



News and Views

1. Low-heat cooking may be associated with reduction of insulin resistance

A new 4-week study found that low-temperature cooking reduces insulin resistance among overweight women. The results were published online August 19 in *Diabetes Care* by Alicja B. Mark, PhD, from the department of nutrition, exercise and sports, faculty of science, University of Copenhagen, Denmark, and colleagues.

High heat cooking of food induces formation of advanced glycation endproducts (AGEs), which are thought to impair glucose metabolism in type 2 diabetic patients. High intake of fructose might additionally affect endogenous formation of AGEs. This parallel intervention study investigated whether addition of fructose or cooking methods influencing the AGE content of food affect insulin sensitivity in overweight individuals.

For the study, some patients were asked to eat bread with crust, and choose high-AGE foods while others were asked to eat bread without the crust and choose low-AGE foods. During the four weeks, there were no changes from fructose or glucose on insulin resistance based from the homeostasis model assessment of insulin resistance (HOMA-IR) and the calculated insulin sensitivity index (ISI).

But what made a difference in the study was their diet. Weight, BMI, and waist circumference all decreased in both the high- and low-AGE groups ($P < .05$), but to a greater degree among those in the low-AGE group compared with the high-AGE group ($P < .02$).

Overall, the low-AGE group consumed about 15 percent more protein, 10 percent more carbohydrates, and 22 percent less fat than did the high-AGE group (all $P < .05$). Study results showed that diets with high AGE content may increase development of insulin resistance. AGEs can be reduced by modulation of cooking methods but is unaffected by moderate fructose intake.

Source: Miriam E. Tucker. Low-heat cooking may reduce

insulin resistance [Internet]. [published 2013 Aug 22; cited 2013 Nov 27]. Available from: <http://www.medscape.com/viewarticle/809750>

2. Green tea, coffee may reduce stroke risk

Researchers have discovered a link between stroke development and coffee and green tea consumption. A study published in *Stroke* shows that green tea and coffee may help lower the risk of having a stroke.

The researchers asked 83,269 Japanese adults, ages 45–74 years without cardiovascular disease or cancer, about their green tea and coffee drinking habits and tracked them for an average 13 years. Green tea and coffee consumption was assessed by self-administered food frequency questionnaire at baseline.

They found that the more green tea or coffee people drink, the lower their stroke risks.

- People who drank at least one cup of coffee daily had about a 20 percent lower risk of stroke compared to those who rarely drank it.
- People who drank two to three cups of green tea daily had a 14 percent lower risk of stroke and those who had at least four cups had a 20 percent lower risk, compared to those who rarely drank it.
- People who drank at least one cup of coffee or two cups of green tea daily had a 32 percent lower risk of intracerebral hemorrhage, compared to those who rarely drank either beverage. (Intracerebral hemorrhage happens when a blood vessel bursts and bleeds inside the brain. About 13 percent of strokes are hemorrhagic.)

Conclusions: Higher green tea and coffee consumption were inversely associated with risk of CVD and stroke in general population.

Source: Green tea, coffee may help lower stroke risk [Internet]. [published 2013 Mar 14; cited 2013 Nov 27]. Available from: <http://newsroom.heart.org/news/green-tea-coffee-may-help-lower-stroke-risk>

3. Fruit tied to fewer aortic aneurysms

A diet high in antioxidant-rich fruit may help protect against the development of an abdominal aortic aneurysm (AAA), a Swedish study suggested. The study aimed to investigate the associations of fruit and vegetable consumption with the risk to develop AAA.

Through 13 years of follow-up, men and women who were in the highest quartile of fruit consumption (>2.0 servings/d), in comparison with those in the lowest quartile (<0.7 servings/d), had a 25% (95% CI, 9%–38%) lower risk of AAA, and a 43% (95% CI, 11%–64%) lower risk of ruptured AAA, specifically. Consumption of 2 fruits per day was associated with 31% (95% CI, 11%–47%) lower risk of non-ruptured AAA, and 39% (95% CI, 1%–63%) lower risk of ruptured AAA, in comparison with no consumption of fruit. No association was observed between vegetable consumption and AAA risk. The researchers reported in the Aug. 20 issue of *Circulation: Journal of the American Heart Association*. There were no such associations with vegetable intake.

In this prospective population-based cohort study, consumption of fruit but not vegetables was inversely associated with risk of AAA. These results showed that a consumption of fruit, but not vegetables, was associated with a decreased risk of AAA, and that this reduction in risk was even more pronounced for the risk of ruptured AAA. A diet high in fruits may help to prevent many vascular diseases, and this study provides evidence that a lower risk of AAA will be among the benefits.

