

## **Medical Therapy of Obesity**

The first component to weight loss therapy is to check the overall metabolism. Probably everybody knows that an under active thyroid causes weight gain. There are some more subtle clues that also need to be evaluated relating to the thyroid and other parts of the endocrine/glandular system. DiHydroEpiAndosterone (DHEA) is the "parent" of the sex hormones Estrogen, Progesterone & Testosterone. These levels decline with aging. Estrogen is actually composed of 3 different compounds, Estrone (E1), Estradiol (E2) & Estriol (E3). Correcting all of these frequently is very helpful in getting the excess pounds to shed.

It's also important to know what you are eating. There are a variety of diets available. Fat has 9 calories per gram; Protein & Carbohydrate each have 4.5 calories/gm. Carbohydrates can be further divided into "good" vs. "bad" based on glycemic index which is a measure of how rapidly they are broken down in the body. The more rapidly broken down and used, the greater the problem with weight gain. Sugar has a very high glycemic index. Sweet Potatoes are actually lower than typical white potatoes and are less damaging. Peter J. D'Adamo ND wrote a book Live Right 4 Your Type that reviews the concept that different blood types do better on different diets as well. It turns out that folks with Type O blood do better on a low carbohydrate (i.e. Atkins, Zone, and South Beach) diet than folks with other blood types tend to do.

Another approach to weight loss is detailed in a relatively new book by Kevin Trudeau; The Weight Loss Cure They Don't Want You to Know About.

The approach he describes as having been used at a lot of exclusive & expensive spas involves a thorough detoxification regimen for the body as well as injections of Human Chorionic Gonadotropin (HCG). HCG is the "pregnancy hormone" that is the basis for most common pregnancy tests. Injections of 150-200 are given daily to help reset the hypothalamus, a small organ of the endocrine system that lies under the brain and regulates our weight much like a thermostat controls the temperature in a building. Changing the "set point" then lets the body know that it has too much weight and needs to cut appetite and burn fat to lose it. This seems to be the latest and hopefully most promising approach but it does involve daily injections that are no worse than what diabetic patients need in terms of pain, needle size etc. The good news too is that diabetics frequently need multiple injections daily. Also, keep in mind that diabetes is often a consequence of obesity; it may be better to inject before the onset if it truly will work as a preventive for obesity and subsequent diabetes.

Organizations such as Weight Watchers ([www.weightwatchers.com](http://www.weightwatchers.com)) use group therapy to help motivate participants, these groups also provide education regarding diet, foods to avoid, calorie counting tips and a variety of useful techniques.

Overeaters Anonymous ([www.aa.org](http://www.aa.org)) is an "12 Step Program" modeled after the Alcoholics Anonymous ([www.aa.org](http://www.aa.org)) program. Many folks have an "inappropriate relationship with food". Typically these are folks who, for whatever reason, eat when they're not hungry. Perhaps a "bad day" deserves a "treat", etc. Clearly our metabolic processes aren't geared to need calories, fat and carbohydrates after a "bad day". Interestingly, studies have shown that folks who eat in this manner respond well to agents that work on the neurotransmitter Serotonin which is active in the central nervous system.

Neurotransmitters are the chemicals that flow from one nerve cell to another within the brain. All mental illnesses can be thought of in terms of a neurotransmitter imbalance. The precursors for neurotransmitters are amino acids. There are lab tests that can be done to give clues as to which neurotransmitters are involved that may cause food cravings, change perceptions satiety or “fullness” and help promote weight loss.

A molecule or drug that mimics the shape of the natural substance but doesn't “turn on” the function of a given receptor will thus block the function of that receptor. Drugs can be considered as a “key”, there is a receptor or “lock” for that drug to exert its effect on the body. Some drugs occupy the receptor but don't turn on the function of that receptor, they can be thought of as “blockers”, others turn it on to variable or even excessive degrees, more than the natural agent in the body would normally do so. This is “how drugs work” within us.

A new class of drug soon to be released is known as (Rimonabant) (Trade names are left in, within parenthesis is the generic name of the drug). It's widely known that smoking pot (which contains THC, a cannabinoid molecule) can cause the “munchies”.

Topamax (Topiramate) is an anti-epilepsy drug that works better than most other drugs to promote weight loss. Side effects include sedation, slowed thinking, clumsiness, sun-sensitivity.

Apptrim is a Nutra-ceutical available to be used only under physician supervision. This supplement (it's not a pharmaceutical agent) works on the serotonin axis in the brain and can cause some sedation/sense of satisfaction. There are other supplements like Arginine & Ornithine which are amino acids, Green tea and Hoodia that depress the appetite but aren't stimulants.

Meridia (Sibutramine) is a Pharmaceutical agent that works the same way, affecting the serotonin axis of the brain. These drugs help folks who often eat out of habit when not hungry.

Fastin/Adipex (Phentermine) works on the norepinephrine/adrenalin axis in the brain to blunt appetite. It is very effective as it's available generically. It's half of the infamous Fen-Phen combination that caused heart problems in folks in the past. It's a very good drug and safe during regular use with routine monthly maintenance.

It may be safe if used with Apptrim, there is no proof of harm or safety. It's not a “first choice” but can give the Fen-Phen effect but there is the need to monitor Echocardiograms to detect any early heart problems developing if that combination is used.

Precose (Acarbose) and Glycet (Miglitol) are drugs that block carbohydrate absorption in the small intestine. If the carbohydrates aren't absorbed in the small intestine they then go to the large intestine where bacteria make a lot of gas with them.

Xenical (Orlistat) is a fat blocker; what fat isn't absorbed goes out “the other end” and can cause loose stool and accidents if a low fat diet is not followed very carefully. An

interesting other use of this drug is that it can be very successful in helping lower cholesterol in patients with hyperlipidemia. It should be noted that this is an “off-label” use of this medication. It is quite effective however. Drops of over 100 points on cholesterol scores have been seen when this is used with other cholesterol lowering medications. There is a new half-strength form of it on the market as Alli that is purported to cause a much lower incidence of loose stool.

Many of these drugs can be used in combination as they work in different parts of the body.

As important as energy intake (food) control is, energy expenditure is also important to lose weight. Weight loss can be achieved only with either a choice of; AIDS/Cancer/Tuberculosis or EXERCISE which is ESSENTIAL to boost the metabolic rate and allow weight to be lost, otherwise when you cut your caloric intake your metabolism slows down as a defense mechanism to try to keep you alive in what may be a famine.

We need to closely follow patients with monthly visits when they're on medications for weight loss. The monthly visits also help maintain motivation to lose weight; "I better not cheat because I have to follow up with the doctor again soon..."

To Your Health!

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