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Predicting decline in lung function

A prediction equation incorporating a few commonly available clinical measures explained 88% of the individual variation in the decline of forced expiratory volume at 1 second in current smokers or sustained quitters with mild-to-moderate chronic obstructive pulmonary disease (COPD). This study used data from a large multicentre clinical trial (the Lung Health Study) involving 5594 patients followed for up to 11 years. This model, which has been made available through a Web-based calculator, can now benefit clinicians and clinical trialists by allowing accurate risk stratification of patients with COPD, say the authors. **See Research, page 1004**

Prediction tools may be useful in the prevention and early treatment of COPD, but uncertainty remains as to whether the prediction model for trajectories of forced expiratory volume at 1 second will be useful for risk-stratified prevention or treatment. **See Commentary, page 997**

Influenza vaccination and type 2 diabetes

In this retrospective cohort study set in England, influenza vaccination was associated with reductions in rates of admission to hospital for specific cardiovascular events for patients with type 2 diabetes. These findings underline the importance of influenza vaccination as part of comprehensive secondary prevention in this high-risk population. **See Research, page E342**

Persistent pain after breast surgery

Strong predictors of persistent pain after breast cancer surgery included younger age, axillary lymph node dissection and severe acute pain following surgery, find the authors of this systematic review and meta-analysis. Thirty cohort and case-control studies supplied data on almost 20 000 women. High-quality evidence showed no association of persistent pain with body mass index, type of breast surgery, chemotherapy or endocrine therapy. **See Research, page E352**

Mercury exposure in the Canadian North

A large body of Canadian and international evidence documents adverse neurodevelopmental outcomes in children exposed prenatally to mercury. However, the effects of post-natal dietary exposure are less clear. Many people living in northern Canada are at high risk of mercury exposure through consumption of wild foods, particularly predatory fish and marine mammals. Prevalent food insecurity may conflict with efforts to reduce mercury exposure in northern communities; careful culturally sensitive and region-specific guidance is required. **See Review, page 1015**

Monitoring CD4 in chronic HIV

A 54-year-old man with sustained HIV-1 viral suppression experiences a decline of his CD4 count from 634 cells/ μ L to 592 cells/ μ L over three months. Is this decline clinically meaningful? How often should CD4 be measured in this patient? Yan and colleagues answer these and other questions about monitoring CD4 in patients with sustained HIV-1 viral suppression. **See Decisions, page 1028**

Toxicity of topical anesthetic cream

A 17-month-old boy developed seizures 20 minutes after application of an entire tube of local anesthetic cream on burned skin affecting about 15% of his body. Although topical anesthetic creams used appropriately are safe, inappropriate use (e.g., over large areas of burned skin) may result in toxicity and potentially life-threatening outcomes. **See Cases, page 1030**

Multilesional cutaneous leishmaniasis

With increased travel to endemic areas, cutaneous leishmaniasis, a protozoan infection spread by bites from infected sand flies, is regarded as one of the top 10 diseases among tourists travelling to tropical countries. Multiple bites can lead to widespread multilesional disease, and treatment is often unsatisfactory, say Ramot and Zlotogorski. **See Clinical images, page 1034**