targeted interventions that reduce blood pressure and smoking, and promote physical activity and a healthy diet, could substantially reduce the burden of stroke. FUNDING: Canadian Institutes of Health Research, Heart and Stroke Foundation of Canada, Canadian Stroke Network, Pfizer Cardiovascular Award, Merck, AstraZeneca, and Boehringer Ingelheim

(23) RAJU NC, HANKEY GJ. **Dabigatran etexilate in people with atrial fibrillation**. BMJ. 2010, vol. 341, p.c3784
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(24) SARWAR N, GAO P, SESHASAI SR, GOBIN R, *et al.* **Diabetes mellitus, fasting blood glucose concentration, and risk of vascular disease: a collaborative meta-analysis of 102 prospective studies**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2215-2222
http://dx.doi.org/10.1016/S0140-6736(10)60484-9 (**accès réservé EHESP**)

BACKGROUND: Uncertainties persist about the magnitude of associations of diabetes mellitus and fasting glucose concentration with risk of coronary heart disease and major stroke subtypes. We aimed to quantify these associations for a wide range of circumstances. METHODS: We undertook a meta-analysis of individual records of diabetes, fasting blood glucose concentration, and other risk factors in people without initial vascular disease from studies in the Emerging Risk Factors Collaboration. We combined within-study regressions that were adjusted for age, sex, smoking, systolic blood pressure, and body-mass index to calculate hazard ratios (HRs) for vascular disease. FINDINGS: Analyses included data for 698 782 people (52 765 non-fatal or fatal vascular outcomes; 8.49 million person-years at risk) from 102 prospective studies. Adjusted HRs with diabetes were: 2.00 (95% CI 1.83-2.19) for coronary heart disease; 2.27 (1.95-2.65) for ischaemic stroke; 1.56 (1.19-2.05) for haemorrhagic stroke; 1.84 (1.59-2.13) for unclassified stroke; and 1.73 (1.51-1.98) for the aggregate of other vascular deaths. HRs did not change appreciably after further adjustment for lipid, inflammatory, or renal markers. HRs for coronary heart disease were higher in women than in men, at 40-59 years than at 70 years and older, and with fatal than with non-fatal disease. At an adult population-wide prevalence of 10%, diabetes was estimated to account for 11% (10-12%) of vascular deaths. Fasting blood glucose concentration was non-linearly related to vascular risk, with no significant associations between 3.90 mmol/L and 5.59 mmol/L. Compared with fasting blood glucose concentrations of 3.90-5.59 mmol/L, HRs for coronary heart disease were: 1.07 (0.97-1.18) for lower than 3.90 mmol/L; 1.11 (1.04-1.18) for 5.60-6.09 mmol/L; and 1.17 (1.08-1.26) for 6.10-6.99 mmol/L. In people without a history of diabetes, information about fasting blood glucose concentration or impaired fasting glucose status did not significantly improve metrics of vascular disease prediction when added to information about several conventional risk factors. INTERPRETATION: Diabetes confers about a two-fold excess risk for a wide range of vascular diseases, independently from other conventional risk factors. In people without diabetes, fasting blood glucose concentration is modestly and non-linearly associated with risk of vascular disease. FUNDING: British Heart Foundation, UK Medical Research Council, and Pfizer

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http://dx.doi.org/10.1016/S0140-6736(10)60702-7 (**accès réservé EHESP**)

(26) SERRUYS PW, SILBER S, GARG S, VAN GEUNS RJ, *et al.* **Comparison of zotarolimus-eluting and everolimus-eluting coronary stents**. N Engl J Med. 2010 July 8, vol. 363, n° 2, pp.136-146
http://dx.doi.org/10.1056/NEJMoa1004130 (**accès réservé EHESP**)

BACKGROUND: New-generation coronary stents that release zotarolimus or everolimus have been shown to reduce the risk of restenosis. However, it is unclear whether there are differences in efficacy and safety between the two types of stents on the basis of prospectively adjudicated end points endorsed by the Food and Drug Administration. METHODS: In this multicenter, noninferiority trial with minimal exclusion criteria, we randomly assigned 2292 patients to undergo treatment with coronary stents releasing either zotarolimus or everolimus. Twenty percent of patients were randomly selected for repeat angiography at 13 months. The primary end point was target-lesion failure, defined as a composite of death from cardiac causes, any myocardial infarction (not clearly attributable to a nontarget vessel), or clinically indicated target-lesion revascularization within 12 months. The secondary angiographic end point was the extent of in-stent stenosis at 13 months. RESULTS: At least one off-label criterion for stent placement was present in 66% of patients. The zotarolimus-eluting stent was noninferior to the everolimus-eluting stent with respect to the primary end point, which occurred in 8.2% and 8.3% of patients, respectively (P<0.001 for noninferiority). There were no significant between-group differences in the rate of death from cardiac causes, any myocardial infarction, or revascularization. The rate of

stent thrombosis was 2.3% in the zotarolimus-stent group and 1.5% in the everolimus-stent group (P=0.17). The zotarolimus-eluting stent was also noninferior regarding the degree (+/-SD) of in-stent stenosis (21.65+/-14.42% for zotarolimus vs. 19.76+/-14.64% for everolimus, P=0.04 for noninferiority). In-stent late lumen loss was 0.27+/-0.43 mm in the zotarolimus-stent group versus 0.19+/-0.40 mm in the everolimus-stent group (P=0.08). There were no significant between-group differences in the rate of adverse events. CONCLUSIONS: At 13 months, the new-generation zotarolimus-eluting stent was found to be noninferior to the everolimus-eluting stent in a population of patients who had minimal exclusion criteria. (ClinicalTrials.gov number, NCT00617084.)

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http://dx.doi.org/10.1016/S0140-6736(10)60975-0 (**accès réservé EHESP**)

(28) VARTIAINEN E, LAATIKAINEN T, PELTONEN M, JUOLEVI A, *et al.* **Thirty-five-year trends in cardiovascular risk factors in Finland**. Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.504-518
http://dx.doi.org/10.1093/ije/dyp330 (**accès réservé EHESP**)

BACKGROUND: In the late 1960s, coronary heart disease (CHD) mortality among Finnish men was the highest in the world. From 1972 to 2007, risk factor surveys have been carried out to monitor risk factor trends and assess their contribution to declining mortality in Finland. METHODS: The first risk factor survey was carried out in the North Karelia and Kuopio provinces in 1972 as the basis for the evaluation of the North Karelia Project. Since then, up to five geographical areas have been included in the surveys. The target population has been persons aged 25-74 years, except in the first two surveys where the sample was drawn from a population aged 30-59 years. Risk factor contribution on mortality change was assessed by a logistic regression model. RESULTS: A remarkable decline in serum cholesterol levels was observed between 1972 and 2007. Blood pressure declined among both men and women until 2002 but levelled off during the last 5 years. Prevalence of smoking decreased among men. Among women, smoking increased throughout the survey years until 2002 but did not increase between 2002 and 2007. Body mass index (BMI) has continuously increased among men. Among women, BMI decreased until 1982, but since then an increasing trend has been observed. Risk factor changes explained a 60% reduction in coronary mortality in middle-aged men while the observed reduction was 80%. CONCLUSIONS: The 80% decline in coronary mortality in Finland mainly reflects a great reduction of the risk factor levels; these in turn have been associated with long-term comprehensive chronic disease prevention and health promotion interventions

(29) WALLIN A, FLADBY T. **Do white matter hyperintensities on MRI matter clinically?** BMJ. 2010, vol. 341, p.c3400
http://www.ncbi.nlm.nih.gov/pubmed/20660505 (**accès libre, collection papier de la bibliothèque**)

Maladies liées à l'alcool

sommaire

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http://www.ncbi.nlm.nih.gov/pubmed/20648960 (**accès réservé EHESP**)

(2) HUERTA MC, BORGONOVI F. **Education, alcohol use and abuse among young adults in Britain**. Soc Sci Med. 2010 July, vol. 71, n° 1, pp.143-151
http://dx.doi.org/10.1016/j.socscimed.2010.03.022 (**accès réservé EHESP**)

In this article we explore the relationship between education and alcohol consumption. We examine whether the probability of abusing alcohol differs across educational groups. We use data from the British Cohort Study, a longitudinal study of one week's birth in Britain in 1970. We

analysed data collected at age 34 (in 2004) and complement it with information gathered at previous sweeps. Measures of alcohol abuse include alcohol consumption above NHS guidelines, daily alcohol consumption and problem drinking. We found that higher educational attainment is associated with increased odds of daily alcohol consumption and problem drinking. The relationship is stronger for females than males. Individuals who achieved high educational test scores in childhood are at a significantly higher risk of abusing alcohol across all dimensions. Our results also suggest that educational qualifications and academic performance are associated with the probability of belonging to different typologies of alcohol consumers among women while this association is not present in the case of educational qualifications and is very weak in the case of academic performance among males

(3) SAITZ R, NAIMI TS. **Adolescent alcohol use and violence: are brief interventions the answer?** JAMA. 2010 Aug. 4, vol. 304, n° 5, pp.575-577= http://dx.doi.org/10.1001/jama.2010.1088 (**accès réservé EHESP**)

(4) SHINTANI F, IZUMI M. **Black legs**. BMJ. 2010, vol. 341, p.c3511 http://www.ncbi.nlm.nih.gov/pubmed/20660006 (**accès libre, collection papier de la bibliothèque**)

(5) WALTON MA, CHERMACK ST, SHOPE JT, BINGHAM CR, *et al.* **Effects of a brief intervention for reducing violence and alcohol misuse among adolescents: a randomized controlled trial**. JAMA. 2010 Aug. 4, vol. 304, n° 5, pp.527-535 http://dx.doi.org/10.1001/jama.2010.1066 (**accès réservé EHESP**)

