US CANCER MORTALITY RATES DECREASING

Cancer death rates decreased in the United States from 2010 to 2014, according the most recent report on US cancer trends from the National Institutes of Health.[1] Overall cancer death rates decreased during that 5-year period by 1.8% in men, 1.4% in women, and 1.6% in children, the study authors reported.

Death rates decreased for some of the most common types of cancers in both men and women, including lung, colorectal, female breast, and prostate cancers. Death rates increased, however, for liver cancer in both men and women, for pancreas and brain cancers in men, and for uterine cancer in women.

Overall incidence of cancer in men decreased by 2.3% from 2009 to 2013 but was unchanged for women.

Survival varied by race or ethnicity. For instance, the adjusted relative risk of death for all cancers was 33% higher in non-Hispanic blacks and 51% higher in non-Hispanic American Indians or Alaskan natives than in non-Hispanic whites.

"Cancer death rates continue to decrease in the United States," the study authors wrote. "However, progress in reducing death rates and improving survival is limited for several cancer types, underscoring the need for intensified efforts to discover new strategies for prevention, early detection, and treatment and to apply proven preventive measures broadly and equitably."

1. Jemal A, Ward EM, Johnson CJ, et al. Annual report to the nation on the status of cancer, 1975–2014, featuring survival. *J Natl Cancer Inst*. 2017;109(9).

Evolocumab Reduced LDL Cholesterol, Risk of Cardiovascular Events

In patients already taking a statin, evolocumab (Repatha, Amgen) further lowered low-density lipoprotein (LDL) cholesterol and reduced patients' risk of dying or experiencing cardiac events compared with placebo, according to a study published in the *New England Journal of Medicine*.[1]

"These findings show that patients with atherosclerotic cardiovascular disease benefit from lowering of LDL cholesterol levels below current targets," the study authors said. They explained that evolocumab is known to lower LDL cholesterol levels by approximately 60%, but whether this prevents cardiovascular events was unknown.

The FOURIER trial was designed to evaluate that unknown. The double-masked, placebo-controlled trial included 27,564 patients with cardiovascular disease and LDL cholesterol levels of 70 mg/dL or higher who were receiving statin therapy. Patients were randomly assigned to receive evolocumab or placebo by injection.

At 48 weeks, the percentage reduction in LDL cholesterol in those receiving the drug was 59% compared with placebo, from a median baseline of 92 mg/dL to 30 mg/dL. In the primary efficacy endpoint, a composite of cardiovascular death, myocardial infarction, stroke, hospitalization for unstable angina, or coronary revascularization, the drug lowered the risk statistically significantly relative to placebo (9.8% vs. 11.3%). Results were consistent across subgroups, and no differences were seen with regard to adverse events, with the exception of injection site reactions, which were more common with the drug.

1. Sabatine MS, Giugliano RP, Keech AC, et al; FOURIER Steering Committee and Investigators. Evolocumab and clinical outcomes in patients with cardiovascular disease [published online ahead of print March 17, 2017]. *N Engl J Med*.

Screen Time Associated With Diabetes Risk in Children

Reducing children's screen time might reduce their risk of developing type 2 diabetes, a study in the United Kingdom suggests. Children who reported 3 hours or more of screen time per day had higher fat mass index and insulin resistance than children who reported 1 hour less screen time per day according to the study, published in the *Archives of Disease in Childhood*.[1]

The study authors noted that higher screen time is associated with type 2 diabetes in adults, but the association in children is unclear. They surveyed more than 4,000 children, ages 9 to 10 years, regarding their screen viewing time and also measured fasting cardiometabolic risk markers and body fat indicators. Physical activity was also measured objectively in a subset of children.

"Strong graded associations between screen time, adiposity, and insulin resistance suggest that reducing screen time could facilitate early [type 2 diabetes] prevention," the authors concluded. They noted that, although their observations are of interest for the public health, evidence from randomized controlled trials would be needed to demonstrate causality.

1. Nightingale CM, Rudnicka AR, Donin AS, et al. Screen time is associated with adiposity and insulin resistance in children [published online ahead of print March 13, 2017]. *Arch Dis Child*.

Intensive Treatment Leads to Temporary Remission in Some With Diabetes

An intensive course of therapy, including diet and exercise as well as oral medicine and insulin, resulted in remission of type 2 diabetes in up to 40% of patients in a pilot study published in the *Journal of Clinical Endocrinology & Metabolism*.[1]

"The findings support the notion that type 2 diabetes can be reversed, at least in the short term—not only with bariatric surgery, but with medical approaches," said the study's first author Natalia McInnes, MD, MSc, FRCPC, of McMaster University, in a press release from the Endocrine Society, which publishes the journal.[2]

Others sounded a note of caution, pointing out that relatively few participants remained in remission a year later. "Rates of diabetes remission did not appear to differ significantly at 52 weeks between 'control' and 'intervention' groups, so the effects do not appear to be sustained," said Christine Lee, MD, MS, of the US National Institute of Diabetes and Digestive and Kidney Diseases, quoted in a report in *Medline Plus*.[3]

In the study, patients with type 2 diabetes of up to 3 years' duration were randomly assigned to one of three groups: an 8-week intensive metabolic intervention, a 16-week intensive metabolic intervention, or standard diabetes care. In the intensive intervention periods, weight loss and blood glucose control were targeted with diet, exercise, and treatment with metformin, acarbose, and insulin glargine. After the interventions, the drugs were discontinued and participants were followed for relapse.

In the 8-week intervention group at 8 weeks, 50.0% of patients achieved normal glucose levels, compared with 3.6% of those receiving standard care. In the 16-week intervention group at 16 weeks, 70.4% achieved glucose control, again compared with 3.6% in the control standard care group. Twelve weeks after the interventions, 21.4% of those in the 8-week group and 40.7% of those in the 16-week group met the study's criteria for partial or complete diabetes remission, compared with 10.7% and 14.3% of controls, respectively.

1. McInnes N, Smith A, Otto R, et al. Piloting a remission strategy in type 2 diabetes: results of a randomized controlled trial [published online ahead of print March 15, 2017]. *J Clin Endocrinol Metab*.
2. Intensive medical treatment can reverse type 2 diabetes [press release]. Endocrine Society. March 15, 2017. www.endocrine.org/news-room/current-press-releases/intensive-medical-treatment-can-reverse-type-2-diabetes. Accessed April 7, 2017.
3. Intensive treatment shows potential against type 2 diabetes. US National Library of Medicine: *Medline Plus*. March 15, 2017. https://medlineplus.gov/news/fullstory_164100.html. Accessed April 7, 2017.

Prolonged Sleep Time Associated With Dementia Development

People who routinely sleep longer than 9 hours per day were twice as likely to develop dementia over 10 years as people who sleep less than 9 hours, according to an analysis of data from the Framingham Heart Study.[1]

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The researchers asked 2,457 people in the large-scale Framingham study to report their sleep duration, and they stratified the responses in three groups: less than 6 hours, 6 to 9 hours, and more than 9 hours. They analyzed the relation of sleep duration to incident dementia over 10 years of follow-up, as well as to brain volume and cognitive development.

"Prolonged sleep duration may be a marker of early neurodegeneration and hence a useful clinical tool to identify those at a higher risk of progressing to clinical dementia within 10 years," the study authors concluded. ■

1. Westwood AJ, Beiser A, Jain N, et al. Prolonged sleep duration as a marker of early neurodegeneration predicting incident dementia. *Neurology*. 2017;88(12):1172-1179.

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