

## As little as 15 minutes of exercise each day may prolong life

A study from Taiwan examined the association between physical activity and mortality. In this study, people who did as little as 90 minutes of exercise each week, who would ordinarily be considered physically inactive, were looked at as a separate group. Around 12.5% (28 311/226 493) of those who exercised at all did so for about 15 minutes on 6 days a week. It turns out that even such low levels of exercise improve survival. The study followed up for an average of 8 years more than 400 000 people who underwent regular health check-ups.



Compared with people who exercised very little, those who did not exercise at all had a 17% higher risk of dying from any cause, and an 11% higher risk of dying from cancer. Each extra 15 minutes of daily exercise was linked with a 4% reduction in the risk of dying from any cause, and a 1% lower risk of cancer-related death. The results held in both sexes, regardless of age, smoking and drinking habits, and overall risk of cardiovascular disease.

At age 30, men who exercised for 15 minutes each day on average could expect to live 2.6 years longer than their peers who did not exercise at all. This was 3.1 years for women. Among 30-year-olds who met the recommendations for physical activity (30 minutes' exercise on 5 days a week) men could expect to live 4.2 years longer and women 3.7 years longer, compared with their physically inactive peers.

Wen CP, et al. *Lancet* 2011; doi:10.1016/S0140-6736(11)60749-6

## Development of Prognosis in Palliative care Study (PiPS) predictor models to improve prognostication in advanced cancer: prospective cohort study

The authors of this study intended to develop a novel prognostic indicator for use in patients with advanced cancer that is significantly better than clinicians' estimates of survival, using a prospective multicentre observational cohort study.

The setting was 18 palliative care services in the UK (including hospices, hospital support teams, and community teams).

Participants were 1 018 patients with locally advanced or metastatic cancer, no longer being treated for cancer, and recently referred to palliative care services.

The main outcome measures were performance of a composite model to predict whether patients were likely to survive for 'days' (0 - 13 days), 'weeks' (14 - 55 days), or 'months+' (>55 days), compared with actual survival and clinicians' predictions.

On multivariate analysis, 11 core variables (pulse rate, general health status, mental test score, performance status, presence of anorexia, presence of any site of metastatic disease, presence of liver metastases, C-reactive protein, white blood count, platelet count, and urea) independently predicted both 2-week and 2-month survival. Four variables had prognostic significance only for 2-week survival (dyspnoea, dysphagia, bone metastases, and alanine transaminase), and eight variables had prognostic significance only for 2-month survival (primary breast cancer, male genital cancer, tiredness, loss of weight, lymphocyte count, neutrophil count, alkaline phosphatase and albumin). Separate prognostic models were created for patients without (PiPS-A) or with (PiPS-B) blood results. The area under the curve for all models varied between 0.79 and 0.86. Absolute agreement between actual survival and PiPS predictions was 57.3% (after correction for over-optimism). The median survival across the PiPS-A categories was 5, 33, and 92 days and survival across PiPS-B categories was 7, 32, and 100.5 days. All models performed as well as, or better than, clinicians' estimates of survival.

In patients with advanced cancer no longer being treated, a combination of clinical and laboratory variables can reliably predict 2-week and 2-month survival.

Gwilliam B, et al. *BMJ* 2011;343:d4920.

## Vitamin A supplements for preventing mortality, illness and blindness in children aged under 5: systematic review and meta-analysis

The authors of this paper in the *British Medical Journal* set out to determine if vitamin A supplementation is associated with reductions in mortality and morbidity in children aged 6 months - 5 years.

Two reviewers independently assessed studies for inclusion. Data were double extracted and discrepancies were resolved by discussion. Meta-analyses were performed for mortality, illness, vision, and side-effects.

Data sources were the Cochrane Central Register of Controlled Trials (CENTRAL) in the Cochrane Library, Medline, Embase, Global Health, Latin American and Caribbean Health Sciences, MetaRegister of Controlled Trials, and African Index Medicus. Databases were searched to April 2010 without restriction by language or publication status.

Eligibility criteria for selecting studies were randomised trials of synthetic oral vitamin A supplements in children aged 6 months - 5 years. Studies of children with current illness (such as diarrhoea, measles and HIV), studies of children in hospital and studies of food fortification or  $\beta$  carotene were excluded.

They included 43 trials with 215 633 children. Seventeen trials including 194 483 participants reported a 24% reduction in all-cause mortality (rate ratio=0.76, 95% confidence interval 0.69 - 0.83). Seven trials reported a 28% reduction in mortality