CONTEXT: Emergency department (ED) visits present an opportunity to deliver brief interventions to reduce violence and alcohol misuse among urban adolescents at risk of future injury. OBJECTIVE: To determine the efficacy of brief interventions addressing violence and alcohol use among adolescents presenting to an urban ED. DESIGN, SETTING, AND PARTICIPANTS: Between September 2006 and September 2009, 3338 patients aged 14 to 18 years presenting to a level I ED in Flint, Michigan, between 12 pm and 11 pm 7 days a week completed a computerized survey (43.5% male; 55.9% African American). Adolescents reporting past-year alcohol use and aggression were enrolled in a randomized controlled trial (SafERteens). INTERVENTION: All patients underwent a computerized baseline assessment and were randomized to a control group that received a brochure (n = 235) or a 35-minute brief intervention delivered by either a computer (n = 237) or therapist (n = 254) in the ED, with follow-up assessments at 3 and 6 months. Combining motivational interviewing with skills training, the brief intervention for violence and alcohol included review of goals, tailored feedback, decisional balance exercise, role plays, and referrals. MAIN OUTCOME MEASURES: Self-report measures included peer aggression and violence, violence consequences, alcohol use, binge drinking, and alcohol consequences. RESULTS: About 25% (n = 829) of screened patients had positive results for both alcohol and violence; 726 were randomized. Compared with controls, participants in the therapist intervention showed self-reported reductions in the occurrence of peer aggression (therapist, -34.3%; control, -16.4%; relative risk [RR], 0.74; 95% confidence interval [CI], 0.61-0.90), experience of peer violence (therapist, -10.4%; control, +4.7%; RR, 0.70; 95% CI, 0.52-0.95), and violence consequences (therapist, -30.4%; control, -13.0%; RR, 0.76; 95% CI, 0.64-0.90) at 3 months. At 6 months, participants in the therapist intervention showed self-reported reductions in alcohol consequences (therapist, -32.2%; control, -17.7%; odds ratio, 0.56; 95% CI, 0.34-0.91) compared with controls; participants in the computer intervention also showed self-reported reductions in alcohol consequences (computer, -29.1%; control, -17.7%; odds ratio, 0.57; 95% CI, 0.34-0.95). CONCLUSION: Among adolescents identified in the ED with self-reported alcohol use and aggression, a brief intervention resulted in a decrease in the prevalence of self-reported aggression and alcohol consequences. TRIAL REGISTRATION: clinicaltrials.gov Identifier: NCT00251212

Paludisme

sommaire

(1) ADAMSON R, REDDY V, JONES L, ANTWI M, *et al.* **Epidemiology and burden of hepatitis A, malaria, and typhoid in New York City associated with travel: implications for public health policy**. Am J Public Health. 2010 July, vol. 100, n° 7, pp.1249-1252
http://dx.doi.org/10.2105/AJPH.2009.178335 (**accès réservé EHESP**)

We examined New York City Department of Health and Mental Hygiene surveillance data on hepatitis A, malaria, and typhoid to determine the proportion of these diseases related to travel and their geographic distribution. We found that 61% of hepatitis A cases, 100% of malaria cases, and 78% of typhoid cases were travel related and that cases clustered in specific populations and neighborhoods at which public health interventions could be targeted. High-risk groups include Hispanics (for hepatitis A), West Africans living in the Bronx (for malaria), and South Asians (for typhoid)

(2) BERTI PR, MILDON A, SIEKMANS K, MAIN B, *et al.* **An adequacy evaluation of a 10-year, four-country nutrition and health programme**. Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.613-629
http://dx.doi.org/10.1093/ije/dyp389 (**accès réservé EHESP**)

BACKGROUND: Evaluations of large-scale health and nutrition programmes in developing countries are needed for determining the effectiveness of interventions. This article critically analyses a non-governmental organization (NGO)-led large-scale, multi-country, 10-year micronutrient and health (MICAH) programme with an 'adequacy evaluation', that is, a documentation of time trends in the expected direction. METHODS: MICAH was implemented from 1996 to 2005 in selected areas of Ethiopia, Ghana, Malawi and Tanzania, reaching >6 million people with numerous health and nutrition interventions. Coverage and impact were monitored through surveys at baseline, midpoint and end of funding. The data were subjected to post-hoc methods of quality determination, and, if of suitable quality, included in the adequacy evaluation. RESULTS: Most collected data were of moderate or high quality and therefore included in the adequacy evaluation. There were moderate to large improvements in vitamin A status in Ethiopian school-age children, children <5 years of age in Tanzania and Ghana and mothers in Ghana. Iodine status improved in Malawi and Tanzania. Anaemia rates and malaria prevalence decreased in women, pregnant women and pre-school children in Ghana, Malawi and Tanzania, but anaemia increased in Ethiopian women. Large increases were reported for rates of exclusive breastfeeding and immunization. Child growth improved to the maximum that would be predicted with the given interventions. CONCLUSIONS: Numerous nutrition and health impacts were observed in the intervention areas, often of a magnitude equal to or larger than observed in controlled interventions or trials. These results show the value of integrated long-term interventions

(3) KAMAT VR, NYATO DJ. **Soft targets or partners in health? Retail pharmacies and their role in Tanzania's malaria control program**. Soc Sci Med. 2010 Aug., vol. 71, n° 3, pp.626-633
http://dx.doi.org/10.1016/j.socscimed.2010.04.016 (**accès réservé EHESP**)

The retail sector has been at the center of recent policy debates concerning its role in malaria control programs in Africa. This article closely examines the perspectives of owners and managers of retail pharmacies and drug shops in Dar es Salaam, toward the dominant public health discourse and practices surrounding the deployment of artemisinin-based combination therapy (ACT) as a way forward in malaria control. Drawing on fieldwork conducted between May-August 2007, and July-August 2009, involving in-depth interviews and participant observation in pharmacies and drug shops in Dar es Salaam, the article describes the social realities facing people who manage retail pharmacies, the nature of their interactions with customers, the kinds of antimalarials they sell, and their perspective on how the new malaria treatment guidelines have affected their business. Findings suggest that for most pharmacy owners and managers, it is 'business as usual' concerning the sale of conventional antimalarials, with a majority reporting that the introduction of ACT in public health facilities had not negatively affected their business.

Implications of the research findings are examined in the context of proposed interventions to make pharmacy owners and managers more socially responsible and adhere to government health regulations. The article makes a case for actively involving pharmacy owners and managers in decision making processes surrounding the implementation of new treatment guidelines, and training programs that have an impact on their business, social responsibility, and community health. In considering regulatory interventions, health planners must explicitly address the concern that retail pharmacies fill an important role in the country's health care system, and that the complex nexus that drives the global pharmaceutical market often governs their operations at the local level

(4) KELLY AH, AMEH D, MAJAMBERE S, LINDSAY S, *et al.* **'Like sugar and honey': the embedded ethics of a larval control project in The Gambia**. Soc Sci Med. 2010 June, vol. 70, n° 12, pp.1912-1919
http://dx.doi.org/10.1016/j.socscimed.2010.02.012 (**accès réservé EHESP**)

This paper describes a malaria research project in The Gambia to provoke thinking on the social value of transnational research. The Larval Control Project (LCP) investigated the efficacy of a microbial insecticide to reduce vector density and, ultimately, clinical malaria in Gambian children. The LCP's protocol delineated a clinical surveillance scheme that involved Village Health Workers (VHWs) supported by project nurses. Combining insights from ethnographic fieldwork conducted at the Medical Research Council (MRC) Laboratories in Farafenni from 2005 to 2009, open-ended interviews with project nurses, and eight focus group discussions held with participant mothers in October 2007, we consider the social impact of the LCP's investigative method against the backdrop of several years of research activity. We found that while participants associated the LCP with the clinical care it provided, they also regarded the collaboration between the nurses and VHWs added additional benefits. Organised around the operational functions of the trial, small-scale collaborations provided the platform from which to build local capacity. While ethical guidelines emphasise the considerations that must be added to experimental endeavour in southern countries (e.g. elaborating processes of informed consent, developing strategies of community engagement or providing therapeutic access to participants after the trial concludes), these findings suggest that shifting attention from supplementing ethical protocols to the everyday work of research -embedding ethics through scientific activity - may provide a sounder basis to reinforce the relationship between scientific rigour and social value

(5) PARRY J. **Cambodian villagers help to tackle malaria resistance with simple public health measures**. BMJ. 2010, vol. 341, p.c3696
http://www.ncbi.nlm.nih.gov/pubmed/20621972 (**accès libre, collection papier de la bibliothèque**)

(6) RICKLEFS RE, OUTLAW DC. **A molecular clock for malaria parasites**. Science. 2010 July 9, vol. 329, n° 5988, pp.226-229
http://dx.doi.org/10.1126/science.1188954 (**accès réservé EHESP**)

The evolutionary origins of new lineages of pathogens are fundamental to understanding emerging diseases. Phylogenetic reconstruction based on DNA sequences has revealed the sister taxa of human pathogens, but the timing of host-switching events, including the human malaria pathogen Plasmodium falciparum, remains controversial. Here, we establish a rate for cytochrome b evolution in avian malaria parasites relative to its rate in birds. We found that the parasite cytochrome b gene evolves about 60% as rapidly as that of host cytochrome b, corresponding to approximately 1.2% sequence divergence per million years. This calibration puts the origin of P. falciparum at 2.5 million years ago (Ma), the initial radiation of mammalian Plasmodium at 12.8 Ma, and the contemporary global diversity of the Haemosporida across terrestrial vertebrates at 16.2 Ma

(7) SNOW RW, MARSH K. **Malaria in Africa: progress and prospects in the decade since the Abuja Declaration**. Lancet. 2010 July 10, vol. 376, n° 9735, pp.137-139
http://dx.doi.org/10.1016/S0140-6736(10)60577-6 (**accès réservé EHESP**)

(8) THUILLIEZ J. **Fever, malaria and primary repetition rates amongst school children in Mali: combining demographic and health surveys (DHS) with spatial malariological measures**. Soc Sci Med. 2010 July, vol. 71, n° 2, pp.314-323
http://dx.doi.org/10.1016/j.socscimed.2010.03.034 (**accès réservé EHESP**)

This study estimates the relative importance to child school performance (indicated by primary repetition) of fever, malaria and some social determinants at the cluster level. It uses individual, household and cluster surveys from the Demographic and Health Surveys conducted in Mali in 2001 and 2006 (MDHS). It also provides a discussion about the use of fever as an indicator of malaria in large cross-sectional surveys by comparing the 2001 and 2006 MDHS, which were realised during two different transmission seasons (dry and rainy seasons). Geographic Information System and DHS Global Positioning System datasets were used to extract age-specific malariological measures from reliable maps of the prevalence and transmission intensity of malaria. We show that fever is not a reliable proxy for malaria at the cluster level, and we recommend the use of spatial measures of malaria prevalence for future research. Cross-sectional regression analysis on data aggregated to the group-level suggests that a higher prevalence of malaria in a community is linked to higher primary repetition rates, but confirmatory studies are needed

