

Can sugar be addictive?

A new study showed that sugar can be addictive.

BASIC

What is your favorite sweet treat? When you start eating something sweet that's really delicious, like chocolate, do you find yourself wanting to eat more and more? Some people think that sugar can be addictive. **Who knows what "addictive" means?** (*In this case, that you begin to crave more and more of it. Truly "addictive" things are dangerous substances like nicotine, alcohol, and some drugs.*) A new study found that eating a lot of sugar caused brain changes similar to the changes caused by addiction to

drugs. Scientists trained lab rats to become dependent on

large amounts of sugar. They found that rats that had sugar taken away from them for a long time worked harder to get it when it was reintroduced. And, they ate even more of it than they had before. **Does this surprise you? Do you think sugar truly can have addictive effects? What are some other bad effects of eating a lot of sugar?** NEXT



GENERAL

Candy bars, doughnuts, cookies, cakes ... most of us love sweets, and some of us end up eating too much of them. **What is your favorite sweet treat? Do you find it hard to stop eating it if you start?** Some people think sugar has an addictive quality — meaning that eating it is habit forming, and that the more sugar you eat, the more you'll want. **Do you agree with that? How do you feel when you eat a lot of sweets? Have you ever tried to cut down on how many sweets you eat?** But a new study actually found that eating a lot of sugar caused brain changes similar to those caused by addiction to drugs. Scientists trained lab rats to become dependent on large amounts of sugar. Then they took

the sugar away from some of them. They found that rats that were denied sugar for a long time worked harder to get it when it was reintroduced. And, they ate even more of it than they had before. They also found that rats who ate a lot of sugar showed chemical changes in the brain that looked like those produced by addictive substances like nicotine, the substance in cigarettes, and dangerous drugs like cocaine. **Does this surprise you? Do you think sugar truly can have addictive effects?** The scientists who did this study think it might help them to find better ways to treat people with eating disorders. **What are some other negative effects of eating a lot of sugar?** NEXT

ADVANCED

Do you have a sweet tooth? Do you ever find that once you start snacking on a favorite treat, it's hard to stop? Whether sugar actually can be physically addictive is something often debated. Some nutritionists believe that getting in the habit of eating sugary treats will in turn lead to more cravings than in those who normally abstain. But a new study by Princeton University scientists found that sugar had a similar effect on the brains of lab animals as the effect caused by known addictive drugs. Scientist Bart Hoebel has long been interested in the brain mechanism that controls appetite and body weight. He and his team trained lab rats to become dependent on large doses of sugar. They found that lab rats that were then denied sugar for a prolonged period

after learning to "binge" on it, worked harder to get it when it was reintroduced to them. And they consumed even more sugar than they had before, suggesting craving and relapse behavior, which are considered key components of addiction. The researchers found that rats that ate large amounts of sugar when hungry underwent neurochemical changes in the brain that appeared to mimic those produced by addictive substances like nicotine, morphine, and cocaine. **Does this surprise you? Do you think sugar truly can have addictive effects?** The scientists conducting this study think the findings eventually could have implications for the treatment of humans with eating disorders. **Do you think elements of the study could also provide help in treating other addictions?** NEXT

Can sugar be addictive? (cont'd)

Americans consume far too many sweetened soft drinks.



BASIC

Does the sentence on the screen surprise you? Do you like to drink soda or some other kind of sweetened drink? If so, how much of it do you think you drink in an average week? If you walk down the beverage aisle of a supermarket, you'll see dozens of different things to drink, and many of them are loaded with sugar or other sweeteners. Even some flavored bottled water contains added sweeteners. Researchers also note that the number of children 2 to 18 who drink milk

has gone down. Doctors worry that children and teens who drink less milk may not get enough calcium and vitamins. **How much milk do you normally drink?** Medical experts hope Americans will start switching to healthier beverages, like water, milk, or tea. **What do you think could be done to get people to drink fewer sugary soft drinks?** END

GENERAL

What do you think of the sentence on the screen? Does it surprise you? Do you regularly drink soda, or some other kind of soft drink? Many Americans are "hooked" on sugar, and it seems that more and more of our sugary calories are coming from sweetened beverages like soda. When you watch TV, you're likely to see many ads for different beverages. The soft-drink industry is enormous and the different companies are always competing with each other. The recent "energy drink" craze has added even more choices to the supermarket aisle. Even some fruit juice has too much sugar and "empty calories," and some flavored bottled water contains added sweeteners. **Who can explain the phrase "empty calories"?** One study showed that teens who drink

soft drinks get nearly 15 percent of their total calories from those drinks. Researchers note that the number of children aged 2 to 18 who drink milk has decreased. This raises concerns among doctors and nutritionists, who worry that children and teens who drink less milk also consume less calcium and vitamins. **How much milk do you normally drink?** Of course, another major problem linked to sweetened soft drinks is obesity, considered one of the worst health crises of our country. **What are some of the health problems obesity can cause?** (*Diabetes, heart disease.*) Medical experts hope Americans will start switching to healthier beverages, like water, milk, or tea. **What do you think could be done to get people to drink fewer sugary soft drinks?** END

ADVANCED

Americans are hooked on sugar, and more and more of it is coming from sweetened beverages. **Does the sentence on the screen surprise you? What type of beverages do you consume regularly? Have you tried to cut down on soda or some other type of soft drink?** Partly fueled by vast advertising campaigns, plenty of Americans are addicted to sugary beverages. And it's not just soda: It seems like every month, a new specialized beverage is introduced. Even many types of bottled water are sweetened with sugar or sugar substitute. And the relatively recent "energy drink" craze added even more sticky-sweet calories to the marketplace and teens' diets. One study showed that teens who drink soft drinks get nearly 15

percent of their total calories from those drinks. Researchers note that the number of children 2 to 18 who drink milk has decreased, raising concerns about the calcium and vitamins they miss by drinking soft drinks instead of milk. And obviously, sweetened soft drinks are contributing to the nation's burgeoning waistlines. With obesity considered one of the nation's biggest public health crises, medical experts hope Americans will start switching to healthier beverages, like water, milk, or tea. **Do you think the government should take some initiative to urge people to drink fewer sweetened soft drinks? Why do you think soft-drink companies are so effective at marketing their products?** END