1- Br J Haematol. 2010 Feb. [Epub ahead of print]

Venous thrombosis prevention -more than just guidelines.

Clark P, Wu O, Greer IA, Lowe GD.

Summary: Hospital-associated venous thromboembolism remains a major international cause of avoidable mortality and morbidity .Although the publication of national guidelines does increase the use of thromboprophylaxis, we present the results of a recent audit of thrombosis prevention in UK hospitals which, despite published guidelines, shows continuing significant variations in guideline implementation and practice .The results of this audit are paralleled with UK and international data on hospital-acquired thrombosis prevention and the potential solutions to these problems, particularly the lessons which can be learned from other areas of clinical practice, are discussed.

2- Addiction. 2010 Feb. [Epub ahead of print]

Internet-based prevention for alcohol and cannabis use :final results of the Climate Schools course.

Newton NC, Teesson M, Vogl LE, Andrews G.

ABSTRACT: Aims: To establish the long-term efficacy of a universal internet-based alcohol and cannabis prevention programme in schools .Methods: A cluster-randomized controlled trial was conducted to assess the effectiveness of the Climate Schools :Alcohol and Cannabis Course .The evidence-based course, aimed at reducing alcohol and cannabis use, is facilitated by the internet and consists of 12 novel and curriculum consistent lessons delivered over 6 months .Participants: A total of 764 year 8 students)13 years (from 10 Australian secondary schools were allocated randomly to the internet-based prevention programme)n =397, five schools(, or to their usual health classes (n =367, five schools). Measures: Participants were assessed at baseline, immediately post, and 6 and 12 months following completion of the intervention, on measures of alcohol and cannabis knowledge, attitudes, use and related harms .Results: This paper reports the final results of the intervention trial, 12 months following the completion of the Climate Schools :Alcohol and Cannabis Course .The effectiveness of the course 6 months following the intervention has been reported previously .At the 12-month follow-up, compared to the control group, students in the intervention group showed significant improvements in alcohol and cannabis knowledge, a reduction in average weekly alcohol consumption and a reduction in frequency of drinking to excess .No differences between groups were found on alcohol expectancies, cannabis attitudes or alcohol -and cannabis-related harms .The course was found to be acceptable by teachers and students as a means of delivering drug education in schools . Conclusions: Internet-based prevention programs for school-age children can improve student's knowledge about alcohol and cannabis, and may also reduce alcohol use twelve months after completion.

3- J Ocul Pharmacol Ther. 2010 Feb. [Epub ahead of print]

Prevention of Oxidative Damage to Lens by Caffeine.

Varma SD, Hegde KR.

Abstract: Purpose :The primary objective of this study was to examine the possibility of inhibiting oxidative damage to the lens in vitro by caffeine .Methods :Oxidative damage was inflicted by incubating mouse lenses in Tyrode medium containing 0.1 mM Fe(8) , an iron complex soluble in aqueous medium .Parallel incubations were conducted in the presence of caffeine (5 mM). Results : Lenses incubated in the medium containing Fe)8(Br)8 (undergo oxidative stress, as evidenced by the inhibition of Na-(+)K (+)ATPase-driven rubidium transport and the loss of tissue glutathione and ATP . These effects were prevented in presence of caffeine .That the effects are due to the oxyradicals produced was ascertained further by parallel studies with Tempol (5 mM), a well-known scavenger of reactive oxygen species (ROS) with its activity being more pronounced with hydroxyl radicals as compared to other ROS .Conclusions :Caffeine was found to be effective in preventing oxidative stress to the lens induced by iron under ambient conditions .The protective effect is attributable to its ability to scavenge ROS, particularly the hydroxyl radical.

4- Schmerz. 2010 Feb . [Epub ahead of print]

Preventive medication in migraine headache :Individualized clinical pathways.

Heinze A, Heinze-Kuhn K, Göbel H.

With the introduction of the highly effective triptans in the treatment of acute migraine attacks, the significance of migraine prevention temporarily lost ground in the awareness of doctors and, even more so, patients .This was unjustified, as the increasing numbers of patients with triptan-overuse headache clearly demonstrated .Recent years have seen this trend reversed with a resurgence of migraine prevention .In daily practice the first question is whether migraine prevention is indeed indicated for the patient .If answered affirmatively, the next step is the intricate selection of the most promising agent for the patient .Treatment guidelines regularly updated by the relevant medical societies provide a general overview of the agents principally available according to the principles of evidence-based medicine .Yet, low compliance rates suggest that in practice implementation of these guidelines may have to be tailored to the patient in question .The treatment algorithm presented here tries to bridge the gulf between general treatment guidelines and the actual needs of the patient .From this, feasible clinical pathways are derived for individualized treatment.

5- Neonatology. 2010 Feb ; 98(2):111-117. [Epub ahead of print]

Postnatal Hydrocortisone for Preventing or Treating Bronchopulmonary Dysplasia in Preterm Infants :A Systematic Review

Doyle LW, Ehrenkranz RA, Halliday HL

Background :Corticosteroids have been used widely after birth in preterm infants with respiratory failure; hydrocortisone may be preferable to other corticosteroids for this purpose .Objectives :To determine if postnatal hydrocortisone is useful to prevent or treat bronchopulmonary dysplasia (BPD) in preterm infants .Methods :Randomised controlled trials)RCTs (of postnatal hydrocortisone therapy to prevent or treat BPD were sought .Data regarding clinical outcomes including mortality, BPD, death or BPD, complications during the primary hospitalisation, and long-term outcome were abstracted and analysed using RevMan 5 .Results :Eight RCTs enrolling a total of 880 participants were eligible .In all trials treatment was started in the first week of life; there were no trials of treatment started in infants who were chronically ventilator-dependent after the first week of life with established or evolving BPD . A meta-analysis of the available trials demonstrated little evidence for a direct effect of hydrocortisone on the rates of BPD, mortality, or the combined outcome of BPD or mortality .Hydrocortisone in the doses used in these eight studies had few beneficial or harmful effects; the notable exception was an increase in gastrointestinal perforation .Conclusions :Postnatal hydrocortisone in the doses and regimens used in the reported trials has few beneficial or harmful effects and cannot be recommended for prevention of BPD .There are no randomised trials to substantiate the use of hydrocortisone in chronically ventilator-dependent infants with established or evolving BPD