(9) THUILLIEZ J, SISSOKO MS, TOURE OB, KAMATE P, *et al.* **Malaria and primary education in Mali: a longitudinal study in the village of Doneguebougou**. Soc Sci Med. 2010 July, vol. 71, n° 2, pp.324-334
http://dx.doi.org/10.1016/j.socscimed.2010.02.027 (**accès réservé EHESP**)

This article assesses the role of malaria and certain social determinants on primary education, especially on educational achievement in Doneguebougou, a small village in a malaria-endemic area near Bamako, Mali. Field data was collected by the authors between November 2007 and June 2008 on 227 schoolchildren living in Doneguebougou. Various malaria indicators and econometric models were used to explain the variation in cognitive abilities, teachers' evaluation scores, school progression and absences. Malaria is the primary cause of school absences. Fixed-effects estimates showed that asymptomatic malaria and the presence of falciparum malaria parasites had a direct correlation with educational achievement and cognitive performance. The evidence suggests that the correlation is causal

Pathologies liées à l'obésité

sommaire

(1) **School dinners: a healthy choice?** Lancet. 2010 July 10, vol. 376, n° 9735, p.69
http://dx.doi.org/10.1016/S0140-6736(10)61060-4 (**accès réservé EHESP**)

(2) ASTRUP A. **Drug management of obesity--efficacy versus safety**. N Engl J Med. 2010 July 15, vol. 363, n° 3, pp.288-290
http://dx.doi.org/10.1056/NEJMe1004076 (**accès réservé EHESP**)

(3) BASARIA S, COVIELLO AD, TRAVISON TG, STORER TW, *et al.* **Adverse events associated with testosterone administration**. N Engl J Med. 2010 July 8, vol. 363, n° 2, pp.109-122
http://dx.doi.org/10.1056/NEJMoa1000485 (**accès réservé EHESP**)

BACKGROUND: Testosterone supplementation has been shown to increase muscle mass and strength in healthy older men. The safety and efficacy of testosterone treatment in older men who have limitations in mobility have not been studied. METHODS: Community-dwelling men, 65 years of age or older, with limitations in mobility and a total serum testosterone level of 100 to 350 ng per deciliter (3.5 to 12.1 nmol per liter) or a free serum testosterone level of less than 50 pg per milliliter (173 pmol per liter) were randomly assigned to receive placebo gel or testosterone gel, to be applied daily for 6 months. Adverse events were categorized with the use of the Medical Dictionary for Regulatory Activities classification. The data and safety monitoring board recommended that the trial be discontinued early because there was a significantly higher rate of adverse cardiovascular events in the testosterone group than in the placebo group. RESULTS: A total of 209 men (mean age, 74 years) were enrolled at the time the trial was terminated. At baseline, there was a high prevalence of hypertension, diabetes, hyperlipidemia, and obesity among the participants. During the course of the study, the testosterone group had higher rates of cardiac, respiratory, and dermatologic events than did the placebo group. A total of 23 subjects in the testosterone group, as compared with 5 in the placebo group, had cardiovascular-related adverse events. The relative risk of a cardiovascular-related adverse event remained constant throughout the 6-month treatment period. As compared with the placebo group, the testosterone group had significantly greater improvements in leg-press and chest-press strength and in stair climbing while carrying a load. CONCLUSIONS: In this population of older men with limitations in mobility and a high prevalence of chronic disease, the application of a testosterone gel was associated with an increased risk of cardiovascular adverse events. The small size of the trial and the unique population prevent broader inferences from being made about the safety of testosterone therapy. (ClinicalTrials.gov number, NCT00240981.)

(4) BLOCK JP, CHANDRA A, MCMANUS KD, WILLETT WC. **Point-of-purchase price and education intervention to reduce consumption of sugary soft drinks**. Am J Public Health. 2010 Aug., vol. 100, n° 8, pp.1427-1433
http://dx.doi.org/10.2105/AJPH.2009.175687 (**accès réservé EHESP**)

OBJECTIVES: We investigated whether a price increase on regular (sugary) soft drinks and an educational intervention would reduce their sales. METHODS: We implemented a 5-phase intervention at the Brigham and Women's Hospital cafeteria in Boston, Massachusetts. After posting existing prices of regular and diet soft drinks and water during baseline, we imposed several interventions in series: a price increase of 35% on regular soft drinks, a reversion to baseline prices (washout), an educational campaign, and a combination price and educational period. We collected data from a comparison site, Beth Israel Deaconess Hospital, also in Boston, for the final 3 phases. RESULTS: Sales of regular soft drinks declined by 26% during the price increase phase. This reduction in sales persisted throughout the study period, with an additional decline of 18% during the combination phase compared with the washout period. Education had no independent effect on sales. Analysis of the comparison site showed no change in regular soft drink sales during the study period. CONCLUSIONS: A price increase may be an effective policy mechanism to decrease sales of regular soda. Further multisite studies in varied populations are warranted to confirm these results

(5) BROPHY S, COOKSEY R, GRAVENOR MB, MISTRY R, *et al.* **Risk factors for childhood obesity at age 5: analysis of the millennium cohort study**. BMC Public Health. 2009, vol. 9, p.467
http://dx.doi.org/1471-24510.1186/1471-2458-9-467 (**accès libre**)

BACKGROUND: Weight at age 5 is a predictor for future health of the individual. This study examines risk factors for childhood obesity with a focus on ethnicity. METHODS: Data from the Millennium Cohort study were used. 17,561 singleton children of White/European (n = 15,062), Asian (n = 1,845) or African (n = 654) background were selected. Logistic regression and likelihood ratio tests were used to examine factors associated with obesity at age 5. All

participants were interviewed in their own homes. The main exposures examined included; Birth weight, sedentary lifestyle, family health behaviours, ethnicity, education and income. RESULTS: Children with a sedentary lifestyle, large at birth, with high risk family health behaviours (overweight mothers, smoking near the child, missing breakfast) and from a family with low income or low educational attainment, were more likely to be obese regardless of ethnicity. Feeding solid food before 3 months was associated with obesity in higher income White/European families. Even when controlling for socioeconomic status, ethnic background is an important independent risk factor for childhood obesity [Odds ratio of obesity; was 1.7 (95%CI: 1.2-2.3) for Asian and 2.7 (95%CI: 1.9-3.9) for African children, compared to White/European]. The final adjusted model suggests that increasing income does not have a great impact on lowering obesity levels, but that higher academic qualifications are associated with lower obesity levels [Odds of obesity: 0.63 (95%CI: 0.52-0.77) if primary carer leaves school after age 16 compared at age 16]. CONCLUSIONS: Education of the primary carer is an important modifiable factor which can be targeted to address rising obesity levels in children. Interventions should be family centred supporting and showing people how they can implement lifestyle changes in their family

(6) CHENG MH. **Asia-Pacific faces diabetes challenge**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2207-2210
http://www.ncbi.nlm.nih.gov/pubmed/20626091 (**accès réservé EHESP**)(**accès réservé EHESP**)

(7) GROW HM, COOK AJ, ARTERBURN DE, SAELENS BE, *et al.* **Child obesity associated with social disadvantage of children's neighborhoods**. Soc Sci Med. 2010 Aug., vol. 71, n° 3, pp.584-591
http://dx.doi.org/10.1016/j.socscimed.2010.04.018 (**accès réservé EHESP**)

Evidence suggests variability in adult obesity risk at a small-scale geographic area is associated with differences in neighborhood socioeconomic status (SES). However, the extent to which geographic variability in child obesity is associated with neighborhood SES is unknown. The objective of this paper was to estimate risk of child obesity associated with multiple census tract SES measures and race within a large urban U.S. county. Height, weight, age, sex, medical insurance type and census tract residence were obtained for 6-18 year old children (n=8616) who received medical care at a health plan in King County, Washington, in 2006. Spatial analyses examined the individual risk of obesity (BMI > or = 95th percentile) with 2000 US census tract measures of median household income, home ownership, adult female education level, single parent households, and race as predictors. Conditional autoregressive regression models that incorporated adjacent census tracts (spatial autocorrelation) were applied to each census tract variable, adjusting for individual variables. We found that in adjusted spatial models, child obesity risk was significantly associated with each census tract variable in the expected direction: lower household income, lower home ownership, and for each 10% increase in less educated women, and single parent households, as well as non-white residents. In a spatial model including all variables, the SES/race variables explained approximately 24% of geographic variability in child obesity. Results indicated that living in census tracts with social disadvantage defined by multiple different measures was associated with child obesity among insured children in a large U.S. urban county. These results contribute new information on relationships between broader social and economic context and child obesity risk using robust spatial analyses

(8) GULLAND A. **Obesity among over 65s in UK reflects "lifetime of gaining weight"**. BMJ. 2010, vol. 341, p.c3585
http://www.ncbi.nlm.nih.gov/pubmed/20603322 (**accès libre**, **collection papier de la bibliothèque**)

(9) HASLAM D, RIGBY N. **A long look at obesity**. Lancet. 2010 July 10, vol. 376, n° 9735, pp.85-86
http://www.ncbi.nlm.nih.gov/pubmed/20629209 (**accès réservé EHESP**)(**accès réservé EHESP**)

(10) HOWE LD, PATEL R, GALOBARDES B. **Commentary: Tipping the balance: wider waistlines in men but wider inequalities in women**. Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.404-405 http://dx.doi.org/10.1093/ije/dyp366 (**accès réservé EHESP**)

(11) KAMEROW D. **The case of the sugar sweetened beverage tax**. BMJ. 2010, vol. 341, p.c3719 http://www.ncbi.nlm.nih.gov/pubmed/20630952 (**accès libre, collection papier de la bibliothèque**)

(12) KMIETOWICZ Z. **Government invites food industry to fund anti-obesity campaign**. BMJ. 2010, vol. 341, p.c3680 http://www.ncbi.nlm.nih.gov/pubmed/20621969 (**accès libre, collection papier de la bibliothèque**)

