

## **Intensive blood glucose control for type 2 diabetes: meta-analysis**

There is uncertainty about the ability of intensive blood glucose control to reduce the risks of death, macrovascular disease, or microvascular disease in people with type 2 diabetes. A systematic review and meta-analysis published in the *British Medical Journal* has suggested that intensive control does not reduce all-cause mortality but it does increase the risk of severe hypoglycaemia by about 30%.

The review, which included 14 trials with a total of 28614 patients randomised to intensive or conventional control, suggests that intensive glycaemic control may not reduce all-cause mortality, though it does appear to improve microvascular complication occurrence. Of concern, however, is that the risk of severe hypoglycaemia was increased by 30%.

## **Ingredient in aspirin could help treat diabetes**

Researchers have revealed a connection between an ingredient in aspirin and a protein that helps to regulate cell growth and metabolism that could lead to new treatments for cancer and type 2 diabetes.

The scientists, from Canada, Australia, and Scotland, found that salicylate, which is derived from willow bark, can improve the working of AMP-activated protein kinase (AMPK), which is usually activated through physical exercise and metformin, a drug taken to treat type 2 diabetes. It was shown that salicylate could also have possibilities as an anti-cancer medication.

The findings follow recent research that showed that daily aspirin consumption could substantially lower the risk of many cancers and also stop tumours from spreading. This study, which was reported in the journal *Science*, helped to explain why this was the case, although more research is needed to pinpoint the best concentrations of salicylate to use.

## **Diabetes risk models and scores**

A systematic review has assessed risk models and scores for the prediction of risk of type 2 diabetes.

The review, published in the *British Medical Journal*, included 43 papers with details of the development and/or validation of 145 models and scores, of which 94 were assessed in detail. They had been based on data from almost 7 million people with follow-up for up to 28 years. Meta-analysis was not possible because of the heterogeneity of the data.

The mean number of components per score was eight (3–14) and some, but not all, models and scores were statistically robust and had been externally validated on a different population. Seven risk scores were chosen as having a high potential for use in practice and ten mechanisms were outlined whereby the assessment of risk of type 2 diabetes might lead to improvement in outcomes.

## **Xenotransplantation as a therapy for type 1 diabetes: pig beta cells show great promise in an animal model**

Transplantation of a whole pancreas or isolated insulin-producing beta cells are the only therapy to cure type 1 diabetes. However, the shortage of organ donors limits this approach to only few patients. Reporting in *Diabetes* online, researchers from Ludwig-Maximilians-Universität Munich

have now shown that beta cells from genetically modified pigs can effectively restore pancreas function and can protect porcine beta cells from immune rejection in animal models.

## **Rising metabolic syndrome in urban Africa**

A recent study from Kenya (published in the journal *Diabetes Care*) has given worrying information on the rising prevalence of the metabolic syndrome in urban Africa, which will of course have a major effect on future diabetes epidemiology. Amongst a group of 539 urban Kenyan adults, 35% had criteria for the metabolic syndrome. The commonest features were hypertension, raised waist circumference, and low HDL cholesterol levels. The syndrome was more frequent in women (40% v 29%,  $p < 0.001$ ). Studies from Johannesburg, South Africa, have also shown high rates of metabolic syndrome. Government-led education and prevention programmes are urgently needed.

## **First Africa Diabetes Congress**

The First Africa Diabetes Congress will be held at the International Conference Centre in Arusha, Tanzania from Wednesday, July 25 to Saturday July 28.



The First African Diabetes Congress is organised by the International Diabetes Federation (IDF) Africa Region, with anticipated participation by members of the Pan-African Diabetes Study Group (PADSG), Pan-African Diabetes Educators Group (PADEG), Pan-African Association for Foot Care (PAAFC) and all those working in the area of diabetes and other non-communicable diseases (NCDs).

The Congress will bring together more than 500 key stakeholders and leaders to discuss ambitions, priorities, and actions for change in diabetes and NCDs within the Africa region. The First African Diabetes Congress is regarded as a highly influential event that will highlight healthcare delivery in diabetes and other NCDs in the Africa region. The main focus will be on the prevention of complications and improved quality of life of people living with diabetes and other NCDs.

For more information please visit <http://www.africadiabetescongress.org>.

## **Non-communicable diseases: the main health risk for older people**

On World Health Day (7 April), the World Health Organization called for urgent action to ensure that people reach old age in the best possible health as by 2050, 80% of the world's older people will be living in low- and middle-income countries.

The main health challenges for older people everywhere are non-communicable diseases, such as heart disease, stroke, cancer, diabetes, and chronic lung disease.

'People in low- and middle-income countries currently face up to four times the risk of death and disability from non-communicable diseases than people in high-income countries,' says Dr Margaret Chan WHO Director-General. 'Yet most of these conditions are largely preventable or inexpensive to treat.'