6- Am J Public Health. 2010 Feb . [Epub ahead of print]

Results of a Pilot Diabetes Prevention Intervention in East Harlem, New York City :Project HEED.

Parikh P, Simon EP, Fei K, Looker H, Goytia C, Horowitz CR.

Objectives.:Our community-academic partnership employed community-based participatory research to develop and pilot a simple, peer-led intervention to promote weight loss, which can prevent diabetes and eliminate racial/ethnic disparities in incident diabetes among overweight adults with prediabetes.Methods .We recruited overweight adults at community sites, performed oral glucose tolerance testing to identify persons with blood glucose levels in the prediabetes range, and randomized eligible people to a peer-led lifestyle intervention group or delayed intervention in 1 year .Outcomes, including weight, blood pressure, and health behaviors, were measured at baseline and 3, 6, and 12 months.Results .More than half of those tested (56%, or 99 of 178) had prediabetes and enrolled in the study .Participants were predominantly Spanish-speaking, low-income, undereducated women .The intervention group lost significantly more weight than the control group and maintained weight loss at 12 months (7.2 versus 2.4 pounds; P<.0.01). One fourth (24 of 99) of participants progressed to diabetes.Conclusions .In underserved minority communities, prediabetes prevalence may be higher than previously reported .Low-cost, community-based interventions can succeed in encouraging weight loss to prevent diabetes.

7- J Aging Health. 2010 Feb . [Epub ahead of print]

Care Management Service and Falls Prevention :A Case-Control Study in a Chinese Population.

Leung AY, Lou VW, Chan KS, Yung A, Chi I.

OBJECTIVE :This study evaluates the effect of a care management service (CMS) on falls in older adults .METHOD :This is a retrospective case-control study with 78 CMS recipients as the case group who received CMS and another 312 community-dwelling frail elders as the control group .The groups were matched by age, gender, activity of daily living, cognitive impairment, and unsteady gait .Thus they were comparable in characteristics and frailty .RESULTS :Among the 390 participants, 89 older adults (23.0 %) had falls in the 90 days prior to the survey .After controlling for the identified risk factors for falls, the odds ratio of CMS was 0.27 (95 %confidence interval =0.110-0.663, p < .01). DISCUSSION :These findings indicate that CMS recipients have a lower chance for falls compared to their counterparts .The two features of CMS (comprehensive assessment and multidisciplinary actions to reduce fall risks) are discussed.

8- HIV Med. 2010 Feb. [Epub ahead of print]

Prevention of mother-to-child transmission of HIV in Denmark, 1994-2008.

von Linstow ML, Rosenfeldt V, Lebech AM, Storgaard M, Hornstrup T, Katzenstein TL, Pedersen G, Herlin T, Valerius NH, Weis N.

Objectives The aim of this study was to describe trends in the management of pregnancies in HIV-infected women and their outcomes over a 14-year period in Denmark on a national basis. Methods The study was a retrospective cohort study of all HIV-infected women in Denmark giving birth to one or more children between 1 June 1994 and 30 June 2008. Results We identified 210 HIV-infected women with 255 pregnancies, ranging from 7 per year in 1995 to 39 per year in 2006. Thirty per cent of the women were Caucasian and 51% were Black African. Knowledge of HIV status before pregnancy increased from 8% (four of 49) in 1994-1999 to 80% (164 of 206) in 2000-2008. Only 29% (53 of 183) of the women chose to consult an infectious disease specialist when planning pregnancy, while 14% (27 of 199) received assistance with fertility. The proportion of women on antiretroviral therapy (ART) increased from 76% (37 of 49) in 1994-1999 to 98% (201 of 206) in 2000-2008. Vaginal deliveries ranged from 0 in 2003 to 35% of pregnancies in 2007. Mother-to-child transmission (MTCT) of HIV decreased from 10.4% in 1994-1999 to 0.5% in 2000-2008. All women giving birth to an HIV-positive child were diagnosed with HIV during or after delivery and did not receive prophylactic ART. Conclusions The annual number of HIV pregnancies increased fivefold during this 14-year period and substantial changes in pregnancy management were seen. No woman treated according to the national guidelines, i.e. ART before week 22, intravenous zidovudine (ZDV) during labour, neonatal ZDV for 4 to 6 weeks and no breastfeeding, transmitted HIV to her child.

9- Acta Paediatr. 2010 Feb . [Epub ahead of print]

Determinants of adherence to a single-dose nevirapine regimen for the prevention of mother-to-child HIV transmission in Gert Sibande district in South Africa.

Peltzer K, Mlambo M, Phaswana-Mafuya N, Ladzani R.