(13) LANG T, RAYNER G. **Corporate responsibility in public health**. BMJ. 2010, vol. 341, p.c3758 http://www.ncbi.nlm.nih.gov/pubmed/20630954 (**accès libre, collection papier de la bibliothèque**)

(14) LUTSEY PL, VIRNIG BA, DURHAM SB, STEFFEN LM, *et al.* **Correlates and consequences of venous thromboembolism: The Iowa Women's Health Study**. Am J Public Health. 2010 Aug., vol. 100, n° 8, pp.1506-1513 http://dx.doi.org/10.2105/AJPH.2008.157776 (**accès réservé EHESP**)

OBJECTIVES: We sought to document incidence, case-fatality, and recurrence rates of venous thromboembolism (VTE) in women and to explore the relationship of demographic, lifestyle, and anthropometric factors to VTE incidence. METHODS: Data from participants aged 55 to 69 years in the Iowa Women's Health Study were linked to Medicare data for 1986 through 2004 (n = 40 377) to identify hospitalized VTE patients. RESULTS: A total of 2137 women developed VTE, yielding an incidence rate of 4.04 per 1000 person-years. The 28-day case-fatality rate was 7.7%, and the 1-year recurrence rate was 3.4%. Educational attainment, physical activity, and age at menopause were inversely associated with VTE. Risk of secondary (particularly cancer-related) VTE was higher among smokers than among those who had never smoked. Body mass index, waist circumference, waist-to-hip ratio, height, and diabetes were positively associated with VTE risk. Hormone replacement therapy use was associated with increased risk of idiopathic VTE. CONCLUSIONS: VTE is a significant source of morbidity and mortality in older women. Risk was elevated among women who were smokers, physically inactive, overweight, and diabetic, indicating that lifestyle contributes to VTE risk

(15) MATTEI J, DEMISSIE S, FALCON LM, ORDOVAS JM, *et al.* **Allostatic load is associated with chronic conditions in the Boston Puerto Rican Health Study**. Soc Sci Med. 2010 June, vol. 70, n° 12, pp.1988-1996 http://dx.doi.org/10.1016/j.socscimed.2010.02.024 (**accès réservé EHESP**)

Puerto Ricans living in the United States mainland present multiple disparities in prevalence of chronic diseases, relative to other racial and ethnic groups. Allostatic load (AL), or the cumulative wear and tear of physiological responses to stressors such as major life events, social and environmental burden, has been proposed as a possible mechanism for the inequalities observed in minority groups, but has not been studied in Puerto Ricans. The aim of this study was to determine the association of AL to six chronic diseases (abdominal obesity, hypertension, diabetes, and self-reported cardiovascular disease (CVD), arthritis and cancer) in Puerto Ricans, and to contrast AL to metabolic syndrome (MetS). Participants of the Boston Puerto Rican Health Study (n=1116, ages 45-75 years) underwent a home-based interview, where questionnaires were completed and biological samples collected. A summary definition of AL was constructed using clinically-defined cutoffs and medication use for 10 physiological parameters in different body systems. Logistic regression models were run to determine associations between AL score

and disease status, controlling for age, sex, smoking, alcohol use, physical activity, total fat intake and energy intake. Parallel models were also run with MetS score replacing AL. We found that increasing categories of AL score were significantly associated with abdominal obesity, hypertension, diabetes and self-reported cardiovascular disease (CVD) and arthritis, but not with self-reported cancer. The strength of associations of AL with all conditions, except diabetes and cancer, was similar to or larger than those of MetS score. In conclusion, Puerto Rican older adults experienced physiological dysregulation that was associated with increased odds of chronic conditions. AL was more strongly associated with most conditions, compared to MetS, suggesting that this cumulative measure may be a better predictor of disease. These results have prospective research implications for Puerto Ricans and other ethnic groups

(16) MBANYA JC, MOTALA AA, SOBNGWI E, ASSAH FK, *et al.* **Diabetes in sub-Saharan Africa**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2254-2266
http://dx.doi.org/10.1016/S0140-6736(10)60550-8 (**accès réservé EHESP**)

In Sub-Saharan Africa, prevalence and burden of type 2 diabetes are rising quickly. Rapid uncontrolled urbanisation and major changes in lifestyle could be driving this epidemic. The increase presents a substantial public health and socioeconomic burden in the face of scarce resources. Some types of diabetes arise at younger ages in African than in European populations. Ketosis-prone atypical diabetes is mostly recorded in people of African origin, but its epidemiology is not understood fully because data for pathogenesis and subtypes of diabetes in sub-Saharan African communities are scarce. The rate of undiagnosed diabetes is high in most countries of sub-Saharan Africa, and individuals who are unaware they have the disorder are at very high risk of chronic complications. Therefore, the rate of diabetes-related morbidity and mortality in this region could grow substantially. A multisectoral approach to diabetes control and care is vital for expansion of socioculturally appropriate diabetes programmes in sub-Saharan African countries

(17) MCDONALD SD, HAN Z, MULLA S, BEYENE J. **Overweight and obesity in mothers and risk of preterm birth and low birth weight infants: systematic review and meta-analyses**. BMJ. 2010, vol. 341, p.c3428
http://www.ncbi.nlm.nih.gov/pubmed/20647282 (**accès libre, collection papier de la bibliothèque**)

OBJECTIVE: To determine the relation between overweight and obesity in mothers and preterm birth and low birth weight in singleton pregnancies in developed and developing countries. DESIGN: Systematic review and meta-analyses. DATA SOURCES: Medline and Embase from their inceptions, and reference lists of identified articles. STUDY SELECTION: Studies including a reference group of women with normal body mass index that assessed the effect of overweight and obesity on two primary outcomes: preterm birth (before 37 weeks) and low birth weight (<2500 g). DATA EXTRACTION: Two assessors independently reviewed titles, abstracts, and full articles, extracted data using a piloted data collection form, and assessed quality. DATA SYNTHESIS: 84 studies (64 cohort and 20 case-control) were included, totalling 1 095 834 women. Although the overall risk of preterm birth was similar in overweight and obese women and women of normal weight, the risk of induced preterm birth was increased in overweight and obese women (relative risk 1.30, 95% confidence interval 1.23 to 1.37). Although overall the risk of having an infant of low birth weight was decreased in overweight and obese women (0.84, 0.75 to 0.95), the decrease was greater in developing countries than in developed countries (0.58, 0.47 to 0.71 v 0.90, 0.79 to 1.01). After accounting for publication bias, the apparent protective effect of overweight and obesity on low birth weight disappeared with the addition of imputed "missing" studies (0.95, 0.85 to 1.07), whereas the risk of preterm birth appeared significantly higher in overweight and obese women (1.24, 1.13 to 1.37). CONCLUSIONS: Overweight and obese women have increased risks of preterm birth and induced preterm birth and, after accounting for publication bias, appeared to have increased risks of preterm birth overall. The beneficial effects of maternal overweight and obesity on low birth weight were greater in developing countries and disappeared after accounting for publication bias

(18) NORDESTGAARD BG. **Commentary: The Finnish success of cardiovascular risk factor reduction**. Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.518-519
http://dx.doi.org10.1093/ije/dyq004 (**accès réservé EHESP**)

(19) OH DY, OLEFSKY JM. **Medicine. Wnt fans the flames in obesity**. Science. 2010 July 23, vol. 329, n° 5990, pp.397-398
http://dx.doi.org/329/510.1126/science.1193404 (**accès réservé EHESP**)

(20) OUCHI N, HIGUCHI A, OHASHI K, OSHIMA Y, *et al.* **Sfrp5 is an anti-inflammatory adipokine that modulates metabolic dysfunction in obesity**. Science. 2010 July 23, vol. 329, n° 5990, pp.454-457
http://dx.doi.org/science.10.1126/science.1188280 (**accès réservé EHESP**)

Adipose tissue secretes proteins referred to as adipokines, many of which promote inflammation and disrupt glucose homeostasis. Here we show that secreted frizzled-related protein 5 (Sfrp5), a protein previously linked to the Wnt signaling pathway, is an anti-inflammatory adipokine whose expression is perturbed in models of obesity and type 2 diabetes. Sfrp5-deficient mice fed a high-calorie diet developed severe glucose intolerance and hepatic steatosis, and their adipose tissue showed an accumulation of activated macrophages that was associated with activation of the c-Jun N-terminal kinase signaling pathway. Adenovirus-mediated delivery of Sfrp5 to mouse models of obesity ameliorated glucose intolerance and hepatic steatosis. Thus, in the setting of obesity, Sfrp5 secretion by adipocytes exerts salutary effects on metabolic dysfunction by controlling inflammatory cells within adipose tissue

(21) PISCHON T. **Commentary: Use of the body mass index to assess the risk of health outcomes: time to say goodbye?** Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.528-529
http://dx.doi.org/10.1093/ije/dyp388 (**accès réservé EHESP**)

(22) RENEHAN A, SMITH U, KIRKMAN MS. **Linking diabetes and cancer: a consensus on complexity**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2201-2202
http://dx.doi.org/10.1016/S0140-6736(10)60706-4 (**accès réservé EHESP**)

(23) RENNA F, THAKUR N. **Direct and indirect effects of obesity on U.S. labor market outcomes of older working age adults**. Soc Sci Med. 2010 July, vol. 71, n° 2, pp.405-413
http://dx.doi.org/10.1016/j.socscimed.2010.03.038 (**accès réservé EHESP**)

In this paper, we study the impact of obesity on labor market decisions of older working age adults in USA. Labor market outcomes are defined as any one of three: working; not working due to a disability; or not working due to an early retirement. Based on existing medical literature, we deduce that obesity can largely impact labor market decisions directly through impairment of bodily functions and indirectly by being a risk factor for various diseases like hypertension, arthritis, etc. We use data from the US Health and Retirement Study on older adults who were no more than 64 years of age in 2002. In our modeling effort, we employ two estimation strategies. We first estimate a model in which employment outcome in 2002 is a function of weight status in 1992. In the second strategy, controlling for time-invariant individual heterogeneity, we first consider the impact of obesity on bodily impairments and chronic illnesses; then, we consider the impact of such impairments and illnesses on labor market outcomes. Our results indicate that, for men, obesity class 2 and 3 increases both the probability of taking an early retirement and the incidence of disability by 1.5 percentage points. For women, we find that obesity class 2 and 3 increases the probability of taking an early retirement by 2.5 percentage points and the incidence of disability by 1.7 percentage points

