

INCREASED RISK OF HEART DISEASE, DIABETES SEEN IN MINORITIES, DESPITE 'NORMAL' WEIGHT

Normal weight Americans of South Asian, Chinese, and Hispanic descent may be at greater risk for heart disease, stroke, and diabetes than their white counterparts, according to a study by researchers at Emory University and the University of California, San Francisco.¹

The study included roughly 7,000 participants, between 45 and 84 years old, identified as white, black, Hispanic, of South Asian descent, and of Chinese descent. Compared with whites, all ethnic groups included in the study had a significantly higher prevalence of metabolic abnormalities but were of normal weight, the study authors found. The upper limit of normal body mass index (BMI) is 24.9 kg/m², according to the US Centers for Disease Control and Prevention (CDC). For nonwhites in this study to have the same degree of cardiometabolic risk as whites, they

had to have lower BMI levels, noted senior author Alka Kanaya, MD, of UCSF: 22.9 Kg/m² for blacks, 21.5 kg/m² for Hispanics, 20.9 kg/m² for Chinese, and 19.6 kg/m² for South Asians.²

Using the CDC criterion for normal weight, normal-weight individuals of South Asian descent were twice as likely as whites to have metabolic abnormalities; normal-weight people of Hispanic descent were 80% more likely to have these abnormalities than whites; and blacks and Chinese-Americans were 50% more likely, according to the research.

1. Gujral UP, Vittinghoff E, Mongraw-Chaffin M, et al. Cardiometabolic abnormalities among normal-weight persons from five racial/ethnic groups in the United States: a cross-sectional analysis of two cohort studies. *Ann Intern Med*. 2017;166(9):628-636.
2. Race ranks higher than pounds in diabetes, heart-health risks. [news release]. University of California, San Francisco. April 3, 2017. www.ucsf.edu/news/2017/04/406316/race-ranks-higher-pounds-diabetes-heart-health-risks. Accessed May 16, 2017.

Smokers at Higher Risk of Complications Following Joint Surgery

Smokers who undergo hip or knee replacement surgery face an increased risk of reoperation for infection than nonsmokers, researchers reported in the *Journal of Bone and Joint Surgery*.¹ They analyzed data from more than 15,000 patients who underwent joint arthroplasties between 2000 and 2014 and found that current smokers were significantly more likely than nonsmokers to undergo reoperation for infection (odds ratio [OR], 1.82 [95% confidence interval (CI), 1.03 to 3.23]; $P=0.04$), and that former smokers were at no increased risk (OR, 1.11 [95% CI, 0.73 to 1.69]; $P=0.61$). Additionally, packs smoked per decade were independently associated with an increased risk of 90-day nonoperative readmission in both former and current smokers (OR, 1.12 [95% CI, 1.03 to 1.20]). For every extra pack smoked per day over the course of a decade, patients faced an increased risk of 12%. The research only indicated an association between smoking and complications following knee or hip surgery, rather than a causal effect.

1. Tischler EH, Matsen KL, Chen AF, et al. Smoking increases the rate of reoperation for infection within 90 days after primary total joint arthroplasty. *J Bone Joint Surg Am*. 2017;99(4):295-304.

Sleepless Nights Correlated to Poor Cardiovascular Health

According to a meta-analysis published in the *European Journal of Preventive Cardiology*,¹ there appears to be a link between insomnia and an increased risk of heart attack or stroke. The analysis examined 15 studies and included nearly 161,000 participants and determined potential links between insomnia symptoms and risk of cardio-cerebral vascular events.

"We found that difficulty initiating sleep, difficulty maintaining sleep, or non-restorative sleep were associated with 27%, 11%, and 18% higher risks of cardiovascular and stroke events, respectively," said the study's first author, Qiao He, a graduate student at China Medical University in Shenyang, as quoted in a press release from the European Society of Cardiology.²

According to He, the underlying reasons are not completely understood, and the study does not establish a causal relationship. Additionally, the association was slightly more prevalent in women than in men, but the difference was not deemed statistically significant.

1. He Q, Zhang P, Li G, Dai H, Shi J. The association between insomnia symptoms and risk of cardio-cerebral vascular events: A meta-analysis of prospective cohort studies [published online ahead of print Jan 1, 2017]. *Eur J Prev Cardiol*.
2. Insomnia associated with increased risk of heart attack and stroke [press release]. European Society of Cardiology. March 31, 2017. www.escardio.org/The-ESC/Press-Office/Press-releases/insomnia-associated-with-increased-risk-of-heart-attack-and-stroke. Accessed April 24, 2017.