Abstract Aim :To identify factors that influence adherence to antiretroviral (ARV) prophylaxis by HIV positive mothers participating in the HIV prevention of mother to child (PMTCT) programme. e .Methods : Post-delivery 815 HIV-infected mothers aged 18 years and above with babies aged 3-6 months were interviewed in Gert Sibande District, Mpumalanga province, South Africa .Results :Eighty five percent of the mothers indicated that they had been provided with nevirapine and 78.4 %took it before or at the onset of labour and infant nevirapine intake was 76.9 .%In multivariate analysis it was found that women with better PMTCT knowledge had a higher perceived confidentility about HIV status at the health facility .They had a term delivery and those who had told their partner about nevirapine had a higher maternal nevirapine adherence .Women who had also told their partner about nevirapine, whose partner was asked for an HIV test and those who knew the HIV status of their infant had higher infant nevirapine adherence .Conclusion :Adherence to maternal and infant ARV prophylaxis was found to be sub-optimal .Health services delivery factors, male involvement, communication and social support contribute to adherence to ARV prophylaxis in this largely rural setting in South Africa.

10- Postgrad Med J. 2010 Feb; 86(1012): 94-9.

Early dietary exposures and feeding practices :role in pathogenesis and prevention of allergic disease?

Jennings S, Prescott SL.

Immune dysregulation has become a hallmark of the modern era. This has led to an epidemic of disease states that result from failed immune surveillance and inappropriate or maladaptive immune responses to self-antigens (autoimmunity) and environmental antigens (allergy). Although environmental change is clearly implicated, the specific causes are still unconfirmed. Any hope to reverse such immune dysfunction must be based on a clearer understanding of the causal pathways and the environmental factors that may be driving the concerning surge in disease rates .This review explores the role of modern dietary changes that, through their known documented immune effects, may play a role in either promoting or preventing disease .Food allergen avoidance has been largely unsuccessful, and most expert bodies no longer recommend delayed complementary feeding or the avoidance of any specific allergenic foods, unless symptoms develop and allergy is confirmed .Rather, focus has shifted to other factors that may influence the ability to develop immune tolerance .There is now evidence that specific nutrients, such as folate, have the capacity to promote an allergic phenotype by epigenetically altering gene expression during early development .A number of other dietary factors including n-3 polyunsaturated fatty acids, oligosaccharides, probiotics, vitamin D, retinoic acid and other antioxidants may also clearly influence immune function and immune development .This review summarises the current evidence, recommendations and future directions in the context of allergy, with the aim of highlighting the need to further investigate the role of diet and nutrition in disease pathogenesis and prevention.

11- Intensive Care Med. 2010 Feb. [Epub ahead of print]

Prevention of adverse drug reactions in intensive care patients by personal intervention based on an electronic clinical decision support system.

Bertsche T, Pfaff J, Schiller P, Kaltschmidt J, Pruszydlo MG, Stremmel W, Walter-Sack I, Haefeli WE, Encke J.

OBJECTIVE: We investigated the effect of written drug information for senior clinicians on the incidence of drug-drug interactions (DDIs) and DDI-related adverse events in intensive care patients. DESIGN AND METHODS: A prospective controlled intervention cohort study was conducted in a medical intensive and intermediate care unit in a university hospital. From 1,062 consecutive intensive care patients, those 265 (control: 136, intervention: 129) with >/=8 concurrently prescribed drugs were included in the study (to include high-risk patients with polypharmacy). The DDI information for senior clinicians during an intervention period of 3 months was based on a computerised clinical decision support system (CDSS) containing information on risk and management of 9,453 drug combinations. RESULTS: The number of patients with at least one DDI at the end of the respective study phase decreased by 18% (relative risk reduction) from 90 (66%) patients in controls to 70 (54%) in the intervention group ($p = 0.02$). The relative risk of a patient suffering from at least one DDI-related adverse event decreased by 43% from 60 (44%) patients in controls to 32 (25%) in the intervention group ($p < 0.01$). Among these events, the incidence of QT(C) prolongation was reduced by 64% from 15 (11%) patients in the control group to 5 (4%) in the intervention group ($p = 0.04$), and the incidence of hypokalemia by 80% from 14 (10%) to 2 (2%, $p < 0.01$). CONCLUSION: Written drug information based on a CDSS considerably decreased DDIs and DDI-related adverse events in routine practice.

12- Qual Saf Health Care. 2010 Feb. [Epub ahead of print]

Exploring the causes of adverse events in hospitals and potential prevention strategies.

Smits M, Zegers M, Groenewegen PP, Timmermans DR, Zwaan L, van der Wal G, Wagner C.

Objectives To examine the causes of adverse events (AEs) and potential prevention strategies to minimise the occurrence of AEs in hospitalised patients. Methods For the 744 AEs identified in the patient record review study in 21 Dutch hospitals, trained reviewers were asked to select all causal factors that contributed to the AE. The results were analysed together with data on preventability and consequences of AEs. In addition, the reviewers selected one or more prevention strategies for each preventable AE. The recommended prevention strategies were analysed together with four general

causal categories: technical, human, organisational and patient-related factors. Results Human causes were predominantly involved in the causation of AEs (in 61% of the AEs), 61% of those being preventable and 13% leading to permanent disability. In 39% of the AEs, patient-related factors were involved, in 14% organisational factors and in 4% technical factors. Organisational causes contributed relatively often to preventable AEs (93%) and AEs resulting in permanent disability (20%). Recommended strategies to prevent AEs were quality assurance/peer review, evaluation of safety behaviour, training and procedures. For the AEs with human and patient-related causes, reviewers predominantly recommended quality assurance/peer review. AEs caused by organisational factors were considered preventable by improving procedures. Discussion Healthcare interventions directed at human causes are recommended because these play a large role in AE causation. In addition, it seems worthwhile to direct interventions on organisational causes because the AEs they cause are nearly always believed to be preventable. Organisational factors are thus relatively easy to tackle. Future research designs should allow researchers to interview healthcare providers that were involved in the event, as an additional source of information on contributing factors.