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http://dx.doi.org/10.1056/NEJMc1005265 (**accès réservé EHESP**)

(25) ROSENKRANZ RR, BEHRENS TK, DZEWALTOWSKI DA. **A group-randomized controlled trial for health promotion in Girl Scouts: healthier troops in a SNAP (Scouting Nutrition & Activity Program)**. BMC Public Health. 2010, vol. 10, p.81
http://dx.doi.org/10.1186/1471-2458-10-81 (**accès libre**)

BACKGROUND: Girl Scouting may offer a viable channel for health promotion and obesity prevention programs. This study evaluated the effectiveness of an intervention program delivered through Girl Scout Junior troops that was designed to foster healthful troop meeting environments and increase obesity prevention behaviors at home. METHODS: Seven Girl Scout troops were randomized to intervention (n = 3, with 34 girls) or standard-care control (n = 4, with 42 girls) conditions. Girls ranged in age from 9 to 13 years (mean 10.5 years). Intervention troop leaders were trained to implement policies promoting physical activity (PA) and healthful eating opportunities at troop meetings, and to implement a curriculum promoting obesity-prevention behaviors at home. The primary outcome variable was child body mass index (BMI) z-score. Secondary outcomes included accelerometer-assessed PA levels in troop meetings, direct observations of snack offerings, time spent in physically active meeting content, and leader encouragement of PA and healthful eating. RESULTS: The intervention was delivered with good fidelity, and intervention troops provided greater opportunities for healthful eating and PA ($x2 = 210.8$, $p < .001$), relative to control troops. In troop meetings, intervention troop leaders promoted PA ($x2 = 23.46$, $p < .001$) and healthful eating ($x2 = 18.14$, $p < .001$) more frequently, and discouraged healthful eating and PA less frequently ($x2 = 9.63$, $p = .002$) compared to control troop leaders. Most effects of the intervention on individual-level variables of girls and parents were not significantly different from the control condition, including the primary outcome of child BMI z-score ($F1, 5 = 0.42$, $p = .544$), parent BMI ($F1, 5 = 1.58$, $p = .264$), and related behavioral variables. The notable exception was for objectively assessed troop PA, wherein girls in intervention troops accumulated significantly less sedentary ($x2 = 6.3$, $p = .011$), significantly more moderate ($x2 = 8.2$, $p = .004$), and more moderate-to-vigorous physical activity, ($x2 = 18.4$, $p < .001$), than girls in control troops. CONCLUSIONS: Implementing a health promotion curriculum and supporting policies to provide more healthful environments in Girl Scout troop meetings appears feasible on a broader scale. Additional work is needed to bridge health promotion from such settings to other environments if lasting individual-level behavior change and obesity prevention remain targeted outcomes. Trial registration number: NCT00949637

(26) ROSKAM AJ, KUNST AE, VAN OH, DEMAREST S, *et al.* **Comparative appraisal of educational inequalities in overweight and obesity among adults in 19 European countries**. Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.392-404
http://dx.doi.org/10.1093/ije/dyp329 (**accès réservé EHESP**)

BACKGROUND: In Western societies, a lower educational level is often associated with a higher prevalence of overweight and obesity. However, there may be important international differences in the strength and direction of this relationship, perhaps in respect of differing levels of socio-economic development. We aimed to describe educational inequalities in overweight and obesity across Europe, and to explore the contribution of level of socio-economic development to cross-national differences in educational inequalities in overweight and obese adults in Europe. METHODS: Cross-sectional data, based on self-reports, were derived from national health interview surveys from 19 European countries (N = 127 018; age range = 25-44 years). Height and weight data were used to calculate the body mass index (BMI). Multivariate regression analysis was employed to measure educational inequalities in overweight and obesity, based on BMI. Gross domestic product (GDP) per capita was used as a measure of level of socio-economic development. RESULTS: Inverse educational gradients in overweight and obesity (i.e. higher education, less overweight and obesity) are a generalized phenomenon among European men and even more so among women. Baltic and eastern European men were the exceptions, with weak positive associations between education and overweight and obesity. Educational

inequalities in overweight and obesity were largest in Mediterranean women. A 10 000-euro increase in GDP was related to a 3% increase in overweight and obesity for low-educated men, but a 4% decrease for high-educated men. No associations with GDP were observed for women. CONCLUSION: In most European countries, people of lower educational attainment are now most likely to be overweight or obese. An increasing level of socio-economic development was associated with an emergence of inequalities among men, and a persistence of these inequalities among women

(27) SAMUEL VT, PETERSEN KF, SHULMAN GI. **Lipid-induced insulin resistance: unravelling the mechanism**. Lancet. 2010 June 26, vol. 375, n° 9733, pp.2267-2277
http://dx.doi.org/10.1016/S0140-6736(10)60408-4 (**accès réservé EHESP**)

Insulin resistance has long been associated with obesity. More than 40 years ago, Randle and colleagues postulated that lipids impaired insulin-stimulated glucose use by muscles through inhibition of glycolysis at key points. However, work over the past two decades has shown that lipid-induced insulin resistance in skeletal muscle stems from defects in insulin-stimulated glucose transport activity. The steatotic liver is also resistant to insulin in terms of inhibition of hepatic glucose production and stimulation of glycogen synthesis. In muscle and liver, the intracellular accumulation of lipids-namely, diacylglycerol-triggers activation of novel protein kinases C with subsequent impairments in insulin signalling. This unifying hypothesis accounts for the mechanism of insulin resistance in obesity, type 2 diabetes, lipodystrophy, and ageing; and the insulin-sensitising effects of thiazolidinediones

(28) SAYBURN A. **Challenge pregnant women to manage their weight, NICE says**. BMJ. 2010, vol. 341, p.c4107
http://www.ncbi.nlm.nih.gov/pubmed/20667960 (**accès libre, collection papier de la bibliothèque**)

(29) SIDORENKOV O, NILSSEN O, BRENN T, MARTIUSHOV S, *et al.* **Prevalence of the metabolic syndrome and its components in Northwest Russia: the Arkhangelsk study**. BMC Public Health. 2010, vol. 10, p.23
http://dx.doi.org/10.1186/1471-2458-10-23 (**accès libre**)

BACKGROUND: The metabolic syndrome (MetS) is a cluster of risk factors associated with morbidity from cardiovascular disease (CVD) and associated mortality. Russia has one of the highest CVD mortality rates in the world. However, the prevalence of MetS in Russia remains largely unknown. The aim of this study is to estimate the prevalence of MetS and its components in an urban Russian setting. METHODS: Altogether, 3705 Russian adults aged 18-90 years were enrolled in a cross-sectional study in Arkhangelsk (Northwest Russia). All subjects completed a questionnaire and underwent a physical examination. Blood samples were taken and analyzed in TromsO, Norway. Three separate modified definitions of MetS were used, namely, the National Education Cholesterol Education Program Adult Treatment Panel III (NCEP), the American Heart Association/National Heart, Lung and Blood Institute (AHA/NHLBI) and the International Diabetes Federation (IDF). To ensure comparability of the findings, the prevalence data were standardized using world and European standard populations and Russian population. RESULTS: The age-standardized (Segi's world standard population) prevalence rates of the MetS among women were 19.8% (95% CI: 18.1-21.5), 20.6% (95% CI: 18.9-22.3) and 23.1% (95% CI: 21.3-24.9) by the NCEP, AHA/NHLBI and IDF criteria, respectively. The corresponding rates for men were 11.5% (95% CI: 10.1-12.9), 13.7% (95% CI: 12.2-15.2) and 11.0% (95% CI: 9.7-12.4). Among subjects with MetS, central obesity was more common among women, while elevated triglycerides and blood glucose were more common among men. Almost perfect agreement was found between the NCEP and AHA/NHLBI criteria (kappa = 0.94). There was less agreement between the used definitions of MetS in men than in women. CONCLUSIONS: While the prevalence of MetS among Russian women is comparable to the data for Europe and the U.S., the prevalence among Russian men is considerably lower than among their European and North-American counterparts. Our results suggest that MetS is unlikely to be a major contributor to the high cardiovascular mortality among Russian men. Further studies of MetS determinants and

associated cardiovascular risk are needed for a better understanding of the mechanisms leading to the exceptionally high cardiovascular mortality in Russia

(30) SMITH SR, WEISSMAN NJ, ANDERSON CM, SANCHEZ M, *et al.* **Multicenter, placebo-controlled trial of lorcaserin for weight management**. N Engl J Med. 2010 July 15, vol. 363, n° 3, pp.245-256
http://dx.doi.org/10.1056/NEJMoa0909809 (**accès réservé EHESP**)

BACKGROUND: Lorcaserin is a selective serotonin 2C receptor agonist that could be useful in reducing body weight. METHODS: In this double-blind clinical trial, we randomly assigned 3182 obese or overweight adults (mean body-mass index [the weight in kilograms divided by the square of the height in meters] of 36.2) to receive lorcaserin at a dose of 10 mg, or placebo, twice daily for 52 weeks. All patients also underwent diet and exercise counseling. At week 52, patients in the placebo group continued to receive placebo but patients in the lorcaserin group were randomly reassigned to receive either placebo or lorcaserin. Primary outcomes were weight loss at 1 year and maintenance of weight loss at 2 years. Serial echocardiography was used to identify patients in whom valvulopathy (as defined by the Food and Drug Administration) developed. RESULTS: At 1 year, 55.4% of patients (883 of 1595) receiving lorcaserin and 45.1% of patients (716 of 1587) receiving placebo remained in the trial; 1553 patients continued into year 2. At 1 year, 47.5% of patients in the lorcaserin group and 20.3% in the placebo group had lost 5% or more of their body weight (P<0.001), corresponding to an average loss of 5.8+/-0.2 kg with lorcaserin and 2.2+/-0.1 kg with placebo during year 1 (P<0.001). Among the patients who received lorcaserin during year 1 and who had lost 5% or more of their baseline weight at 1 year, the loss was maintained in more patients who continued to receive lorcaserin during year 2 (67.9%) than in patients who received placebo during year 2 (50.3%, P<0.001). Among 2472 patients evaluated at 1 year and 1127 evaluated at 2 years, the rate of cardiac valvulopathy was not increased with the use of lorcaserin. Among the most frequent adverse events reported with lorcaserin were headache, dizziness, and nausea. The rates of serious adverse events in the two groups were similar. CONCLUSIONS: In conjunction with behavioral modification, lorcaserin was associated with significant weight loss and improved maintenance of weight loss, as compared with placebo. (Funded by Arena Pharmaceuticals; ClinicalTrials.gov number, NCT00395135.)

