

Hold the Diet Soda? Sweetened Drinks Linked to Depression, Coffee Tied to Lower Risk

SAN DIEGO – New research suggests that drinking sweetened beverages, especially diet drinks, is associated with an increased risk of depression in adults while drinking coffee was tied to a slightly lower risk. The study was released today and will be presented at the [American Academy of Neurology's](#) 65th Annual Meeting in San Diego, March 16 to 23, 2013. “Sweetened beverages, coffee and tea are commonly consumed worldwide and have important physical—and may have important mental—health consequences,” said study author Honglei Chen, MD, PhD, with the National Institutes of Health in Research Triangle Park in North Carolina and a member of the American Academy of Neurology.

The study involved 263,925 people between the ages of 50 and 71 at enrollment. From 1995 to 1996, consumption of drinks such as soda, tea, fruit punch and coffee was evaluated. About 10 years later, researchers asked the participants whether they had been diagnosed with depression since the year 2000. A total of 11,311 depression diagnoses were made.

People who drank more than four cans or cups per day of soda were 30 percent more likely to develop depression than those who drank no soda. Those who drank four cans of fruit punch per day were about 38 percent more likely to develop depression than those who did not drink sweetened drinks. People who drank four cups of coffee per day were about 10 percent less likely to develop depression than those who drank no coffee. The risk appeared to be greater for people who drank diet than regular soda, diet than regular fruit punches and for diet than regular iced tea.

“Our research suggests that cutting out or down on sweetened diet drinks or replacing them with unsweetened coffee may naturally help lower your depression risk,” said Chen. “More research is needed to confirm these findings, and people with depression should continue to take depression medications prescribed by their doctors.”

The study was supported by the National Institutes of Health, the National Institute of Environmental Health Sciences and the National Cancer Institute.

Learn more about depression, which commonly affects people with brain diseases, at <http://www.aan.com/patients>.

The American Academy of Neurology, an association of more than 25,000 neurologists and neuroscience professionals, is dedicated to promoting the highest quality patient-centered neurologic care. A neurologist is a doctor with specialized training in diagnosing, treating and managing disorders of the brain and nervous system such as Alzheimer’s disease, stroke, migraine, multiple sclerosis, brain injury, Parkinson’s disease and epilepsy. For more information about the American Academy of Neurology, [visit http://www.aan.com](http://www.aan.com) or find us on [Facebook](#), [Twitter](#), [Google+](#) and [YouTube](#).

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Medscape Medical News from the:

[American Academy of Neurology \(AAN\) 65th Annual Meeting](#)

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Sweetened Drinks May Boost Depression, Coffee Reduce It

Megan Brooks

Jan 09, 2013

New observational research hints that regular consumption of sweetened beverages, particularly diet soda, may raise the risk for depression in adults, while drinking coffee may protect against depression.

"Our research suggests that cutting out or down on sweetened diet drinks or replacing them with unsweetened coffee may naturally help lower your depression risk," Honglei Chen, MD, PhD, from the National Institutes of Health, Research Triangle Park, North Carolina, said in a statement.

In an email to *Medscape Medical News*, Dr. Chen emphasized, however, that the biological mechanisms behind the associations "are not well-understood" and "more research is needed to confirm these findings."

Dr. Chen will present the research at the upcoming American Academy of Neurology 65th Annual Meeting in March.

Beverages and Depression

"A few earlier studies reported that coffee consumption was associated with fewer suicides," Dr. Chen told *Medscape Medical News*. "Last year, the Nurses' Health Study reported that coffee consumption was associated with lower risk of depression. To the best of our knowledge, our study is the first prospective study on sweetened beverages and depression," Dr. Chen said.

The study team prospectively evaluated intake of sweetened beverages, coffee, and tea in relation to depression among 263,925 US adults aged 50 to 71 years at the outset. Beverage consumption was assessed in 1995-1996. In 2004-2006, a total of 11,311 participants reported being diagnosed with depression.

All analyses, Dr. Chen said, were based on "extreme" exposures, which they defined as 4 or more cups or cans per day versus nondrinkers.

The results showed that people who drank 4 or more cups or cans of soda per day were 30% more likely to develop depression than those who drank no soda, whereas those who reported this level of intake of fruit punch were about 38% more likely to develop depression. People who drank 4 cups of coffee per day were about 10% less likely to develop depression than those who drank no coffee.

Table 1. Beverage Intake and Risk for Depression With 4 or More Cans or Cups per Day vs None

Beverage OR (95% CI)

Soda 1.30 (1.17 - 1.44)

Fruit punch 1.38 (1.15 - 1.65)

Coffee 0.91 (0.84 - 0.98)

All *P* for trend < .0001. CI, confidence interval; OR, odds ratio.

The risk appeared to be greater for people who drank 4 or more cups or cans of diet soda, fruit punch, or iced tea, as opposed to the same amount of regular soda, fruit punch, or iced tea.