13- Cancer Epidemiol Biomarkers Prev. 2010 Feb; 19(2):614-8.

Human papillomavirus types 16, 18, and 31 serostatus and prostate cancer risk in the prostate cancer prevention trial.

Sutcliffe S, Viscidi RP, Till C, Goodman PJ, Hoque AM, Hsing AW, Thompson IM, Zenilman JM, De Marzo AM, Platz EA.

Since human papillomavirus (HPV) infection was first identified as a risk factor for cervical cancer, several seroepidemiologic and tissue-based studies have investigated HPV in relation to prostate cancer, another common genitourinary malignancy, with mixed results. To further inform this potential association, we conducted a large, prospective investigation of HPV types 16, 18, and 31 in relation to risk of prostate cancer in the Prostate Cancer Prevention Trial. Cases were a sample of men diagnosed with prostate cancer after visit 2 or on their end-of-study biopsy (n = 616). Controls were men not diagnosed with prostate cancer during the trial or on their end-of-study biopsy (n = 616). Controls were frequency matched to cases by age, treatment arm, and family history of prostate cancer. Sera from visit 2 were tested for IgG antibodies against HPV types 16, 18, and 31. No associations were observed for weak or strong HPV-16 [odds ratio (OR), 0.94; 95% confidence interval (95% CI), 0.53-1.64 and OR, 1.07; 95% CI, 077-1.48, respectively], HPV-18 (OR, 0.75; 95% CI, 0.27-2.04 and OR, 0.87; 95% CI, 0.47-1.63, respectively), or HPV-31 seropositivity (OR, 0.76; 95% CI, 0.45-1.28 and OR, 1.15; 95% CI, 0.80-1.64, respectively) and risk of prostate cancer. Considering this finding in the context of the HPV and prostate cancer literature, HPV does not appear to be associated with risk of prostate cancer, at least by mechanisms proposed to date, and using epidemiologic designs and laboratory techniques currently available.

14- J Adolesc Health. 2010 Feb; 46(2S2):S9-S15.

Meningococcal Disease Awareness :Clinical and Epidemiological Factors Affecting Prevention and Management in Adolescents.

Pelton SI.

Nonspecificity of early symptoms makes meningococcal disease difficult to distinguish from more common, primarily self-limited infections .Patients rapidly progress to death despite medical intervention if early shock and/or disseminated intravascular coagulopathy are already present . Although overall incidence of and mortality from meningococcal disease is lower in adolescents than in infants, the case fatality rate is higher, making this population a critical target for prevention .

15- Gynecol Oncol. 2010 Feb . [Epub ahead of print]

Prevention strategies against human papillomavirus in males.

Garland SM.

Sexually transmitted human papillomavirus (HPV) infection is very common in men and women. Oncogenic HPV is strongly associated with cancers and high-grade dysplasias of the anogenital tract, including the anus, penis, and also a proportion of oropharyngeal cancers. In reducing male disease burden, some consider screening and treatment for high-grade anal dysplasia (AIN) to prevent anal

cancer in high-risk populations. Such strategies have wide implications for the workforce, and require more evidence for the optimal management of AIN. Male sexual behavior, with consequent HPV infection and disease contribute to considerable disease burden in females. Hence, inclusion of males in prophylactic HPV vaccination programs should prevent HPV-related disease in males as well as substantially reducing disease burden in females. Clinical trial data in males 16-26 years for the quadrivalent vaccine show it is well tolerated, induces a strong type-specific immunological response comparable to that of females, and reduced vaccine HPV-type-related genital infection, as well as disease. Cost-benefit analyses and mathematical modeling show that the most cost-effective strategy involves routine administration of this vaccine to 12-year-old females, with catch-up vaccination of 12- to 24-year-olds, with the most effective strategy in disease reduction including men and/or boys in the program. Such a vaccination strategy including 12-year-old boys is projected by 2050 to reduce HPV 16 infection by 88-94% in females and 68-82% in males, plus the aforementioned male HPV- related cancers by 22-27%. Therefore, inclusion of males in an HPV vaccination program is likely to have significant health and economic benefits over and above those observed from current female-only programs. However, comprehensive cost-benefit analyses are needed to determine the efficacy of these programs in the overall population. Such analyses will be crucial for the design, acceptance, and implementation of these vaccination programs into clinical practice globally.

16- Z Orthop Unfall. 2010 Feb . [Epub ahead of print]

Oral Prevention of Thromboembolism with Rivaroxaban and Dabigatran :Are the Newly Approved Drugs Innovations in Orthopaedic and Trauma Surgery?

Quante M, Pauschert R, Gogarten W.

Today the indication for thrombosis prophylaxis is a relevant and daily concern in orthopaedic surgery .Recently there are some changes concerning the German guidelines, which are approved by 27 German medical societies .For the first time the guidelines give distinct recommendations for the different indications, the kind of thrombosis prophylaxis and its duration .Some of the recommendations will lead to changes of both processes in outpatient and inpatient management .In parallel 2 new oral anticoagulants have been approved for the prevention of thromboembolic events after elective knee and hip replacement .Dabigatran is an oral thrombin inhibitor .Compared to enoxaparin it has a comparable profile of side effects and efficacy .Rivaroxaban is an oral Xa inhibitor which shows a sigificantly better efficacy compared to enoxaparin and no difference in side effects .The significant reduction of symptomatic thromboembolisms after elective knee and hip replacement was shown for rivaroxaban compared to enoxaparin in a pooled analysis of phase III data .This review discusses the main topics of the new German guideline and impact of the new oral anticoagulants on in -and outpatient treatment procedures .