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(32) VARTIAINEN E, LAATIKAINEN T, PELTONEN M, JUOLEVI A, *et al.* **Thirty-five-year trends in cardiovascular risk factors in Finland**. Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.504-518
http://dx.doi.org/10.1093/ije/dyp330 (**accès réservé EHESP**)

BACKGROUND: In the late 1960s, coronary heart disease (CHD) mortality among Finnish men was the highest in the world. From 1972 to 2007, risk factor surveys have been carried out to monitor risk factor trends and assess their contribution to declining mortality in Finland. METHODS: The first risk factor survey was carried out in the North Karelia and Kuopio provinces in 1972 as the basis for the evaluation of the North Karelia Project. Since then, up to five geographical areas have been included in the surveys. The target population has been persons aged 25-74 years, except in the first two surveys where the sample was drawn from a population aged 30-59 years. Risk factor contribution on mortality change was assessed by a logistic regression model. RESULTS: A remarkable decline in serum cholesterol levels was observed between 1972 and 2007. Blood pressure declined among both men and women until 2002 but levelled off during the last 5 years. Prevalence of smoking decreased among men. Among women, smoking increased throughout the survey years until 2002 but did not increase between 2002 and 2007. Body mass index (BMI) has continuously increased among men. Among women, BMI decreased until 1982, but since then an increasing trend has been observed. Risk factor changes explained a 60% reduction in coronary mortality in middle-aged men while the observed reduction was 80%. CONCLUSIONS: The 80% decline in coronary mortality in Finland mainly

reflects a great reduction of the risk factor levels; these in turn have been associated with long-term comprehensive chronic disease prevention and health promotion interventions

(33) VINER RM, ROCHE E, MAGUIRE SA, NICHOLLS DE. **Childhood protection and obesity: framework for practice**. BMJ. 2010, vol. 341, p.c3074
http://www.ncbi.nlm.nih.gov/pubmed/20634344 (**accès libre, collection papier de la bibliothèque**)

(34) YUN KE, PARK HS, SONG YM, CHO SI. **Increases in body mass index over a 7-year period and risk of cause-specific mortality in Korean men**. Int J Epidemiol. 2010 Apr., vol. 39, n° 2, pp.520-528
http://dx.doi.org/10.1093/ije/dyp282 (**accès réservé EHESP**)

BACKGROUND: The association between increased body mass index (BMI) and subsequent mortality remains unclear in Asians. This study investigated the associations between BMI increases and cause-specific mortality in middle-aged Korean men. METHODS: We conducted a retrospective cohort study of 473 358 Korean men aged 30-64 years, who had undergone health examinations in both 1992 and 1998 and were followed up during 1998-2004. Cox proportional hazards for cause-specific 7-year mortality in relation to BMI changes after stratification of baseline BMI status were analysed. RESULTS: Mortality from cardiovascular disease (CVD) was associated with BMI in both 1992 and 1998. Non-CVD mortality was inversely associated with BMI in both 1992 and 1998. We cross-classified participants into groups based on their baseline BMI levels and percent BMI changes during follow-up; men with the lowest BMI level at baseline (BMI in 1992 <21 kg/m(2)) and stable BMI during follow-up (percent change in BMI <5%) were included in the reference category. Compared with the reference group, CVD mortality was higher in initially obese men (BMI in 1992 > or =25 kg/m(2)) with any increase of BMI, and in initially lean men (BMI in 1992 <21 kg/m(2)) or initially overweight men (BMI in 1992 23-24.9 kg/m(2)) with BMI increases of > or =10%. BMI increases of 5.0-9.9% in men with baseline BMI <25 kg/m(2) and stable BMI in men with baseline BMI > or =21 kg/m(2) appeared to lower the risk for non-CVD or all-cause mortality, to below the levels seen in the reference group. CONCLUSIONS: Among middle-aged Korean men, obesity or severe weight gain was detrimental to CVD mortality. An increase in BMI appeared to have a predictive value for CVD mortality, especially when used in combination with baseline BMI level. In contrast, moderate weight gain in non-obese men seemed to protect against non-CVD and all-cause mortality

(35) ZHANG X, LUO H, GREGG EW, MUKHTAR Q, *et al.* **Obesity prevention and diabetes screening at local health departments**. Am J Public Health. 2010 Aug., vol. 100, n° 8, pp.1434-1441
http://dx.doi.org/10.2105/AJPH.2009.168831 (**accès réservé EHESP**)

OBJECTIVES: We assessed whether local health departments (LHDs) were conducting obesity prevention programs and diabetes screening programs, and we examined associations between LHD characteristics and whether they conducted these programs. METHODS: We used the 2005 National Profile of Local Health Departments to conduct a cross-sectional analysis of 2300 LHDs nationwide. We used multivariate logistic regressions to calculate odds ratios (ORs) and 95% confidence intervals (CIs). RESULTS: Approximately 56% of LHDs had obesity prevention programs, 51% had diabetes screening programs, and 34% had both. After controlling for other factors, we found that employing health educators was significantly associated with LHDs conducting obesity prevention programs (OR = 2.08; 95% CI = 1.54, 2.81) and diabetes screening programs (OR = 1.63; 95% CI = 1.23, 2.17). We also found that conducting chronic disease surveillance was significantly associated with LHDs conducting obesity prevention programs (OR = 1.66; 95% CI = 1.26, 2.20) and diabetes screening programs (OR = 2.44; 95% CI = 1.90, 3.15). LHDs with a higher burden of diabetes prevalence were more likely to conduct diabetes screening programs (OR = 1.20; 95% CI = 1.11, 1.31) but not obesity prevention programs. CONCLUSIONS: The presence of obesity prevention and diabetes screening programs was significantly associated with LHD structural capacity and general performance. However, the effectiveness and cost-effectiveness of both types of programs remain unknown

(36) ZIRABA AK, FOTSO JC, OCHAKO R. **Overweight and obesity in urban Africa: A problem of the rich or the poor?** BMC Public Health. 2009, vol. 9, p.465
http://dx.doi.org/10.1186/1471-2458-9-465 (**accès libre**)

BACKGROUND: Obesity is a well recognized risk factor for various chronic diseases such as cardiovascular diseases, hypertension, and type 2 diabetes mellitus. The aim of this study was to shed light on the patterns of overweight and obesity in sub-Saharan Africa, with special interest in differences between the urban poor and the urban non-poor. The specific goals were to describe trends in overweight and obesity among urban women; and examine how these trends vary by education and household wealth. METHODS: The paper used Demographic and Health Surveys data from seven African countries where two surveys had been carried out with an interval of at least 10 years between them. Among the countries studied, the earliest survey took place in 1992 and the latest in 2005. The dependent variable was body mass index coded as: Not overweight/obese; Overweight; Obese. The key covariates were time lapse between the two surveys; woman's education; and household wealth. Control variables included working status, age, marital status, parity, and country. Multivariate ordered logistic regression in the context of the partial proportional odds model was used. RESULTS: Descriptive results showed that the prevalence of urban overweight/obesity increased by nearly 35% during the period covered. The increase was higher among the poorest (+50%) than among the richest (+7%). Importantly, there was an increase of 45-50% among the non-educated and primary-educated women, compared to a drop of 10% among women with secondary education or higher. In the multivariate analysis, the odds ratio of the variable time lapse was 1.05 ($p < 0.01$), indicating that the prevalence of overweight/obesity increased by about 5% per year on average in the countries in the study. While the rate of change in urban overweight/obesity did not significantly differ between the poor and the rich, it was substantially higher among the non-educated women than among their educated counterparts. CONCLUSION: Overweight and obesity are on the rise in Africa and might take epidemic proportions in the near future. Like several other public health challenges, overweight and obesity should be tackled and prevented early as envisioned in the WHO Global strategy on diet, physical activity and health

SIDA

sommaire

(1) BDOOL-KARIM Q, ABOUZAHR C, DEHNE K, MANGIATERRA V, *et al.* **HIV and maternal mortality: turning the tide**. Lancet. 2010 June 5, vol. 375, n° 9730, pp.1948-1949
http://dx.doi.org/10.1016/S0140-6736(10)60747-7 (**accès réservé EHESP**)

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http://dx.doi.org/10.1126/science.329.5988.173 (**accès réservé EHESP**)

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(4) COOPER CJ, METCH B, DRAGAVON J, COOMBS RW, *et al.* **Vaccine-induced HIV seropositivity/reactivity in noninfected HIV vaccine recipients**. JAMA. 2010 July 21, vol. 304, n° 3, pp.275-283
http://dx.doi.org/10.1001/jama.2010.926 (**accès réservé EHESP**)