Source: Todd Neale, Senior Staff Writer, MedPage Today [Internet]. [published 2013 Aug 19; updated 2013 Aug 20; cited 2013 Nov 27]. Available from: <http://www.medpagetoday.com/Cardiology/PeripheralArteryDisease/41056>

4. LDL may rise during winter months

Moura FA, et al. “Seasonal variation of lipid profile and prevalence of dyslipidemia: A large population study” ACC 2013.

Assessment of lipid profile parameters has been considered a cornerstone in classifying individuals and populations at risk for cardiovascular disease. LDL levels may increase during the winter months, according to the largest study to date to evaluate cholesterol levels by season. The reasons for the seasonal rise of LDL levels in winter are unknown, but possibly explanations are lifestyle changes, and changes in eating habits in winter compared with summer months.

Prospective evaluation of the lipid profiles of 227,359 patients showed that plasma LDL cholesterol levels over 130 mg/dL were 8% more prevalent during the winter than the summer months (P <0.001). The findings were presented here at the annual meeting of the American College of Cardiology.

Other findings of the study were:

- Women and middle-aged adults were more likely to have dyslipidemia in the winter months than men and people of other age groups. According to the author this could be due to the fact that about two-thirds of the sample were women and over half were middle-aged.
- HDL cholesterol levels less than 40 mg/dL and triglyceride levels greater than 150 mg/dL were 9% and 5%, respectively, more common during the summer (P<0.001). Researchers were surprised by these findings because they contradict what previous, smaller studies have found.

Seasonal fluctuations may be even more pronounced in the United States, Europe or other regions that experience more extreme climate shifts in winter and summer than Brazil.

Source: Charlene Laino, Contributing Writer, MedPage Today [Internet]. [published 2013 Mar 10; cited 2013 Nov 27]. Available from: <http://www.medpagetoday.com/MeetingCoverage/ACC/37791>

5. Added sugar intake linked to cardiovascular diseases mortality among US adults

New research recently published in the journal *JAMA Internal Medicine* suggests that individuals who consume high amounts of added sugar in their diet may be at increased risk of death from cardiovascular disease.

The research team, led by Quanhe Yang of the Division for Heart Disease and Stroke Prevention at the Centers for Disease Control and Prevention (CDC), notes that people who got more than a quarter of their calories from added sugar were almost three times (2.75 to be exact) more likely to die of a CVD than those consuming less than a quarter of their total energy intake from added sugar.

The study is relatively dependable because it recruited a large number of people and followed them over more than a decade. The study obtained information on added sugar intake from a dietary survey of 31,147 nationally representative US adults. The information was then linked to information about deaths and disease in the same people many years later.

The researchers concluded that “Most US adults consume more added sugar than is recommended for a healthy diet”. They observed a significant relationship between added sugar consumption and increased risk for CVD mortality.

Source: Yang Q, Zhang Z, Gregg EW, Flanders WD, Merritt R, Hu FB. Added Sugar Intake and Cardiovascular Diseases Mortality Among US Adults. JAMA Internal Medicine. 2014;DOI: 10.1001/jamainternmed.2013.13563

5. Depression: Risk factor for poor prognosis among patients with Acute Coronary Syndrome (ACS)

An American Heart Association Scientific Statement led by Judith Lichtman methodically reviewed 53 studies applicable to the association of depression and acute coronary syndrome. They found that there is a consistent message that depression is associated with adverse outcomes, including death and non-fatal cardiac events such as heart attack and angina for heart patients despite differences in published studies in the field.

The AHA Statement calls for depression to be considered a risk factor for poor outcomes among people with acute

coronary syndrome. The paper appears in the journal *Circulation*.

A systematic literature review on depression and adverse medical outcomes after acute coronary syndrome included all-cause mortality, cardiac mortality, and composite outcomes for mortality and nonfatal events. The review assessed the strength, consistency, independence, and generalizability of the published studies.

A panel of experts is recommended that depression be added to the list of risk factors associated with heart disease. Obesity, diabetes, high blood pressure and smoking are among the factors already linked to heart problems.

Source: Lichtman JH, Froelicher ES, Blumenthal JA, Carney RM, Doering LV, Frasure-Smith N, et al; on behalf of the American Heart Association Statistics Committee of the Council on Epidemiology and Prevention and the Council on Cardiovascular and Stroke Nursing. Depression as a risk factor for poor prognosis among patients with acute coronary syndrome: systematic review and recommendations: a scientific statement from the American Heart Association. Circulation. doi: 10.1161/CIR.000000000000019