17- Eur J Pediatr. 2010 Feb. [Epub ahead of print]

Clinical practice :Breastfeeding and the prevention of allergy.

Kneepkens CM, Brand PL.

The increase in allergic disease prevalence has led to heightened interest in the factors determining allergy risk, fuelled by the hope that by influencing these factors one could reduce the prevalence of allergic conditions. The most important modifiable risk factors for allergy are maternal smoking behaviour and the type of feeding. A smoke-free environment for the child (to be), exclusive breastfeeding for 4-6 months and the postponement of supplementary feeding (solids) until 4 months of age are the main measures considered effective. There is no place for restricted diets during pregnancy or lactation. Although meta-analyses suggest that hypoallergenic formula after weaning from breastfeeding grants protection against the development of allergic disease, the evidence is limited and weak. Moreover, all current feeding measures aiming at allergy prevention fail to show effects on allergic manifestations later in life, such as asthma. In conclusion, the allergy preventive effect of dietary interventions in infancy is limited. Counselling of future parents on allergy prevention should pay attention to these limitations.

18- J Dig Dis. 2010 Feb;11(1): 2-11.

Role of Helicobacter pylori infection in gastric cancer pathogenesis :A chance for prevention.

Malfertheiner P, Bornschein J, Selgrad M.

Gastric cancer in the absence of strategies implemented for early detection continues to have a dismal prognosis. There are limited options for a curative therapy once patients present with clinical manifestations of this malignant disease. Helicobacter pylori (H. pylori) infection plays a key role in gastric carcinogenesis, supported by epidemiological, preclinical and clinical studies. The recognition of H. pylori infection as a critical risk factor in the development of gastric cancer opens the chance for new venues in prevention strategies.

19- J Clin Pharmacol. 2010 Feb. [Epub ahead of print]

Potential Use of Erythromycin to Prevent and Treat Prosthetic Failure.

Zhang P, Qin L.

Prolonged prosthetic life span is a goal that orthopedic surgeons are pursuing .Both septic and aseptic loosening may lead to prosthetic failure .For decades, antibiotics have been applied in arthroplasty to prevent septic loosening, with excellent clinical results, although few therapies have been able to prevent aseptic loosening .Research on aseptic loosening indicates that osteoclasts play an essential role in this process .Thus, the exploration of osteoclastogenesis inhibitor has become of interest .Erythromycin is a broad-spectrum antimicrobial that has been used to prevent postoperative infection after artificial joint replacement .A new function to inhibit particle-induced osteolysis has been discovered recently .Fundamental research indicates that erythromycin administration should be an excellent method for the prophylaxis of prosthetic failure and should increase the life span of artificial joint in clinics.

20- J Nutr. 2010 Feb. Epub ahead of print]

Guidance for Substantiating the Evidence for Beneficial Effects of Probiotics :Prevention and Management of Allergic Diseases by Probiotics.

Kalliomki M, Antoine JM, Herz U, Rijkers GT, Wells JM, Mercenier A.

Allergy is a hypersensitivity reaction mediated by specific antibody-mediated or cell-mediated immunologic mechanisms and clinically manifested as atopic eczema, allergic rhinoconjunctivitis, or asthma .During the recent decades there has been an increase in allergy prevalence, which is attributed to changes in environmental factors .The so-called "hygiene hypothesis "suggests that a lack of exposure to microbial stimulus early in childhood is a major factor involved in this trend .This provides a rationale for using probiotics to modify the gut microbiota and thereby shaping the immune response of the host, especially in infancy .Most success has been obtained in primary prevention of atopic eczema . A limited number of studies also provided evidence for a beneficial effect of different probiotics in the management of allergic diseases)atopic eczema, allergic rhinitis .However, choice of probiotic strains as well as timing of the intervention are important variables .The exact in vivo mechanism of probiotics in shaping the immune response still needs to be determined .Future studies should use uniform criteria for diagnosis and symptom scoring of atopic diseases and may identify the genes predisposing to allergic disease .There is encouraging evidence that specific probiotics can become valuable tools in the prevention and management of allergic diseases.

21- BMC Med Res Methodol. 2010 Feb ;10(1): 10. [Epub ahead of print]

Primary prevention from the epidemiology perspective :Three examples from the practice.

Pigeot I, De Henauw S, Foraita R, Jahn I, Ahrens W.

ABSTRACT :BACKGROUND :Primary prevention programmes are of increasing importance to reduce the impact of chronic diseases on the individual, institutional and societal level .However, most initiatives that develop and implement primary prevention programmes are not evaluated with scientific rigor .On the basis of three different projects we discuss necessary steps on the road to evidence-based primary prevention .DISCUSSION :We first discuss how to identify suitable target groups exploiting sophisticated statistical methods .This is illustrated using data from a health survey conducted in a federal state of Germany .A literature review is the more typical approach to identify

target groups that is demonstrated using a European project on the prevention of childhood obesity .In the next step, modifiable risk factors and realistic targets of the intervention have to be specified .These determine the outcome measures that in turn are used for effect evaluation .Both, the target groups and the outcome measures, lay the ground for the study design and the definition of comparison groups as can be seen in our European project .This project also illustrates the development and implementation of a prevention programme .These may require active involvement of participants which can be achieved by participatory approaches taking into account the socio-cultural and living environment . Evaluation is of utmost importance for any intervention to assess structure, process and outcome according to rigid scientific criteria .Different approaches used for this are discussed and illustrated by a methodological project developed within a health promotion programme in a deprived area .Eventually the challenge of transferring an evidence-based intervention into practice and to achieve its sustainability is addressed .SUMMARY :This article describes a general roadmap to primary prevention comprising (1) the identification of target groups and settings, (2) the identification of modifiable risk factors and endpoints, (3) the development and implementation of an intervention programme, (4) the evaluation of structure, process and outcome and (5) the transfer of an evidence-based intervention into practice.

