



The Brain/Body Connection

Have you ever felt that you have more food cravings than other people or that you need to eat to feel emotionally OK? Recent research may shed some light on that phenomenon. Researchers found abnormally low levels of the neurotransmitter dopamine in the brains of obese people. They found similarly low dopamine levels in people who abuse drugs or alcohol. They hypothesize that the depressed dopamine level may lead to cravings as the body attempts to boost dopamine to a normal level. People may seek to elevate the depressed dopamine levels with food, alcohol or drugs. Those who choose food as their method may end up obese. Studies have found that obese adults have a 25% lower risk of developing substance abuse. Which makes sense if food, alcohol or other drugs trigger the same dopamine sites in the brain; overweight people are correcting the deficit with food rather than alcohol or drugs.

Addictive behaviors do not simply provide pleasure. If that were the case, addicts would be the happiest people walking around. The addictive behaviors seem to tell our bodies what to focus on. Nora Volkow, the director of the National Institute on Drug Abuse, is uncovering how the brain focuses on specific things. Dopamine is involved in learning, memory and motivation. It helps us to pay attention to information that we need to survive. An overeater may compensate for a sluggish dopamine system by turning to the one thing that gets his or her neurons pumping--food.

Addictive behaviors like overeating are very complex. It would be too simplistic to assume that a depressed dopamine level was the only contributing factor. Dr. Volkow states, "What motivates us to eat is clearly much more than hunger. We need to expand the way we think about eating."

Following surgery, we are exhilarated as rapid changes occur. We need less medication, our health problems subside, and we replace our clothing with smaller and smaller sizes. We're excited and confident that we're permanently shedding all the excess pounds that have been such a burden in so many ways. We embrace a more active lifestyle with healthy food choices. Life is good. But what about those who previously used food to affect brain chemistry?

After bariatric surgery, it is difficult to eat enough to achieve pre-surgical dopamine levels. Do people seek different means to raise dopamine levels? There have been estimates that 5% to 30% of post bariatric surgery patients develop new addictive behaviors. Addiction transfer is a term that became associated with those having undergone bariatric surgery a few years ago. Rather than a food addiction, people switch to other addictive substances or compulsive behaviors such as alcohol, drugs, gambling, or shopping. Most experts agree that bariatric surgery does not cause an addiction. Rather, the addictive personality traits or altered brain chemistry present prior to bariatric surgery remain after the surgery and after the weight is lost.

Alcohol use can be particularly troublesome after gastric bypass surgery. Because of the physical alterations to the digestive system, there is a faster, more profound, and longer lasting impact from alcohol. This occurs because alcohol empties out of the pouch into the small intestine almost immediately and is quickly absorbed. Bariatric surgery patients may be more sensitive to the effects of alcohol due to a lower caloric intake. To compound the effects, the liver may have a more difficult time clearing the circulating alcohol from the bloodstream, resulting in a prolonged impact. Additionally, the post bypass patient is at greater risk for low blood sugar or severe hypoglycemia following alcohol consumption. Symptoms of hypoglycemia can be a loss of balance, slurred speech, poor vision and confusion. Because these could easily be mistaken for symptoms of alcohol intoxication, treatment may be delayed.

To sum it up, bariatric surgery provides a physical tool to enable people to reach and maintain a healthy weight. It does not cause addictions, but it also does not change underlying factors that may lead to addictive behaviors. Work with your primary care physician and therapist if new addictive behaviors emerge following surgery.

As the researchers continue to put the puzzle pieces together, there are some things that you can do to boost your dopamine and serotonin (another neurotransmitter) levels, decrease your need for addictive behaviors, and feel good. Rather than substituting another destructive behavior for a food addiction, fill your life with healthful habits that support your weight loss. Dr. Volkow recommends stimulating your brain by connecting with your world in meaningful ways, learning and getting excited about the things around you--you'll be less likely to need an artificial boost.

Healthful habits that positively affect brain chemistry:

- Exercise increases dopamine and serotonin levels;
- Stress reduction increases serotonin levels;
- Adequate sleep increases serotonin levels;
- Adequate nutrition increases serotonin levels;
- An interesting life/stimulating job/active lifestyle increases dopamine levels.