

Obesity, an Epidemic Ignored by Pharmacists

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Introduction

Obesity is a growing epidemic in the United States. Obesity leads to further health complications, and as a result more trips to the pharmacy for medications. Pharmacists are well respected and trusted by their patients, and it is a disservice to the public to idly stand by dispensing medications merely to treat these problems. Pharmacists are more available and faster to see when it comes to providing consultations in regards to general day-to-day health needs, and should take advantage of this constant public exposure. Pharmacists should work to educate and motivate patients on how to halt, eradicate, and prevent these comorbid conditions.

For those up to the challenge of assisting patients with weight loss, there are a plethora of options which are usually used in combination, like supplementation with chromium picolinate or treatment with Litramine IQP. These examples are also meant to work synergistically with proper dieting and exercise regimens as part of non-pharmacological weight reduction treatments. Another way for the pharmacist to interject here would be availability of alternative delivery systems for treatment, such as in compounded products like orally dissolving tablets or troches. Whatever the case, pharmacists are uniquely positioned to pursue an active role in the war on obesity.

Obesity, in simple terms, is having a high proportion of body fat. Fat is important for storing energy and insulating your body, among other functions. The human body can handle carrying some extra fat, but beyond a certain point body fat can begin to interfere with your health. For this reason, obesity is more than a cosmetic concern. Obesity puts you at greater risk of developing high blood pressure, diabetes and many other serious health problems. One in three Americans are obese.

Modest weight loss can improve or prevent complications associated with obesity. Weight loss is usually possible through dietary changes, increased physical activity, and behavior modification. For people who don't respond to these lifestyle changes, other more involved obesity treatments are available to enhance weight loss. These include prescription medications and weight-loss surgery.

Although there are genetic and hormonal influences on body weight, ultimately excess weight is a result of an imbalance of calories consumed versus calories burned through physical activity. If you consume more calories than you expend through exercise and daily activities, you gain weight – your body stores calories that you don't need for energy as fat.

The High Cost of Obesity

Obesity itself isn't the only issue; it is all the additional conditions that come with it. The treatment of these conditions--diabetes, heart disease, osteoarthritis, and hyperlipidemia among others.—are costing us billions of dollars a year. In 2006 it was estimated that around 21% of all medical costs—around \$190 billion dollars—were due to obesity-related conditions [1]. This number only continues to rise as the number of obese individuals continues to rise year after year.

Diets

Diet is a key factor in contributing to weight loss. With a plethora

of diets flooding the media, however, it can be confusing and difficult to navigate a patient to the appropriate diet for them. Three of the most popular diets are the low-carbohydrate diet, the Mediterranean diet, and the low-fat diet. In a 2-year trial, 322 obese individuals were randomly assigned one of these diets, and their progress was monitored. After two years, 84.6% of the participants had completed the trial, and all saw weight loss results [2]. The mean weight loss for the low-fat group was 3.3kg, 4.6kg for the Mediterranean diet group, and 5.5kg for the low-carbohydrate group [2]. Interestingly, the Mediterranean diet group saw a greater mean weight loss and a greater improvement in their fasting plasma glucose and insulin levels than the other groups. This is worth noting, as taking patient history and long-term health goals can indicate a preference of one diet over another.

Chromium Picolinate

While many different supplements have been found to have an effect on weight loss success, chromium picolinate is one of particular interest. In one study, 42 overweight adult women were given 1000µg of chromium picolinate for 8 weeks and had their daily food intake measured. The results of this study indicated that their food intake, hunger levels and fat cravings decreased, as did their body weights [3]. The placebo group in this study actually found their body weight increasing during this time. The effect of chromium picolinate may not yet be fully understood, but the benefits of it and other supplements on weight loss is not to be underestimated. For too long most pharmacists have opted to stay away from recommending supplements since they are not monitored by the Food and Drug Administration in the same manner as medications are. Most Pharmacist lack the training in alternative to pharmacological treatments and perceive recommending supplements as outside of their area of expertise.

Some Examples of Pharmacological Treatment Options

A natural fiber complex known as Litramine IQP derived from *Opuntia ficus-indica*, has shown some promise in reducing the absorption of dietary fat through gastrointestinal fat binding [4]. Over a 12-week period, 123 individuals were given either the Litramine complex or a placebo. Compared to the placebo group, those that received this complex lost at least 5% of their body weight and had a greater reduction in their BMI, body fat composition, and their weight circumference [4].

Another treatment that has been studied is that of a combination

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of naltrexone/bupropion. This combination has been shown in recent studies to act in hypothalamic brain regions that are responsible for appetite regulation and energy expenditure. At the same time, this combination influences eating behaviors that are mediated by the reward system [5]. By working to incite changes in these multiple areas, this combination may be more effective for weight loss. Participants in this study saw around 5-10% reduction in their weight loss. Further exploration in this therapy may provide more data on the benefits this option may present for long-term weight loss.

