CHAPTER 7

MEDICAL TREATMENTS FOR OBESITY: MYTHS & REALITIES

Unfortunately, there's no quick fix for obesity. Achieving and maintaining a healthy weight takes a commitment to good nutrition and an active lifestyle. However, when the medical problems caused by excess weight are life threatening, medical treatment may be an option. There are two main types of medical therapies for obesity: weight loss drugs and surgery. Both options have pros and cons.

Weight Loss Drugs

There are two basic classes of drugs currently available for the treatment of obesity. One class works by curbing your appetite so that you take in fewer calories. The other type of drug prevents the body from absorbing nutrients. This means that a portion of what you eat will pass through your system without being converted into energy. Regardless of the type of drug you take, this treatment can be expected to produce a maximum of 10% weight loss. Also, the effects of these drugs tend to disappear with time. This means that the weight will eventually return even if you keep taking the drug. Currently, there are no weight loss drugs approved for use in children under the age of 16. In addition, the long-term consequences of using any weight loss drug in a child have not been studied. The short-term side effects are likely to be similar in adults and children, and are described below.

Appetite Suppressants

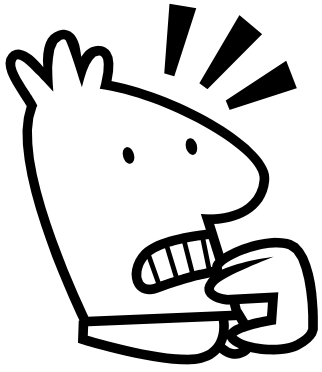
Appetite suppressant drugs work by changing the balance of important chemical transmitters in the brain. Their action is similar to that produced by amphetamines. Although both medications may provide temporary assistance with weight loss, they're only effective when combined with lifestyle changes. Also, the positive effects of appetite suppressants last only about 6 months. Therefore, these drugs are best viewed as a short term weight loss aid rather than a permanent solution for obesity.

There are currently two appetite suppressant drugs on the market:

- **Sibutramine (Meridia)**: Alters the balance of both the hormones serotonin and norepinephrine
- **Phentermine (Adipex-P, Ionamin, Fastin)**: Affects the balance of norepinephrine only. Phentermine was previously used in combination with fenfluramine (the famous "fen-phen"). This combination was withdrawn from the market in 1997 after it was discovered that fenfluramine caused serious heart valve damage. Phentermine was not found to cause this damage, and therefore remains on the market.

Both types of these drugs can produce side effects. These include:

- **Rapid irregular heartbeat (palpitations)**
- **Nervousness**
- **Restlessness**
- **Insomnia**
- **Shakiness**



- **Anxiety**

These drugs have other drawbacks, as well. They can produce dangerous interactions with many other drugs, particularly antidepressants. For this reason, these drugs should be prescribed in carefully controlled situations by a doctor who is familiar with their use. In addition, the long term safety of these drugs in children and adolescents is unknown, so they should be used only in very rare cases.

Drugs That Alter the Absorption of Nutrients

Orlistat (Xenical) is a prescription medication. It was approved by the FDA for weight loss in 1999. This drug works in the digestive system to block the digestion of approximately one third of the dietary fat that you eat. Unfortunately, the undigested fat causes can cause bowel problems. Bowel movements will be larger and more frequent and have an oily consistency. Many people experience abdominal pain, gas, and uncontrolled leakage of bowel movements, as well. These symptoms are worse if you eat a diet high in fat. Orlistat also blocks the absorption of many important vitamins. Therefore, you'll need to take a vitamin supplement if you're on the drug

Even with all of these intestinal side effects, orlistat is only marginally effective at producing weight loss. It generally doesn't produce weight loss in excess of 10% of body weight. At present, orlistat is not approved for use in anyone under the age of 18. For all of these reasons,

this medication is used only in very rare situations in adolescents.

In addition to orlistat, there are other drugs that block the absorption of nutrients other than fat. One of these is **acarbose (Precose)** which slows the absorption and digestion of carbohydrates and sugars. However, this kind of drug does not produce weight loss and is not used for this purpose.