CONTEXT: Induction of protective anti-human immunodeficiency virus (HIV) immune responses is the goal of an HIV vaccine. However, this may cause a reactive result in routine HIV testing in the absence of HIV infection. OBJECTIVE: To evaluate the frequency of vaccine-induced

seropositivity/reactivity (VISP) in HIV vaccine trial participants. DESIGN, SETTING, AND PARTICIPANTS: Three common US Food and Drug Administration-approved enzyme immunoassay (EIA) HIV antibody kits were used to determine VISP, and a routine diagnostic HIV algorithm was used to evaluate VISP frequency in healthy, HIV-seronegative adults who completed phase 1 (n = 25) and phase 2a (n = 2) vaccine trials conducted from 2000-2010 in the United States, South America, Thailand, and Africa. MAIN OUTCOME MEASURE: Vaccine-induced seropositivity/reactivity, defined as reactive on 1 or more EIA tests and either Western blot-negative or Western blot-indeterminate/atypical positive (profile consistent with vaccine product) and HIV-1-negative by nucleic acid testing. RESULTS: Among 2176 participants free of HIV infection who received a vaccine product, 908 (41.7%; 95% confidence interval [CI], 39.6%-43.8%) had VISP, but the occurrence of VISP varied substantially across different HIV vaccine product types: 399 of 460 (86.7%; 95% CI, 83.3%-89.7%) adenovirus 5 product recipients, 295 of 552 (53.4%; 95% CI, 49.2%-57.7%) recipients of poxvirus alone or as a boost, and 35 of 555 (6.3%; 95% CI, 4.4%-8.7%) of DNA-alone product recipients developed VISP. Overall, the highest proportion of VISP (891/2176 tested [40.9%]) occurred with the HIV 1/2 (rDNA) EIA kit compared with the rLAV EIA (150/700 tested [21.4%]), HIV-1 Plus O Microelisa System (193/1309 tested [14.7%]), and HIV 1/2 Peptide and HIV 1/2 Plus O (189/2150 tested [8.8%]) kits. Only 17 of the 908 participants (1.9%) with VISP tested nonreactive using the HIV 1/2 (rDNA) kit. All recipients of a glycoprotein 140 vaccine (n = 70) had VISP, with 94.3% testing reactive with all 3 EIA kits tested. Among 901 participants with VISP and a Western blot result, 92 (10.2%) had a positive Western blot result (displaying an atypical pattern consistent with vaccine product), and 592 (65.7%) had an indeterminate result. Only 8 participants with VISP received a vaccine not containing an envelope insert. CONCLUSIONS: The induction of VISP in HIV vaccine recipients is common, especially with vaccines containing both the HIV-1 envelope and group-specific core antigen gene proteins. Development and detection of VISP appear to be associated with the immunogenicity of the vaccine and the EIA assay used

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(6) HUTTNER A, CALMY A. **Treatment of HIV infection with drugs for HSV-2 infection**. Lancet. 2010 July 10, vol. 376, n° 9735, p.88
http://dx.doi.org/10.1016/S0140-6736(10)61069-0 (**accès réservé EHESP**)

(7) JASNY B, MUELLER K, ROBERTS L. **HIV/AIDS. HIV/AIDS: Eastern Europe. Introduction**. Science. 2010 July 9, vol. 329, n° 5988, p.159
http://dx.doi.org/10.1126/science.329.5988.159 (**accès réservé EHESP**)

(8) JEWKES RK, DUNKLE K, NDUNA M, SHAI N. **Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: a cohort study**. Lancet. 2010 July 3, vol. 376, n° 9734, pp.41-48
http://dx.doi.org/10.1016/S0140-6736(10)60548-X (**accès réservé EHESP**)

BACKGROUND: Cross-sectional studies have shown that intimate partner violence and gender inequity in relationships are associated with increased prevalence of HIV in women. Yet temporal sequence and causality have been questioned, and few HIV prevention programmes address these issues. We assessed whether intimate partner violence and relationship power inequity increase risk of incident HIV infection in South African women. METHODS: We did a longitudinal analysis of data from a previously published cluster-randomised controlled trial undertaken in the Eastern Cape province of South Africa in 2002-06. 1099 women aged 15-26 years who were HIV negative at baseline and had at least one additional HIV test over 2 years of follow-up were included in the analysis. Gender power equity and intimate partner violence were measured by a sexual relationship power scale and the WHO violence against women instrument, respectively. Incidence rate ratios (IRRs) of HIV acquisition at 2 years were derived from Poisson models,

adjusted for study design and herpes simplex virus type 2 infection, and used to calculate population attributable fractions. FINDINGS: 128 women acquired HIV during 2076 person-years of follow-up (incidence 6.2 per 100 person-years). 51 of 325 women with low relationship power equity at baseline acquired HIV (8.5 per 100 person-years) compared with 73 of 704 women with medium or high relationship power equity (5.5 per 100 person-years); adjusted multivariable Poisson model IRR 1.51, 95% CI 1.05-2.17, p=0.027. 45 of 253 women who reported more than one episode of intimate partner violence at baseline acquired HIV (9.6 per 100 person-years) compared with 83 of 846 who reported one or no episodes (5.2 per 100 person-years); adjusted multivariable Poisson model IRR 1.51, 1.04-2.21, p=0.032. The population attributable fractions were 13.9% (95% CI 2.0-22.2) for relationship power equity and 11.9% (1.4-19.3) for intimate partner violence. INTERPRETATION: Relationship power inequity and intimate partner violence increase risk of incident HIV infection in young South African women. Policy, interventions, and programmes for HIV prevention must address both of these risk factors and allocate appropriate resources. FUNDING: National Institute of Mental Health and South African Medical Research Council

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http://dx.doi.org/10.1001/jama.2010.925 (**accès réservé EHESP**)

As of 2008, more than 33 million adults and children have been estimated to be living with human immunodeficiency virus (HIV). Among them are rare patients (<0.5%) who have remained clinically well without antiretroviral therapy after almost 20 years of infection. They maintain stable CD4 cell counts and suppressed HIV replication to levels comparable with those measured in patients receiving combination antiretroviral therapy. No known epidemiologic or behavioral factors are predictive of untreated, nonprogressive HIV infection; however, host genetics and immune response factors, most specifically HLA antigen class I-restricted HIV-specific CD8 T cells, appear to be primarily responsible for this remarkable phenotype in a majority of these individuals. These patients offer hope that durable control of HIV infection is possible and can provide important insight to inform the development of the next generation of HIV/AIDS vaccines and immune-based therapies. This article reviews clinical features of these unique patients and discusses them in the context of nonprogressors enrolled in other cohorts. Potential mechanisms underlying nonprogressive HIV infection and scientific discoveries, facilitated by the participation of these patients in clinical trials, of relevance to the design of an efficacious HIV/AIDS vaccine are also highlighted

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(12) SANNE I, ORRELL C, FOX MP, CONRADIE F, *et al.* **Nurse versus doctor management of HIV-infected patients receiving antiretroviral therapy (CIPRA-SA): a randomised non-inferiority trial**. Lancet. 2010 July 3, vol. 376, n° 9734, pp.33-40
http://dx.doi.org/10.1016/S0140-6736(10)60894-X (**accès réservé EHESP**)

BACKGROUND: Expanded access to combination antiretroviral therapy (ART) in resource-poor settings is dependent on task shifting from doctors to other health-care providers. We compared outcomes of nurse versus doctor management of ART care for HIV-infected patients. METHODS: This randomised non-inferiority trial was undertaken at two South African primary-care clinics. HIV-positive individuals with a CD4 cell count of less than 350 cells per microL or WHO stage 3 or 4 disease were randomly assigned to nurse-monitored or doctor-monitored ART care. Patients

were randomly assigned by stratified permuted block randomisation, and neither the patients nor those analysing the data were masked to assignment. The primary objective was a composite endpoint of treatment-limiting events, incorporating mortality, viral failure, treatment-limiting toxic effects, and adherence to visit schedule. Analysis was by intention to treat. Non-inferiority of the nurse versus doctor group for cumulative treatment failure was prespecified as an upper 95% CI for the hazard ratio that was less than 1.40. This study is registered with ClinicalTrials.gov, number NCT00255840. FINDINGS: 408 patients were assigned to doctor-monitored ART care and 404 to nurse-monitored ART care; all participants were analysed. 371 (46%) patients reached an endpoint of treatment failure: 192 (48%) in the nurse group and 179 (44%) in the doctor group. The hazard ratio for composite failure was 1.09 (95% CI 0.89-1.33), which was within the limits for non-inferiority. After a median follow-up of 120 weeks (IQR 60-144), deaths (ten vs 11), virological failures (44 vs 39), toxicity failures (68 vs 66), and programme losses (70 vs 63) were similar in nurse and doctor groups, respectively. INTERPRETATION: Nurse-monitored ART is non-inferior to doctor-monitored therapy. Findings from this study lend support to task shifting to appropriately trained nurses for monitoring of ART. FUNDING: National Institutes of Health; United States Agency for International Development; National Institute of Allergy and Infectious Diseases

(13) SMITH DJ, MBAKWEM BC. **Antiretroviral therapy and reproductive life projects: mitigating the stigma of AIDS in Nigeria**. Soc Sci Med. 2010 July, vol. 71, n° 2, pp.345-352 http://dx.doi.org/10.1016/j.socscimed.2010.04.006 (**accès réservé EHESP**)

As millions of people infected with HIV in Africa are increasingly able to live longer and healthier lives because of access to antiretroviral therapy, concerns have emerged that people might eschew protective practices after their health improves. Extending beyond the notion of sexual "disinhibition," researchers have begun to analyze the sexual behavior of people in treatment through the perspective of their marital and childbearing aspirations. This article explores the reproductive life projects of HIV-positive men and women in southeastern Nigeria, showing how actions that contradict medical advice are understandable in the context of patients' socially normative desires for marriage and children. Based on in-depth interviews and observations (June-December 2004; June-July 2006; June-July 2007) of people enrolled in the region's oldest treatment program, we argue that broadly held social expectations with regard to reproduction are experienced even more acutely by HIV-positive people. This is because in Nigeria the stigma associated with AIDS is closely tied to widespread perceptions of social and moral crisis, such that AIDS itself is seen as both a cause and a symptom of anxiety-producing forms of social change. Specifically, in an era of rapid societal transformation, Nigerians see sexual promiscuity and the alienation of young people from traditional obligations to kin and community as indicative of threatened social reproduction. For people who are HIV-positive, marrying and having children offer not only the opportunity to lead normal lives, but also a means to mitigate the stigma associated with the disease. Four ethnographic case studies are provided to exemplify how and why social and personal life projects can trump or complicate medical and public health priorities. These examples suggest that treatment programs must openly address and proactively support the life projects of people on antiretroviral therapy if the full benefits of expanded access to treatment are to be realized

(14) TAHIROV TH, BABAYEVA ND, VARZAVAND K, COOPER JJ, *et al.* **Crystal structure of HIV-1 Tat complexed with human P-TEFb**. Nature. 2010 June 10, vol. 465, n° 7299, pp.747-751 http://dx.doi.org/10.1038/nature09131 (**accès payant**)

