

DIABETES

Effects of Smoking Cessation on Diabetes Risk

Although smoking is a well established risk factor for type 2 diabetes, quitting smoking, ironically, may double the risk in the short term, say researchers from Johns Hopkins University, Baltimore, MD; Federal University of Rio Grande do Sul, Porto Alegre, Brazil; and University of North Carolina, Chapel Hill.

They analyzed data on 10,892 patients without diabetes at baseline from the Atherosclerosis Risk in Communities (ARIC) study. They assessed smoking status by interview and sorted patients into four groups: (1) never-smoker, (2) former smoker at baseline, (3) new quitter (smoker at baseline but former smoker at follow-up), and (4) continuing smoker.

Over the course of nine years, 1,254 patients developed type 2 diabetes. The incidence increased from 13.3 per 1,000 person-years for never-smokers to 18.5 per 1,000 person-years for those in the highest tertile of pack-years.

In the first three years, 380 patients quit smoking. After adjusting for age, race, sex, body mass index, blood pressure, and other factors, the researchers found these new quitters to be more likely to develop diabetes than never-smokers (hazard ratio, 1.73). Corresponding hazard ratios for former smokers and continuing smokers were 1.22 and 1.31, respectively. The heightened risk among new quitters was still observable six years after they quit smoking, but the risk dropped to “not excessive” by year 12.

Weight gain partly explained the higher risk in new quitters: During

follow-up, this group had more significant increases in weight, waist circumference, and fasting blood glucose levels than the other groups. Moreover, when the researchers simultaneously adjusted for weight change and leukocyte count, diabetes risk was markedly attenuated in new quitters and continuing smokers—but not former smokers.

The researchers say their findings suggest heavy smokers with evidence of systemic inflammation who gain a substantial amount of weight after they quit are at highest risk for developing type 2 diabetes—a conclusion supported by other studies. They emphasize, however, that the many long-term health benefits of smoking cessation outweigh the short-term risk of diabetes. They recommend aggressive weight management and use of nicotine replacement therapy to help prevent excessive weight gain during smoking cessation.

Source: *Ann Intern Med.* 2010;152(1):10–17.

SURGERY

Understanding Mortality After Splenectomy

Splenectomy is known to have a high long-term risk of mortality, but it isn't clear which patients are most vulnerable. To find out, researchers used data from the Danish National Patient Registry to identify 3,812 residents who underwent a splenectomy between January 1, 1996 and December 31, 2005 (the splenectomy cohort). For each patient in the splenectomy cohort, the researchers randomly selected 10 unsplenectomized patients matched for age and gender

(the general population cohort) and up to five unsplenectomized patients matched for the medical condition that led to splenectomy (the matched indication cohort). They evaluated mortality risk at three time points after splenectomy: (1) within 90 days, (2) 91 to 365 days, and (3) greater than 365 days.

All splenectomized patients had a higher risk of death, regardless of indication for splenectomy, compared with the general population cohort. The risk was highest within 90 days of splenectomy and was still elevated more than a year later.

The researchers found the short- and long-term mortality risk generally was not increased, however, when the splenectomy cohort was compared with the matched indication cohort. This finding suggests that the splenectomy indication may contribute substantially to the mortality risk. In fact, at one year, splenectomized patients with immune thrombocytopenia (ITP), splenomegaly, or splenic disease had a lower mortality risk than did unsplenectomized patients with the same conditions. Splenectomy itself was associated with mortality risk among certain subgroups, however. Splenectomized patients with ITP, other thrombocytopenia, and hematopoietic cancer had a higher risk of 90-day mortality than did unsplenectomized patients with the same medical conditions. ●

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