

The Science of Obesity

Robert Ziltzer, MD, FACP, FAAP, FOMA

Too often, patients blame themselves for gaining weight. They say, “it’s my fault. I just have no self-control. I know what to do, I just can’t do it” Many physicians cause more harm than good by advising patients to “eat less and exercise more.” Patients are left to feel hopeless because they have tried to reduce their intake and feel deprived. Also, they sometimes take up an aggressive workout regimen and don’t lose a pound.

This shame-blame cycle has pervaded the self-help diet industry, as it did with cancer in the 1950’s. Then, people with cancer would whisper their diagnosis fearing they would lose their friends and be isolated. Now we can cure many cancers, and those who seek treatment are considered heroes!

Depression was treated the same way before effective medications. “Just snap out of it and feel better” was the advice. This was clearly a flawed approach. The brain is complex, and abnormalities in brain chemistry can cause depression even when our lives are stress-free, and we “should” be happy. Depression is now effectively treated as a medical problem through medications and counseling.

Obesity is a medical disease that responds to treatment, including prescription strength diets, weight loss medications, support and education, and exercise. Here is what we know so far:

- **We are programmed for weight gain for survival.** Our bodies have adapted mechanisms that guarantee we don’t starve to death. Any attempt at weight loss is countered by a decrease in metabolism and an increase in appetite.
- **We have a set point weight** (or at least a set range). The chemical leptin decreases whenever we try to lose weight, causing a surge in appetite.
- **Weight loss causes the hunger hormone ghrelin to increase,** causing us to think about nothing but food!
- **Antiobesity Medications target the hypothalamus.** Drugs like [phentermine](#), diethylpropion, [Contrave](#)® and [Qsymia](#)® make losing weight a relatively hunger-free process.
- **New drugs abolish feelings of hunger** that occur during weight loss. [Semaglutide](#) (Ozempic® and Wegovy®) has a potent effect on the hypothalamus resulting in feelings

of fullness. We have not seen a drug that so effectively decreases food intake until now, and the average patient loses 15% of their weight.

- **Medical devices such as [Plenity](#)[®] fill the stomach**, leading to reduced caloric intake.
- **Prescription-strength diets** are faster and much easier than self-help diets.
- **Bariatric surgery can eliminate diabetes in many patients.**

By understanding how our bodies react to weight loss explains why obesity is a medical disease that can be treated by physicians and nurse practitioners, in the same way we treat other medical diseases like cancer, depression, diabetes and high blood pressure.