Regulation of the expression of the human immunodeficiency virus (HIV) genome is accomplished in large part by controlling transcription elongation. The viral protein Tat hijacks the host cell's RNA polymerase II elongation control machinery through interaction with the positive transcription elongation factor, P-TEFb, and directs the factor to promote productive elongation of HIV mRNA. Here we describe the crystal structure of the Tat.P-TEFb complex containing HIV-1 Tat, human Cdk9 (also known as CDK9), and human cyclin T1 (also known as CCNT1). Tat adopts a structure complementary to the surface of P-TEFb and makes extensive contacts, mainly with the cyclin T1 subunit of P-TEFb, but also with the T-loop of the Cdk9 subunit. The structure provides a plausible explanation for the tolerance of Tat to sequence variations at certain sites. Importantly, Tat induces significant conformational changes in P-TEFb. This finding lays a foundation for the

design of compounds that would specifically inhibit the Tat.P-TEFb complex and block HIV replication

(15) THOMPSON MA, ABERG JA, CAHN P, MONTANER JS, *et al.* **Antiretroviral treatment of adult HIV infection: 2010 recommendations of the International AIDS Society-USA panel**. JAMA. 2010 July 21, vol. 304, n° 3, pp.321-333
http://dx.doi.org/10.1001/jama.2010.1004 (**accès réservé EHESP**)

CONTEXT: Recent data regarding the consequences of untreated human immunodeficiency virus (HIV) infection and the expansion of treatment choices for antiretroviral-naive and antiretroviral-experienced patients warrant an update of the International AIDS Society-USA guidelines for the use of antiretroviral therapy in adults with HIV infection. OBJECTIVES: To provide updated recommendations for management of HIV-infected adults, using antiretroviral drugs and laboratory monitoring tools available in the international, developed-world setting. This report provides guidelines for when to initiate antiretroviral therapy, selection of appropriate initial regimens, patient monitoring, when to change therapy, and what regimens to use when changing. DATA SOURCES AND STUDY SELECTION: A panel with expertise in HIV research and clinical care reviewed relevant data published or presented at selected scientific conferences since the last panel report through April 2010. Data were identified through a PubMed search, review of scientific conference abstracts, and requests to antiretroviral drug manufacturers for updated clinical trials and adverse event data. DATA EXTRACTION AND SYNTHESIS: New evidence was reviewed by the panel. Recommendations were drafted by section writing committees and reviewed and edited by the entire panel. The quality and strength of the evidence were rated and recommendations were made by full panel consensus. CONCLUSIONS: Patient readiness for treatment should be confirmed before initiation of antiretroviral treatment. Therapy is recommended for asymptomatic patients with a CD4 cell count < or = 500/microL, for all symptomatic patients, and those with specific conditions and comorbidities. Therapy should be considered for asymptomatic patients with CD4 cell count > 500/microL. Components of the initial and subsequent regimens must be individualized, particularly in the context of concurrent conditions. Patients receiving antiretroviral treatment should be monitored regularly; treatment failure should be detected and managed early, with the goal of therapy, even in heavily pretreated patients, being HIV-1 RNA suppression below commercially available assay quantification limits

(16) TRONO D, VAN LC, ROUZIOUX C, VERDIN E, *et al.* **HIV persistence and the prospect of long-term drug-free remissions for HIV-infected individuals**. Science. 2010 July 9, vol. 329, n° 5988, pp.174-180
http://dx.doi.org/10.1126/science.1191047 (**accès réservé EHESP**)

HIV infection can persist in spite of efficacious antiretroviral therapies. Although incomplete inhibition of viral replication may contribute to this phenomenon, this is largely due to the early establishment of a stable reservoir of latently infected cells. Thus, life-long antiviral therapy may be needed to control HIV. Such therapy is prone to drug resistance and cumulative side effects and is an unbearable financial burden for regions of the world hit hardest by the epidemic. This review discusses our current understanding of HIV persistence and the limitations of potential approaches to eradicate the virus and accordingly pleads for a joint multidisciplinary effort toward two highly related goals: the development of an HIV prophylactic vaccine and the achievement of long-term drug-free remissions in HIV-infected individuals

Tuberculose

sommaire

(1) BALDRIDGE MT, KING KY, BOLES NC, WEKSBERG DC, *et al.* **Quiescent haematopoietic stem cells are activated by IFN-gamma in response to chronic infection**. Nature. 2010 June 10, vol. 465, n° 7299, pp.793-797= http://dx.doi.org/10.1038/nature09135 (**accès payant**)

Lymphocytes and neutrophils are rapidly depleted by systemic infection. Progenitor cells of the haematopoietic system, such as common myeloid progenitors and common lymphoid progenitors, increase the production of immune cells to restore and maintain homeostasis during chronic infection, but the contribution of haematopoietic stem cells (HSCs) to this process is largely unknown. Here we show, using an in vivo mouse model of Mycobacterium avium infection, that an increased proportion of long-term repopulating HSCs proliferate during M. avium infection, and that this response requires interferon-gamma (IFN-gamma) but not interferon-alpha (IFN-alpha) signalling. Thus, the haematopoietic response to chronic bacterial infection involves the activation not only of intermediate blood progenitors but of long-term repopulating HSCs as well. IFN-gamma is sufficient to promote long-term repopulating HSC proliferation in vivo; furthermore, HSCs from IFN-gamma-deficient mice have a lower proliferative rate, indicating that baseline IFN-gamma tone regulates HSC activity. These findings implicate IFN-gamma both as a regulator of HSCs during homeostasis and under conditions of infectious stress. Our studies contribute to a deeper understanding of haematological responses in patients with chronic infections such as HIV/AIDS or tuberculosis

(2) BIGGS B, KING L, BASU S, STUCKLER D. **Is wealthier always healthier? The impact of national income level, inequality, and poverty on public health in Latin America**. Soc Sci Med. 2010 July, vol. 71, n° 2, pp.266-273 http://dx.doi.org/10.1016/j.socscimed.2010.04.002 (**accès réservé EHESP**)

Despite findings indicating that both national income level and income inequality are each determinants of public health, few have studied how national income level, poverty and inequality interact with each other to influence public health outcomes. We analyzed the relationship between gross domestic product (GDP) per capita in purchasing power parity, extreme poverty rates, the gini coefficient for personal income and three common measures of public health: life expectancy, infant mortality rates, and tuberculosis (TB) mortality rates. Introducing poverty and inequality as modifying factors, we then assessed whether the relationship between GDP and health differed during times of increasing, decreasing, and decreasing or constant poverty and inequality. Data were taken from twenty-two Latin American countries from 1960 to 2007 from the December 2008 World Bank World Development Indicators, World Health Organization Global Tuberculosis Database 2008, and the Socio-Economic Database for Latin America and the Caribbean. Consistent with previous studies, we found increases in GDP have a sizable positive impact on population health. However, the strength of the relationship is powerfully influenced by changing levels of poverty and inequality. When poverty was increasing, greater GDP had no significant effect on life expectancy or TB mortality, and only led to a small reduction in infant mortality rates. When inequality was rising, greater GDP had only a modest effect on life expectancy and infant mortality rates, and no effect on TB mortality rates. In sharp contrast, during times of decreasing or constant poverty and inequality, there was a very strong relationship between increasing GDP and higher life expectancy and lower TB and infant mortality rates. Finally, inequality and poverty were found to exert independent, substantial effects on the relationship between national income level and health. Wealthier is indeed healthier, but how much healthier depends on how increases in wealth are distributed

(3)FEE E. **Jules Schevitz (1897-1922): boy wonder from Brooklyn**. Am J Public Health. 2010 July, vol. 100, n° 7, p.1205
http://dx.doi.org/10.2105/AJPH.2009.185736 (**accès réservé EHESP**)

(4) MOSZYNSKI P. **Improving access to health care for UK minority communities is key to combating tuberculosis**. BMJ. 2010, vol. 341, p.c3563
http://www.ncbi.nlm.nih.gov/pubmed/20601420 (**accès libre, collection papier de la bibliothèque**)

(5) SCHEVITZ J. **Advertising as a force in public health education. 1915**. Am J Public Health. 2010 July, vol. 100, n° 7, pp.1202-1204
http://www.ncbi.nlm.nih.gov/pubmed/20530759 (**accès réservé EHESP)**

(6) SEVERE P, JUSTE MA, AMBROISE A, ELIACIN L, *et al.* **Early versus standard antiretroviral therapy for HIV-infected adults in Haiti**. N Engl J Med. 2010 July 15, vol. 363, n° 3, pp.257-265
http://dx.doi.org/10.1056/NEJMoa0910370 (**accès réservé EHESP**)

BACKGROUND: For adults with human immunodeficiency virus (HIV) infection who have CD4+ T-cell counts that are greater than 200 and less than 350 per cubic millimeter and who live in areas with limited resources, the optimal time to initiate antiretroviral therapy remains uncertain. METHODS: We conducted a randomized, open-label trial of early initiation of antiretroviral therapy, as compared with the standard timing for initiation of therapy, among HIV-infected adults in Haiti who had a confirmed CD4+ T-cell count that was greater than 200 and less than 350 per cubic millimeter at baseline and no history of an acquired immunodeficiency syndrome (AIDS) illness. The primary study end point was survival. The early-treatment group began taking zidovudine, lamivudine, and efavirenz therapy within 2 weeks after enrollment. The standard-treatment group started the same regimen of antiretroviral therapy when their CD4+ T-cell count fell to 200 per cubic millimeter or less or when clinical AIDS developed. Participants in both groups underwent monthly follow-up assessments and received isoniazid and trimethoprim-sulfamethoxazole prophylaxis with nutritional support. RESULTS: Between 2005 and 2008, a total of 816 participants--408 per group--were enrolled and were followed for a median of 21 months. The CD4+ T-cell count at enrollment was approximately 280 per cubic millimeter in both groups. There were 23 deaths in the standard-treatment group, as compared with 6 in the early-treatment group (hazard ratio with standard treatment, 4.0; 95% confidence interval [CI], 1.6 to 9.8; P=0.001). There were 36 incident cases of tuberculosis in the standard-treatment group, as compared with 18 in the early-treatment group (hazard ratio, 2.0; 95% CI, 1.2 to 3.6; P=0.01). CONCLUSIONS: Early initiation of antiretroviral therapy decreased the rates of death and incident tuberculosis. Access to antiretroviral therapy should be expanded to include all HIV-infected adults who have CD4+ T-cell counts of less than 350 per cubic millimeter, including those who live in areas with limited resources. (ClinicalTrials.gov number, NCT00120510.)

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