

## YOU ARE WHAT YOU DRINK

It has often been stated that "you are what you eat," but recently the saying has been changing with more of an emphasis on "you are what you drink." Obviously alcoholic beverages of all kinds and concentrations can drastically alter one's mental disposition – particularly for people who deal with various types of mental illness – and should be avoided by people living with a serious mental disorder. This is especially the case for those taking medication, as the sedative and depressive aspects of alcohol can negatively affect the properties of psychotropic medication in various ways. So "you are what you drink" is important to keep in mind for alcohol consumption, but did you know that soft drinks containing caffeine and/or high levels of sugar, such as High Fructose Corn Syrup (HFCS) – a type of sugar manufactured and stored in plants; corn in this case – and even refined sugar (scientifically known as sucrose) can significantly alter mental status too?

Several health related government agencies – mainly the National Institutes of Health (NIH), the Centers for Disease Control (CDC), the American Academy of Pediatrics (AAP) and the American Academy of Family Physicians (AAFP) – agree that **soft drinks not only negatively affect body physiology and metabolism but can also alter one's mental status in both the short and long term.**

**The first component of many soft drinks that can seriously alter mood is caffeine.** This ubiquitous chemical found in many kinds of soda has been increasing in concentration over the last decade according to the Food & Drug Administration (FDA). Caffeine is a stimulant that promotes the production of the hormone epinephrine (adrenaline) in the adrenal glands, which can greatly increase one's mood as well as enhance mental alertness and productivity. The fact is that most people don't drink coffee or other caffeinated beverages because they "like" the taste; rather they are relying on the physiological and psychological effects they know caffeine consumption brings. And while there are those who can consume caffeine in moderation without ill effects, many others are reliant on it just to get through the day; some to the point of addiction.

**The second component of soft drinks that is linked to changes in one's mental status is sugar.** In the form of its natural or refined state (sucrose), or as HFCS (fructose), sugar has a marked physiologic effect on the body, and even more on the brain. You may have heard people stating that they are on a sugar "high" or are having a bona fide withdrawal referred to as "the blues" where, not unlike illicit drugs, they may find themselves craving sugar when going without it. Sugar's power is believed to be both directly and indirectly related to brain neurotransmitters (chemicals that affect the nervous system; mainly the brain) and certain hormones derived and excreted from multiple organs in the body and brain. The neurotransmitter dopamine, often referred to as the "pleasure chemical," plays a major role in regulating mood as well as motor function. **High concentrations of dopamine are responsible for the euphoric "high" one feels from drinking alcohol or taking drugs. This is also the case for sugar.** When broken down and metabolized via the digestive system and liver to a simpler chemical form called glucose, sugar is responsible for indirect stimulation of the excretion of dopamine in the brain.

The elevated mood from sugar intake can induce mania or hypomania, even in those without mental illness. **Thus, if enough sugar in the body can cause mania in those who do not have a mental illness, then it could certainly have a more multiplied effect on those with mental disorders.** Additionally, when the high concentration of sugar in the body and brain starts to decrease, it can cause a withdrawal syndrome similar to the cessation of psychoactive drugs like alcohol and tobacco. This abstinence – while not dangerous to a person physically – is defined as a psychological withdrawal which can drastically lower one's mood to the point of clinical depression and even suicidality (though rarely).

If you cannot completely avoid beverages containing caffeine and/or sugar, consider the age-old saying **"everything in moderation,"** which makes good sense – even more so for those with a mental disorder or a predilection for one.



The World Health Organization's recommended sugar intake for adults is no more than 6 teaspoons a day, but look at how many teaspoons these sugary drinks have!