Diabetes Rates Among Children, Teens Have Increased

According to a study published in the *New England Journal of Medicine*,¹ the rates of type 1 and type 2 diabetes have increased among children in the United States between 2002 to 2012. The study examined 11,244 youths up to 19 years old with type 1 diabetes and another 2,846 youths between the ages of 10 and 19 with type 2 diabetes.

A study from SEARCH for Diabetes in Youth determined that the rate of recently diagnosed type 1 diabetes increased by 1.8% each year between 2002 and 2012, and the rate of newly diagnosed type 2 diabetes increased by 4.8%.² In the diagnosis of type 1 diabetes, Hispanic youths were most affected, increasing by 4.2%. Additionally, non-Hispanic blacks saw an increase of 2.2%, and non-Hispanic whites increased by 1.2%.

In the diagnosis of type 2 diabetes, Native Americans were most affected, increasing by 8.9%, followed by Asian Americans/Pacific Islanders at 8.5%, and non-Hispanic blacks at 6.3%. This rate increased 3.1% among Hispanics, and the smallest increase in type 2 diabetes was seen in whites at 0.6%. Overall, the rates of diagnosis for type 2 diabetes were more prominent in women at 6.2% than in men at 3.7%.

1. Mayer-Davis EJ, Lawrence JM, Dabelea D, et al; SEARCH for Diabetes in Youth Study. Incidence trends of type 1 and type 2 diabetes among youths, 2002-2012. *N Engl J Med*. 2017;376(15):1419-1429.

People Without Celiac Disease Should Not Avoid Gluten, Study Concludes

A gluten-free diet may lead to a lower intake of whole grains that keep the heart healthy, a recent study concluded. People who do not have celiac disease should not be encouraged to avoid gluten, according to researchers.

Information from participants in the Nurses' Health Study and the Health Professionals Follow-up Study was used to examine the association of long-term gluten intake with the development of coronary heart disease (CHD). Data were gathered through food questionnaires over a period of 26 years.

After adjusting for risk factors, the researchers found no statistically significant link between long-term gluten consumption and an increased risk of CHD. Quite the opposite, they found that an increased intake of gluten correlated to a reduced risk of CHD. Nonetheless, avoidance of gluten can result in less consumption of healthy whole grains, which can also affect cardiac risk, the authors noted.

1. Lebowitz B, Cao Y, Zong G, et al. Long term gluten consumption in adults without celiac disease and risk of coronary heart disease: prospective cohort study. *BMJ*. 2017;357:j1892.

Blood Group Correlated to Risk of Heart Attack

People with non-O blood types (ie, those with A, B, and AB blood types) may have a greater risk for heart attacks and other cardiovascular issues than those with type O blood, according to a presentation at a European heart failure meeting.¹

Researchers provided an analysis of multiple studies that reported on participants' blood types and the incidence of cardiovascular issues. The data, presented at Heart Failure 2017 and the World Congress of Acute Heart Failure, consisted of more than 1.3 million adults in 11 cohorts across nine studies.

The odds ratios for all coronary events and for combined cardiovascular events were significantly higher for carriers of non-O blood types, the researchers determined. There was no significant difference in fatal coronary events between individuals with O and non-O blood types.

1. Non-O blood groups associated with higher risk of heart attack [press release]. European Society of Cardiology. April 30, 2017. www.escardio.org/The-ESC/Press-Office/Press-releases/non-o-blood-groups-associated-with-higher-risk-of-heart-attack?hit=wirek. Accessed May 18, 2017.

Bioinspired Iodo-thiocyanate Complexes Effective Against Drug-Resistant Bacteria

Researchers in Ireland have developed an antimicrobial treatment that can rapidly kill drug-resistant bacteria and effectively and efficiently disinfect and remove biofilm contamination.¹

In combination with hydrogen peroxide, peroxidases can produce highly reactive oxidized molecules. These naturally occurring substances can harm and even kill bacterial cells. The researchers devised an enzyme-free system consisting of hydrogen peroxide, along with iodide and thiocyanate, two complexes capable of producing similarly reactive antimicrobial substances without a peroxidase enzyme.

The iodo-thiocyanate complexes caused rapid death in all the bacterial strains tested, in some cases within 30 seconds. It killed both bacteria and biofilms, suggesting a potential for use in decontamination practices. The complexes were similarly effective against methicillin-resistant *Staphylococcus aureus*, without the development of resistance over time in the tested strains. ■

1. Tonoyan L, Fleming GTA, McCay PH, et al. Antibacterial potential of an antimicrobial agent inspired by peroxidase-catalyzed systems. *Front Microbiol*. 2017;8:680.

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