22- Clin Cardiol. 2010 Feb . [Epub ahead of print]

Prevention of Contrast-induced Nephropathy :A Single Center Randomized Study.

Castini D, Lucreziotti S, Bosotti L, Salerno Uriarte D, Sponzilli C, Verzoni A, Lombardi F.

BACKGROUND: Contrast-induced nephropathy (CIN) is the third cause of acute deterioration of renal function in hospitalized patients. HYPOTHESIS: The purpose of the study was to compare the efficacy of saline infusion, saline infusion plus N-acetylcysteine (NAC), and sodium bicarbonate (SB) infusion to prevent CIN in patients undergoing coronary angiography and/or percutaneous coronary intervention. METHODS: We prospectively studied 156 patients with a baseline creatinine level >/= 1.2 mg/dL. The primary endpoint was the development of CIN, defined as an increase in serum creatinine concentration >/= 25% over the baseline value within 5 days from contrast exposure. RESULTS: Contrast-induced nephropathy developed in 23 patients (14.7%). Incidence of the primary endpoint was similar in the 3 groups of treatment, occurring in 7 patients (14%) in the saline infusion group, in 9 (17%) in the saline infusion plus NAC group, and in 7 (14%) in the SB infusion group. CONCLUSIONS: Our findings suggest that neither the addition of NAC nor the administration of SB add further benefit in CIN prevention, compared to standard hydration with isotonic saline infusion.

23- Adv Ther. 2010 Feb. [Epub ahead of print]

New pharmacotherapy for stroke prevention in atrial fibrillation :Update 2010.

Armaganijan L, Eikelboom J, Healey JS, Morillo CA.

Atrial fibrillation)AF (is the most commonly encountered arrhythmia in clinical practice and is associated with substantial morbidity and mortality .Its prevalence increases with age, affecting about 1 %of patients aged <60 years and almost 10 %of patients >80 years .AF is associated with a fivefold increasing risk of embolism or stroke with absolute risk ranging from less than 1 %to 20% per year, depending on patient age and the presence of clinical risk factors including congestive heart failure, systemic hypertension, diabetes mellitus and prior history of cardioembolic events .Vitamin K antagonists (VKA) (and acetyl salicylic acid are currently the only licensed antithrombotic therapies for stroke prevention in patients with AF .Anticoagulants are very effective for stroke prevention in patients 0084-8 12 with AF, overall a 64 %relative risk reduction .Nonetheless, approximately 50 %of patients with AF who have an indication for VKA receive anticoagulant therapy, of which only 50 %maintain adequate therapeutic ranges .Furthermore, 50 %will discontinue VKAs within 3 to 5 years regardless of appropriate international normalized ratio control .Underutilization of VKAs is related, in part, to their numerous limitations and difficulty in maintaining adequate therapeutic control, prompting the development of new antithrombotic strategies that are equally effective and safer, and easier to manage than VKAs .This review focuses on new antithrombotic therapies for stroke prevention in patients with AF.

24- Arch Pediatr Adolesc Med. 2010 Feb;164(2):145-50

Effectiveness of a school-based physical activity injury prevention program :a cluster randomized controlled trial.

Collard DC, Verhagen EA, Chinapaw MJ, Knol DL, van Mechelen W.

OBJECTIVE: To study the effects of a school-based injury prevention program on physical activity injury incidence and severity. DESIGN: Cluster randomized controlled trial performed from January 1, 2006, through July 31, 2007. SETTING: Forty Dutch primary schools. PARTICIPANTS: A total of 2210 children (aged 10-12 years). INTERVENTION: Schools were randomized to receive either the regular curriculum or an intervention program that targeted physical activity injuries. OUTCOME MEASURES: Incidence and severity of physical activity injuries per 1000 hours of physical activity participation. RESULTS: A total of 100 injuries in the intervention group and 104 injuries in the control group were registered. Nonresponse at baseline or follow-up was minimal (8.7%). The Cox regression analyses adjusted for clustering showed a small nonsignificant intervention effect on total (HR, 0.81; 95% confidence interval [CI], 0.41-1.59), sports club (0.69; 0.28-1.68), and leisure time injuries (0.75; 0.36-1.55). However, physical activity appeared to be an effect modifier. In those who were less physically active, the intervention had a larger effect. The intervention reduced the total and leisure time injury incidence (HR, 0.47; 95% CI, 0.21-1.06; and 0.43; 0.16-1.14; respectively). Sports club injury incidence was significantly reduced (HR, 0.23; 95% CI, 0.07-0.75). CONCLUSION: We found a substantial and relevant reduction in physical activity injuries, especially in children in the low active group, because of the intervention. This school-based injury prevention program is promising, but future large-scale research is needed.

25- Arch Gen Psychiatry. 2010 Feb;67(2): 146-54.

Long-chain omega-3 fatty acids for indicated prevention of psychotic disorders :a randomized, placebo-controlled trial.

Amminger GP, Schäfer MR, Papageorgiou K, Klier CM, Cotton SM, Harrigan SM, Mackinnon A, McGorry PD, Berger GE.

