
RETIREMENT MAY BE HAZARDOUS TO YOUR HEALTH

Is retirement from work blissful or hazardous? Three Greek investigators studied more than 16,000 men and women who were either gainfully employed or already retired between 1994 and 1999 and had not been diagnosed with stroke, coronary artery heart disease, cancer, or diabetes mellitus. Using Cox regression models and controlling for confounders, they analyzed survival status as of 2006. Retirees had a 51% increase in all-cause mortality, mostly from cardiovascular disease. A 5-year increase in age at retirement was associated with a 10% decrease in mortality. This study, reported in the *American Journal of Epidemiology* in 2008 suggests that retirement may be a risk factor for both all-cause and cardiovascular mortality. If you like your work and you like being alive, keep working. This article is selected from Medscape Best Evidence.

FIXED DOSE ANTIMALARIAL NOW AVAILABLE FOR ADULTS AND CHILDREN

A new antimalarial combination treatment to be taken as a fixed dose once a day has been developed by a non-profit organisation for use in developing countries. The combination of artesunate and amodiaquine will be known by the brand name Coarsucam in private sector sales.

The non-patented drug is the first result of the drugs for neglected diseases initiative (DNDi), a non-profit product development organisation, and was produced in partnership with one of the world's largest drug companies, Sanofi-Aventis. Two other major sources of funding were Médecins Sans Frontières and the European Commission.

Artesunate is a water soluble derivative of artemisinin, which comes from the shrub *Artemisia annua*, long used in traditional Chinese medicine. The World Health Organization recommends treating malaria with artemisinin in combination with another antimalarial drug rather than on its own to prevent the development of resistance.

Until now the combination of artesunate and amodiaquine was available only in multi-tablet formulations. The new drug is a single tablet, which ensures that the two drugs are taken together and in the correct proportion. The drug is also the first combination of artesunate and amodiaquine that is available at three strengths suitable for children, including for infants. To public sector organisations the three day course of the drug will cost less than \$1 for adults and less than \$0.50 for children aged under 5 years.

Source: *BMJ* 2007;334:443

FERTILITY FAILURE

Treatment that is designed to increase the chances of older women giving birth after fertility treatment may actually reduce their chances of having a baby, according to a recent paper in the *New England Journal of Medicine*. Pre-implantation genetic diagnosis (PGD) involves removing one or two cells from the early embryo and screening these cells for chromosome abnormalities that are associated with miscarriage. This technique is widely offered to women undergoing IVF, who are at risk of producing embryos with the wrong number of chromosomes.

Sebastian Mastenbroek and colleagues looked at 408 women aged between 35 to 41 who were undergoing IVF; 206 were given PGD. Twelve weeks after the embryos were implanted, 25% of the women who had PGD had become pregnant, compared with 37% of women whose embryos were selected using appearance – the standard method of embryo selection. Women in the PGD group also had a significantly lower live birth rate compared to those whose embryos were selected in the standard way.

Mastenbroek suggests that removing a cell may harm the embryo and lead to lower survival and the cell may also not carry a representative number of chromosomes. He suggests that women stick to traditional IVF treatment and save themselves the cost of PGD, given these results.

FETAL ALCOHOL SYNDROME

Fetal alcohol syndrome (FAS) is a birth defect caused by a mother's alcohol intake during pregnancy. The symptoms of FAS are mental retardation, poor growth, facial defects, and behavioral problems. It is one of the leading causes of mental retardation in children. The effects are lifelong. Fetal alcohol effects (FAE) is a less severe set of the same symptoms. FAS is found in infants of all races and ethnic groups. Since it is not known how much

The Centers for Disease Control estimate that up to three children of every 2,000 are born with fetal alcohol syndrome. The condition causes physical and mental disabilities, but it is 100 per cent preventable.