Another treatment option is a combination of phentermine/topiramate. In a recent study, subjects who were administered the phentermine/topiramate combination were found to have significant, sustained weight loss, improvement of cardiovascular and metabolic variables, as well as reduction in symptoms of diabetes [6]. Because of the cardiovascular improvements, more research in this area could provide an effective treatment option for those patients struggling with cardiovascular impairments as well as obesity.

Drugs Associated with Obesity

The following drugs and medications are in some way related to, or used in the treatment of Obesity. This service should be used as a supplement to, and NOT a substitute for, the expertise, skill, knowledge and judgment of healthcare practitioners.

- Adipex-P
- Belviq
- Fastin
- Ionamin
- Pregnyl
- Tagamet
- Topiragen

Plants Associated with obesity

Achyranthes aspera Lin, The Ayurvedic Pharmacopoeia of India indicates the use of the whole plant in lipid disorders and obesity. *Balsamodendron mukul-Oleo-gum-resin*—used for reducing obesity.

Achyranthes aspera is a member of *amaranthaceae*, and it is widely used for curing so many ailments in tribal peoples of nallamalais of Eastern ghats of andhra pradesh and root also used as a tooth brush, it gives foam. It is used for scorpion sting etc. *Commiphora mukul*, *Cyprus rotundus*, *Black bitumen* are some of the commonly used anti-obese herbs. Remember *Shilajith* is an exudate from a plant *Euphorbia royleana*.

Food Addiction

Just how responsible is the individual for their obesity? New research is showing that some individuals may be clinically addicted to food. Food addiction does not necessarily result in obesity, but can lead to activities such as emotional and binge eating which can result in obesity [7]. Individuals that are experiencing depression, emotional eating, binge eating, anti-fat attitudes, internalized weight bias, and body shame may present further difficulties losing weight. Much like other addictions, individuals with food addiction may suffer withdrawals that make their weight loss attempts much more difficult [7].

The foods we eat create different responses in our brains. “Junk” foods, or those high in things such as fat, sodium and sugar, can give us

cravings not unlike those of illegal drugs. The more we eat them, the more our body wants them, and the harder it becomes to stop ourselves from continuing to ingest these foods—even when we know they are poor choices. This can put these patients in a vicious cycle of fad diets, failing at multiple types of diets, weight gain, and depression. In order to work with these patients, we can't just expect them to stop eating these foods, much like we wouldn't expect a drug addict to quit “cold turkey” without any interventions.

How do we know if someone is actually suffering from a food addiction, though? Physical symptoms of withdrawal, increasing the amount of “bad” foods required to feel “good”, and allowing overeating to control or dictate their activities are some signs that may point to food addiction. Outside of traditional weight-loss methods, these patients may require outside counseling or psychological intervention in order to be successful with their weight loss.

Conclusion

Studies suggest that there are many different ways to approach the treatment of obesity. The important thing, however, is that we move to treat it. As pharmacists we have the ability to contribute to the treatment of obesity, weather through education or with pharmacologic therapy. While the “right answer” on how to handle this epidemic may not be clear at this time, the only “wrong” answer is no treatment at all.

References

1. Cawley J, Meyerhoefer C (2012) The medical care costs of obesity: an instrumental variables approach. *J Health Econ* 31: 219-230.
2. Shai I, Schwarzfuchs D, Henkin Y, Shahar D, Witkow S, et al. (2008) Weight Loss with a Low-Carbohydrate, Mediterranean, or Low-Fat Diet. *New England Journal of Medicine* 359: 2169-2172.
3. Anton SD, Morrison CD, Cefalu WT, Martin CK, Coulon S, et al. (2008) Effects of Chromium Picolinate on Food Intake and Satiety. *Diabetes Technology & Therapeutics* 10: 405-412.
4. Grube B, Chong P, Lau K, Orzechowski H (2012) A Natural Fiber Complex Reduces Body Weight in the Overweight and Obese: A Double-Blind, Randomized, Placebo-Controlled Study. *Obesity* 21: 58-64.
5. Billes S, Sinnayah P, Cowley M (2014) Naltrexone/bupropion for obesity: An investigational combination pharmacotherapy for weight loss. *Pharmacological Research* 84C: 1-11.
6. Garvey WT, Ryan DH, Look M, Gadde KM, Allison DB, et al. (2012) Two-year sustained weight loss and metabolic benefits with controlled-release phentermine/topiramate in obese and overweight adults (SEQUEL): a randomized, placebo-controlled, phase 3 extension study. *American Journal of Clinical Nutrition* 95: 297-308.
7. Chen J (2000) ‘Strong medicine’: an analysis of pharmacist consultations in primary care. *Family Practice* 17: 480-483.