CONTEXT: The use of antipsychotic medication for the prevention of psychotic disorders is controversial. Long-chain omega-3 (omega-3) polyunsaturated fatty acids (PUFAs) may be beneficial in a range of psychiatric conditions, including schizophrenia. Given that omega-3 PUFAs are generally beneficial to health and without clinically relevant adverse effects, their preventive use in psychosis merits investigation. OBJECTIVE: To determine whether omega-3 PUFAs reduce the rate of progression to first-episode psychotic disorder in adolescents and young adults aged 13 to 25 years with subthreshold psychosis. DESIGN: Randomized, double-blind, placebo-controlled trial conducted between 2004 and 2007. SETTING: Psychosis detection unit of a large public hospital in Vienna, Austria. PARTICIPANTS: Eighty-one individuals at ultra-high risk of psychotic disorder. INTERVENTIONS: A 12-week intervention period of 1.2-g/d omega-3 PUFA or placebo was followed by a 40-week monitoring period; the total study period was 12 months. MAIN OUTCOME MEASURES: The primary outcome measure was transition to psychotic disorder. Secondary outcomes included symptomatic and functional changes. The ratio of omega-6 to omega-3 fatty acids in erythrocytes was used to index pretreatment vs posttreatment fatty acid composition. RESULTS: Seventy-six of 81 participants (93.8%) completed the intervention. By study's end (12 months), 2 of 41 individuals (4.9%) in the omega-3 group and 11 of 40 (27.5%) in the placebo group had transitioned to psychotic disorder (P = .007). The difference between the groups in the cumulative risk of progression to full-threshold psychosis was 22.6% (95% confidence interval, 4.8-40.4). omega-3 Polyunsaturated fatty acids also significantly reduced positive symptoms (P = .01), negative symptoms (P = .02), and general symptoms (P = .01) and improved functioning (P = .002) compared with placebo. The incidence of adverse effects did not differ between the treatment groups. CONCLUSIONS: Long-chain omega-3 PUFAs reduce the risk of progression to psychotic disorder and may offer a safe and efficacious strategy for indicated prevention in young people with subthreshold psychotic states.

26- Interact Cardiovasc Thorac Surg. 2010 Feb . [Epub ahead of print]

Is skin closure with cyanoacrylate glue effective for the prevention of sternal wound infections?

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A best evidence topic in cardiac surgery was written according to a structured protocol .The question addressed whether cyanoacrylate glue was effective at preventing wound infection following sternotomy incision .Altogether more than 108 papers were found using the reported search, of which seven represented the best evidence to answer the clinical question .The authors, journal, date and country of publication, patient group studied, study type, relevant outcomes and results of these papers are tabulated. We conclude that applying cyanoacrylate glue to a sternal wound has superior outcomes in terms of infection rates, both if applied preoperatively (decreasing from 10.8% to 2.7% or 7.8% to 1.1%, according to two studies) and postoperatively (4.9%-2.1%). This trend is true of both deep surgical site infections (0.6%-0%) and superficial site infections (4.3%-2.1%). Furthermore, in patients who had developed mediastinitis following cardiac surgery rates of recurrent sternal detachment and osteomyelitis were significantly reduced in cases where sealant was applied compared to controls (35.3% vs. 0%). In all studies examining hospital stay, duration was reduced in cases where cyanoacrylate glue was used, both in patients treated for recurrent mediastinitis (24.06 vs. 14.16 days) and those with uncomplicated recovery following cardiac surgery (13 vs. 9 days). In addition, two studies examining the use of cyanoacrylate glue to secure the sternum in complicated cases of recurrent detachment report success rates of 86% and 100%.

27- Stroke. 2010 Feb. [Epub ahead of print]

Critical Role for Copper/Zinc-Superoxide Dismutase in Preventing Spontaneous Intracerebral Hemorrhage During Acute and Chronic Hypertension in Mice.

Wakisaka Y, Chu Y, Miller JD, Rosenberg GA, Heistad DD.

Backgrounds and Purpose-Superoxide is associated with spontaneous intracerebral hemorrhage (ICH) during hypertension. The goal of this study was to test the hypothesis that changes in superoxide, in genetically altered mice with deletion and overexpression of copper/zinc-superoxide dismutase (SOD1), modulate susceptibility to ICH. METHODS: Chronic hypertension was produced by infusion of angiotensin II and an inhibitor of nitric oxide synthase in drinking water in SOD1 transgenic (SOD1Tg) mice, SOD1-deficient (SOD1(-/-)) mice, and their respective wild-type littermates. Acute hypertension was produced by daily injections of angiotensin II in some mice with chronic hypertension to produce ICH. We evaluated susceptibility to ICH, oxidative stress (superoxide, NAD[P]H oxidase activity, SOD activity), gene expression, and activity of matrix metalloproteinases. RESULTS: Incidence, size, and number of ICHs were reduced in SOD1Tg mice and were increased in SOD1(-/-) mice compared with their wild-type littermates. Levels of superoxide increased in the brain even before developing ICH in wild-type littermates, whereas levels of superoxide remained low in SOD1Tg mice. Changes in level of matrix metalloproteinase-9 paralleled oxidative stress in SOD1Tg mice and wild-type littermates. Moreover, levels of superoxide and matrix metalloproteinase-9 were greater in SOD1(-/-) mice than wild-type littermates after induction of ICH. Active matrix metalloproteinases colocalized on cerebral vessels that appeared to lead toward regions with ICH. CONCLUSIONS: These results suggest that superoxide contributes to the pathogenesis of spontaneous ICH, possibly through activation of matrix metalloproteinase-9, and that SOD1 protects against spontaneous ICH during hypertension.

28- Am J Surg. 2010 Jan;199 (1 Suppl): S3-10.

Risk assessment as a guide for the prevention of the many faces of venous thromboembolism.

Caprini JA.