Over-the-Counter Drugs and Supplements

There are thousands of weight loss pills and supplements for sale on the internet and elsewhere. They range from being a simple waste of money (Advalean, Dietrine, etc.) to the blatantly dangerous (Ephedra, Phenylpropanolamine, etc.). The simple fact is that **none of these drugs or supplements has been shown to produce *any* weight loss**. Claims of dramatic results from taking a drug such as "losing 40 pounds in three weeks" are either completely false or simply the result of an unsafe starvation diet in combination with the supplement. Not only are these drugs and supplements harmful to your pocketbook and your health, they can also undermine serious efforts to lose weight. Getting your hopes up that these products might actually live up to their exaggerated claims can leave you feeling even more discouraged when they fail to produce results. The bottom line is there is no place for these drugs and supplements in a healthy lifestyle and weight management plan for children or adults

Surgical Options

In cases of extreme obesity, surgery may be an option. There are several different procedures. The goal of all of them is to alter the process of digestion so that your body receives fewer calories.

The Normal Digestive Process

The normal process of digestion begins with the familiar act of chewing. When food is chewed, it is mashed into small pieces and moistened with saliva. The enzymes contained in saliva act on the food to begin the chemical break down of it while it's still in your mouth. When you swallow, the food moves down the esophagus into the stomach, where further churning and digestion takes place. The stomach secretes strong acids that help to break down the food further before it moves through the digestive system. If acid from the stomach "refluxes" or passes up the esophagus, we feel this as heartburn.

In a normal person, the stomach can hold approximately six cups of food. After the food is churned in the stomach, it is gradually released into the first part of the small intestine, known as the duodenum. There, strong digestive juices (mostly enzymes and detergent-like compounds) are added by the liver and the pancreas. This is also the place where significant absorption of nutrients begins, particularly minerals such as calcium and iron. The rest of the small intestine is divided into two regions, the jejunum and the ileum. Together these two segments are nearly 20 feet in length in an adult. Any food that cannot

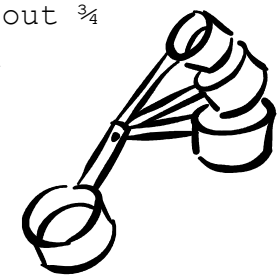
be digested is stored in the final part of the intestine (the colon or large intestine) until it is eliminated.

How Surgery Alters the Normal Digestive Process

There are two basic types of surgery for obesity. Collectively these operations are known as **bariatric surgery**. The first type reduces the size of the stomach by stapling or placing a restrictive band around the majority of the stomach. In theory, this makes people feel full more quickly and therefore leads to weight loss. There may also be some important changes in appetite regulating hormones that also contribute to weight loss after this procedure. The second basic type of surgery involves reducing the size of the stomach and creating a direct connection between the stomach and the lower segment of the small intestine. This process allows partially digested food to enter the small intestine, which has limited capacity to process the nutrients. This surgical type produces weight loss by the mechanisms listed above, but also produces weight loss by causing the body to lose some of the ingested nutrients. This is why these procedures are known as **malabsorptive** (unable to absorb) operations.

How Successful Are These Procedures?

There are at least two major types of restrictive "stomach stapling" operations. They have similar effects, complications, and success rates. In general, after having this type of procedure, you can no more than about ¾ to 1 cup of food at a time without experiencing stomach discomfort or nausea. Although these operations lead to weight loss in almost all



cases, they do not always produce the same degree of success. About one quarter of people having he procedure will reach a normal or near normal weight. The remaining three quarters achieve some lesser degree of weight loss. In addition, if a person is unable or unwilling to adjust their eating habits and physical activity, he or she is likely to regain all of the lost weight.

The malabsorptive operations (gastric bypass) tend to be more successful at producing substantial weight loss than the restrictive surgeries. Most people who undergo this type of procedure will lose approximately two-thirds of their excess weight within two years. However, just as with the restrictive surgeries, the success of the procedure depends greatly on the willingness of the individual to make lifestyle changes.

