lems, including possible insomnia and very intense dreams. Various diet medications can have cardiovascular and psychiatric side effects as well. It is important for patients to be aware of the risks associated with taking diet medications prescribed to them. If a patient purchases a diet medication that is over the counter like Alli, recommend that the patient speak with the pharmacist on call about it before completing purchase.

Many dieticians believe patients can lose weight by eating right and increasing physical activity. It may take several attempts at losing weight to finally reach the desired goal. Patients may need to set small weight loss goals rather than one big goal. There will be setbacks and temptations, but the key is to stick with the diet and not give up easily. As pharmacy technicians, we can inform and educate the public about obesity and ways to lose the weight.

"Weight Loss" Supplements

Though there are few weight loss medications out there, patients have a variety of choices when it comes to weight loss supplements. Herbal remedies and dietary supplements fall under a special category of food by the FDA under the Dietary Supplement Health and Education Act of 1994 (DSHEA). Therefore, dietary supplements are not required to go through an approval process of clinical study and FDA

review like pharmaceutical medications. Patients should take dietary supplements with caution. In March 2011, the FDA issued a consumer update warning consumers of tainted, dangerous products being marketed as "dietary supplements." The FDA found almost 300 fraudulent consumer products that promote weight loss, sexual enhancement and bodybuilding. The update stresses these supplements contain hidden or deceptively labeled ingredients. The FDA also states in the consumer report of harm associated with the use of these supplements such as stroke, liver injury, kidney failure, heart palpitations and death. Dietary supplements can cause adverse effects when taken with prescription or over-thecounter medications. Pharmacists and pharmacy technicians need to be aware of marketed weight loss supplements in their pharmacy and potential interactions that can occur with medications. If a patient purchases a weight loss supplement

or a special dietary supplement, ask the patient if he or she is also taking any prescription medications or if he or she routinely takes an OTC medication. If the patient answers yes, ask if he or she would be willing to wait a few more minutes to consult with the pharmacist. In addition, the FDA states in the consumer update it has worked with industry to remove various products with potentially harmful ingredients and more than 40 products were marketed for weight loss. The FDA warns against weight loss fraud and urges consumers to report instances of fraud to the agency. Pharmacists and pharmacy technicians can help by offering a resource center or information pamphlet where patients can report potentially dangerous or illegally marketed weight loss supplements.

Weight Loss Research Pipeline: The Trials and Tribulations

The success of another weight loss medication depends on many factors. Is it affordable? Safe? Effective? Will it be covered by insurance? Drugs designed to fight the ongoing problem of obesity are not cheap and may or may not be covered by insurance. These factors can make it difficult for people already struggling to lose weight through dieting and exercising to get help from a weight loss medication. There is also another issue to contend with in the weight loss world. Some doctors practice "combo-pilling," which is prescribing a combination of drugs (or one drug that contains two different ingredients) to produce weight loss. The FDA does not endorse combo-pilling. The most recent attempt of producing a combination weight loss drug was Contrave by Orexigen Therapeutics. According to a press release by Orexigen, the drug was studied for the ability to assist patients with their obesity problem and help them lose at least five percent of their starting body weight in one year. The investigational drug was to be a combination of naltrexone (used to treat alcohol and opioid addiction) and bupropion (also known as Zyban and Wellbutrin). With the two drugs combined into one, Contrave promised to aide in the weight loss of obese patients. Contrave was shot down by the FDA due to concerns about cardiovascular safety when used long term.



"We are surprised and extremely disappointed with the agency's request in light of the extensive discussion and resulting vote on this topic at the December 7 advisory committee meeting," said Michael Narachi, President and CEO of Orexigen. "We plan to work closely with the agency to gain more information to determine the appropriate next steps regarding the Contrave application." As far as the future of Contrave, additional studies and clinical trials are needed to assure its effectiveness and safety before it goes before the FDA once again. The FDA also rejected Lorcaserin by Arena Pharmaceuticals and Qnexa by Vivus in October 2010. Qnexa combines phentermine (the other half of fen-phen) and topiramate (sold as Topamax). There have been instances of adverse psychiatric effects and irregular heartbeat. According to a recent press release by Vivus, when compared with a placebo,

overweight individuals treated with Qnexa for two years showed reductions in blood pressure as well as definite improvements in lipid levels following reductions in weight loss.

Conclusion

Right now, orlistat remains the only FDA-approved weight loss medication on the market. It is unknown at this time if or when the FDA will approve another weight loss medication besides orlistat. Until more weight loss medications are approved by the FDA, patients turn to orlistat and, more often, dietary supplements as a means of losing weight. The pharmacy can be a powerful, unbiased information resource on both of these types of weight loss options. As pharmacy professionals, it is our duty