Table 2. Depression Risk With Diet vs Regular Sweetened Drinks (4 or More Cans/Cups per Day vs None)

Beverage	OR (95% CI)
Soft drinks	
Diet	1.31 (1.16 - 1.47)
Regular	1.22 (1.03 - 1.45)
Fruit punch	
Diet	1.51 (1.18 - 1.92)
Regular	1.08 (0.79 - 1.46)
Iced tea	
Diet	1.25 (1.10 - 1.41)
Regular	0.94 (0.83 - 1.08)

"Consistently, constituent-based analyses showed higher depression risk with aspartame intake (ORs between extreme quintiles: 1.36; 95% CI 1.29-1.44) and lower risk with caffeine intake (OR 0.83; 95% CI 0.78-0.89)," the researchers report.

Dr. Chen said the analyses were adjusted for "many socioeconomic and lifestyle factors, and only included cases that reported a diagnosis at least 4 years after the dietary assessment. However, we could not exclude the possibility of confounding by other factors or the possibility that individuals at higher risk for depression were drawn to sweetened drinks."

The study was supported by the National Institutes of Health, the National Institute of Environmental Health Sciences, and the National Cancer Institute. The authors have disclosed no relevant financial relationships.

American Academy of Neurology's 65th Annual Meeting. Abstract 2257. Released January 8, 2013.



Diet Drinks Tied to Depression Risk in Older Adults: Study

Higher odds also seen for regular soda drinkers

By Amy Norton

HealthDay Reporter



TUESDAY, Jan. 8 (HealthDay News) -- Older adults who down several diet drinks a day may have a heightened risk of developing depression, a new study suggests.

Researchers found that of more than 260,000 older adults in a U.S. survey, those who had at least four daily servings of artificially sweetened soda, iced tea or fruit punch were at increased risk of being diagnosed with depression in the next decade.

People with a taste for sugar-sweetened drinks also showed a higher depression risk versus those who avoided the beverages. But the link was weaker than the one between diet drinks and depression, according to the study, which was released Jan. 8.

On the other hand, coffee lovers had a slightly lower depression risk than people who typically passed on the java.

What it all means, however, is anyone's guess.

"This probably creates more questions than it answers," said Eva Redei, a professor of psychiatry at the Northwestern University Feinberg School of Medicine in Chicago. And it definitely is not possible to lay the blame on diet drinks themselves, based on these findings alone, said Redei, who was not involved in the study.

Caution is in order, agreed study leader Dr. Honglei Chen, an investigator at the U.S. National Institute of Environmental Health Sciences.

"The research is preliminary and more investigation into the topic is needed," Chen said.

But, he added, the findings are "intriguing," and are consistent with a small but growing number of studies linking artificially sweetened drinks to poorer health.

The results were released by the American Academy of Neurology, ahead of its annual meeting in San Diego in March.

The American Beverage Association (ABA), which represents soft drink manufacturers, said it was not impressed by the findings.

"This research is nothing more than an abstract -- it has not been peer-reviewed, published or even, at the very least, presented at a scientific meeting," the ABA said in a news release. "Furthermore,

neither this abstract nor the body of scientific evidence supports that drinking soda or other sweetened beverages causes depression. Thus, promoting any alleged findings without supporting evidence is not only premature, but irresponsible."

The findings are based on more than 260,000 Americans aged 50 to 71 who reported on their usual beverage habits. About a decade later, they were asked whether they'd been diagnosed with depression in the past several years.

Slightly more than 4 percent said they had. In general, people who consumed the most aspartame-sweetened diet beverages at the outset had a higher depression risk. Those who had downed at least four cans or cups of diet soda a day were 31 percent more likely to report depression than nondrinkers.

High intakes of artificially sweetened fruit punch and iced tea were linked to similar risks. Regular soda was as well, but the increased risk -- at 22 percent -- was lower than that linked to diet soda.

In contrast, people who had four or more cups of coffee a day had a roughly 10 percent lower risk of depression versus nondrinkers.

"This is an interesting study, and it's based on a large population," Redei said. She added that it's unusual for depression studies to focus on older adults, so it is good to see researchers look into the risk factors for later-life depression.

The problem is that many other factors might explain why diet drinks or coffee have a relationship with depression risk.

Two big ones are diabetes and obesity, Redei said. Both are common among older Americans, and both conditions are linked to higher odds of developing depression. People who are obese or have diabetes may favor diet drinks to help control their weight or blood sugar.

As for coffee, it may just be that healthy adults feel more free to drink a lot of it. "Older adults in poorer health may have been advised by their doctors to avoid caffeine," Redei said. And poorer physical health may translate into a higher depression risk.

Chen said his team statistically adjusted for many other factors, including weight and any reports of diabetes.

He noted, though, that overall lifestyle or other factors could still account for the findings. And it's not clear, Chen said, why diet drinks or coffee would have some direct effect on depression risk.

Until more is known, Redei cautioned older adults against lining up at Starbucks to help cut their depression risk.

Studies presented at medical meetings are generally considered preliminary until they are published in a peer-reviewed journal.

More information

Learn more about depression from the [U.S. National Institute of Mental Health](#).

SOURCES: Honglei Chen, M.D., Ph.D., investigator, epidemiology branch, U.S. National Institute of Environmental Health Sciences; Eva Redei, Ph.D., professor, psychiatry, Northwestern University Feinberg School of Medicine, Chicago; American Beverage Association, news release, Jan. 8, 2013; news release, American Academy of Neurology, Jan. 8, 2013

Last Updated: Jan. 08, 2013