Risks and Impact of Bariatric Sugery

Bariatric sugery requires a permanent lifestyle change. Otherwise, the surgery may not be successful in promoting weight loss and the person may face long-term complications. After a restrictive procedure, a person must carefully monitor his or her food intake. Eating too much food or not chewing food well can cause vomiting. Another possible complication is that band or staples used to restrict the stomach could cause the stomach contents to leak into the abdomen. This would require an emergency surgery. Although rare, infection or death from this procedure has also been reported.

Malabsorptive operations carry all of these risks, as well as several others. The most obvious problem is that it places an individual at high risk for nutritional deficiencies. In particular, certain vitamins and minerals such as calcium may not be absorbed. Lack of calcium can lead to osteoporosis (brittle, weak bones). Because of this risk, people who've had this procedure need to take nutritional supplements for the rest of their lives. Another common problem is a condition known as "dumping syndrome". Dramatic shifts in fluid balance and circulation occur because partially digested food moves out of the stomach and into the intestine so quickly. This can produce nausea, weakness, sweating, faintness, and diarrhea after eating. People who've had this type of surgery need to be monitored closely and use special food, supplements, and medications for the rest of their lives.

As many as ten to twenty percent of patients will need some kind of a follow-up surgery to correct complications from the original bariatric procedure. This includes surgeries to correct hernias and gallstones, as well as other more rare complications. Finally, this surgery is expensive (around $15,000) and is unlikely to be covered by insurance providers.

Is Surgery The Answer For You Or Your Child?

A recently published consensus statement from a panel of experts on childhood obesity said that "…bariatric surgery may be indicated in selected subjects with extreme obesity and serious comorbidities." This is a broad

statement that leaves a lot of room for interpretation. A place to start when making a decision about surgery is with the guidelines for adults seeking bariatric surgery published by the National Institutes of Health. To be a candidate, a person should have:

1) **A BMI of 40 or more.**
2) **A life-threatening obesity-related health problem such as diabetes, severe sleep apnea, or heart disease and a BMI of 35 or more.**
3) **Obesity-related physical problems that interfere with employment, walking, or family function.**

In addition, the guidelines state that candidates should consider the following questions prior to deciding to choose the surgical option:

Are you…

1) Unlikely to lose weight successfully with nonsurgical measures?
2) Well informed about the surgical procedure and the effects of treatment?
3) Determined to lose weight and improve your health?
4) Aware of how your life may change after the operation (adjustment to the side effects of the surgery, including the need to chew well and inability to eat large meals)?
5) Aware of the potential for serious complications, dietary restrictions, and occasional failures?
6) Committed to lifelong medical follow-up?

For adults, these questions may be fairly straightforward. But, for children the answers are more complex. By looking

at each of the questions in the context of child health, it becomes clear that the issue is much more complex in children. Reasons for this include:

1) Children lose weight much more successfully than adults do. Therefore, it is never "unlikely" that weight loss will occur.
2) Children (even teenagers) really do not have the ability to understand the profound impact this procedure will have on their lives. Even in the best case, without any side effects, people who undergo these procedures are committing themselves to lifelong changes in their eating and activity patterns. If they continue to eat junk food, do not exercise, etc. then they will not be likely to lose weight after the procedure. It is therefore critical that the child incorporate these changes *before* the surgery is contemplated. If this is done successfully, weight loss generally will occur even without the procedure.
3) This is a difficult issue for teens to understand as well. What are their real motivations? Is the entire family willing to commit to the lifestyle changes that will result? How likely will the family be to consistently follow the lifestyle changes for the next several decades?
4) Again, a difficult concept for children to really understand, particularly the fact that this will be a permanent change in their lives and will be just as important twenty years from now as it currently is.
5) Obviously the risk of death or serious complication from this type of surgery is real. The question is, do teenagers really understand this risk? In general,

teens tend to believe that they are "immortal" and probably are incapable of understanding the real risk.

6) The key here is the word **lifelong**… For a teenager this may mean for the next sixty or more years!

Overall, most providers believe that surgery is not a good option for children. It should not even be considered before the end of puberty at the earliest. There are very rare cases wherein the complications of the obesity are so severe that surgery can be viewed as a lifesaving procedure. However, even in this scenario, this procedure will not be performed without the teenager and their family demonstrating real commitment to major lifestyle change.