BACKGROUND: Approximately 900,000 cases of deep vein thrombosis and pulmonary embolism occur annually in the United States, and one-third lead to the patient's death .A variety of surgical factors contribute to Virchow's triad of venous stasis, vascular injury, and hypercoagulability, including intraoperative venous distension and microvascular endothelial damage .Patients also may have individual risk factors such as a history of thromboembolism, cancer, advanced age, or a genetic trait linked to hypercoagulation .This article discusses recent trends in the development and validation of

venous thromboembolism risk scores, including the results of a large validation study .DATA SOURCES :A Medline literature search was performed to identify original studies .CONCLUSIONS : Venous thromboembolism risk scores have been developed for groups of patients based on a few broad risk categories, but a more accurate, individualized risk score can be obtained using a recently validated risk scoring system, which can be used to determine the type and length of prophylaxis to administer . Further studies are under way to refine this system .

29- J Gerontol Nurs. 2010 Jan 28:1-9 .doi :10.3928/00989134-20100108-06. [Epub ahead of print]

Prevention and Clinical Outcomes in Older Inpatients with Suspected Venous Thromboembolism.

Lee JA, Zierler BK.

Venous thromboembolism (VTE) is one of the most common preventable disorders among hospital inpatients. Advancing age is a major risk factor for VTE. The purpose of this study was to describe and compare prevention practices and clinical outcomes in older (age 65 and older) versus younger (ages 18 to 64) hospitalized patients at risk for or diagnosed with VTE. Medical charts of 210 older and 450 younger inpatients undergoing diagnostic tests to rule out VTE were reviewed at an academic medical center. Acute VTE was diagnosed in 17.1% of older and 22.7% of younger inpatients. Pharmacological prophylaxis was used in 70% of eligible older and 57% of eligible younger inpatients. Nearly one quarter of eligible older inpatients did not receive any VTE prevention measures. The 3-month mortality was higher in older inpatients (13.9%) compared with younger inpatients (9.8%) with VTE, despite the lower rate of VTE in older inpatients. Prevention measures for VTE were underused in both older and younger inpatients.

30- Anticancer Res. 2010 Jan; 30(1): 111-8.

Cancer preventive effect of kumaizasa bamboo leaf extracts administered prior to carcinogenesis or cancer inoculation.

Seki T, Maeda H

BACKGROUND: Kumaizasa bamboo found in Hokkaido is used for traditional medicine in Japan. The cancer preventive effect of vigorous (multistep) hot water extract of Kumaizasa was examined in relation to immunological conditioning and free radical scavenging activity. MATERIALS AND METHODS: Cytokine induction in mice, free radical scavenging activity in vitro, and cancer preventive effect by oral administration of the vigorous extracts prior to tumor implantation or carcinogenesis by 7,12-dimethylbenz[a]anthracene (DMBA) were examined. RESULTS: In tumor inoculated mouse models (S-180 sarcoma, Meth-A fibrosarcoma, B16-F10 melanoma), the vigorous extracts from Kumaizasa bamboo leaves suppressed tumor growth and prolonged survival significantly. In the chemical carcinogenesis model suppression of cancer incidence on day 100, tumor size and survival time were significantly improved with the vigorous extract, at/or above 0.03% in the diet, when given two weeks prior to the administration of the carcinogen. CONCLUSION: The vigorous extracts of bamboo leaf show immunopotentiating and radical scavenging effects and administration prior to carcinogen exposure or tumor inoculation significantly suppresses tumor incidence and tumor growth and prolongs survival.

31- Am J Prev Med. 2010 Jan; 38 (1 Suppl): S156-81.

Prevention of physical training-related injuries recommendations for the military and other active populations based on expedited systematic reviews.

Bullock SH, Jones BH, Gilchrist J, Marshall SW.

BACKGROUND: The Military Training Task Force of the Defense Safety Oversight Council chartered a Joint Services Physical Training Injury Prevention Working Group to: (1) establish the evidence base for making recommendations to prevent injuries; (2) prioritize the recommendations for prevention programs and policies; and (3) substantiate the need for further research and evaluation on interventions and programs likely to reduce physical training-related injuries. EVIDENCE ACQUISITION: A work group was formed to identify, evaluate, and assess the level of scientific evidence for various physical training-related injury prevention strategies through an expedited systematic review process. Of 40 physical training-related injury prevention strategies identified, education, leader support, and surveillance were determined to be essential elements of a successful

injury prevention program and not independent interventions. As a result of the expedited systematic reviews, one more essential element (research)was added for a total of four. Six strategies were not reviewed. The remaining 31 interventions were categorized into three levels representing the strength of recommendation: (1) recommended; (2) not recommended; and (3) insufficient evidence to recommend or not recommend. EVIDENCE SYNTHESIS: Education, leadership support, injury surveillance, and research were determined to be critical components of any successful injury prevention program. Six interventions (i.e., prevent overtraining, agility-like training, mouthguards, semirigid ankle braces,nutrient replacement, and synthetic socks) had strong enough evidence to become working group recommendations for implementation in the military services. Two interventions (i.e., back braces and pre-exercise administration of anti-inflammatory medication) were not recommended due to evidence of ineffectiveness or harm, 23 lacked sufficient scientific evidence to support recommendations for all military services at this time, and six were not evaluated. CONCLUSIONS: Six interventions should be implemented in all four military services immediately to reduce physical training-related injuries. Two strategies should be discouraged by all leaders at all levels. Of particular note, 23 popular physical training-related injury prevention strategies need further scientific investigation, review, and group consensus before they can be recommended to the military services or similar civilian populations. The expedited systematic process of evaluating interventions enabled the working group to build consensus around those injury prevention strategies that had enough scientific evidence to support a recommendation.

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