A HEALTHY WEIGHT FOR BABIES

Outdated targets for infant growth may be starting healthy babies on the path to obesity, according to new research. This is just confirming what many mothers have long suspected – that the most commonly used growth charts, based on babies fed on high-protein formula milks, may classify lean but healthy babies as underweight. The generally used growth chart has been used for nearly 30 years. The main aim was to make sure that babies are not underfed and suffer from malnutrition. But, it is now increasingly being recognised that



these charts were based on babies who were atypically heavy – almost all fed on high-protein formula diet, from white, middle-class families in Ohio, USA.

The charts were revised in 2000 by the Centers for Disease Control to include more breastfed infants. But, the previous charts have skewed infant nutrition towards overfeeding for decades, according to Bert Koletzko, who heads a major European programme, Earnest, which is set up to investigate the effects of infant nutrition on obesity in adult life.

Source: *New Scientist*, 28 April 2007

DAILY ASPIRIN AND CANCER

Regular aspirin may not only protect your heart. It may also reduce your risks of cancer. Asitya Bardia and colleagues from the Mayo Clinic, Rochester, USA analysed the cancer history of more than 22 000 post-menopausal women over a period of 12 years. Those women who reported taking aspirin regularly at the start of the study were 16% less likely to develop cancer and 13% less likely to die of it during the period of the study.

The only lifestyle factor that influenced the results was smoking, which reduced the positive effect slightly. Bardia suggests that aspirin's anti-inflammatory effects may be responsible, although a similar effect was not seen with other anti-inflammatories, such as ibuprofen.

Source: *New Scientist* 21 April, 2007

OBESITY PARADOX AND HEART DISEASE

We all know that obesity is a risk factor for developing heart disease. But if you are too fat and your heart is already failing, your fat could save your life. Gregg Fonarow and colleagues, publishing in the *American Heart Journal*, found that the fatter a person admitted to hospital with worsening heart failure, the less likely they were to die during a week-long hospital stay. The study included 100 000 patients admitted to hospital because their heart failure was deteriorating. The researchers suggest that fat people may cope better with heart failure because they have more metabolic reserves to draw on when the heart isn't pumping blood fast enough to meet the body's needs.

Source: *Fonarow GC et al. American Heart J* 2007; 153: 74-8

SLEEP OFF THE FAT

A study of more than 68 000 women found that those who sleep less than five hours a night gain more weight over time than those who sleep seven hours a night. So says Sanjay Patel from Case Western Reserve University, Cleveland, Ohio. Patel found that women who sleep for five hours a night or less gained an average of 0.7 kilograms more over 10 years than those who slept seven hours or more. The short-sleeping group was also 32% more likely to have gained 15 kilograms or more and 15% more likely to have become obese.

Interestingly, the short-sleepers actually ate fewer calories than the longer sleepers, overturning the common idea that over-eating among those who sleep less explains the weight differences. Patel suggests that a lower metabolic rate or less fidgeting resulting from less sleep may be the reason behind the weight gain.

Source: *New Scientist*

STRAIGHT TO THE TUMOUR

A new delivery system that directs cancer drugs to tumours virtually anywhere in the body should start human testing this year. The new delivery technique, which could dramatically reduce the side-effects of chemotherapy, uses fragments of bacteria to target a tumour, avoiding the need to flood the patient's body with toxic drugs.

Himanshu Brahmabhatt and Jennifer MacDiarmid of Engeneic, in Australia, use *Salmonella enterica* and *E. coli*, making them divide at their centres, instead of at their ends. This produces small buds of cytoplasm called 'Engeneic delivery vehicles' or EDVs. These EDVs are repeatedly washed to remove toxins – they have no chromosomes and are not living, are easy to make and can be loaded with chemicals. They are made target-specific using monoclonal antibodies connected via a linker molecule. One of the antibodies attaches to the EDVs surface, while its partner is specific to a protein on the target tumour. So far results in mice and dogs have been promising and the EDVs can carry multiple drugs, which may be more effective than the usual drug combinations that are used at present.

Source: *New Scientist*, 12 May 2007