As obesity rates in adults in the United States continue to rise, so too does the problem in children and teens. In July 2006, Harvard University researchers released data from a 22-year study in children under the age of six showing that there has been an overall increase in the prevalence of overweight by 59 percent in this age group. In teens (aged 12-19), rates have tripled. Overall, there are approximately 9 million U.S. children over the age of six who are obese, and the number is on the rise.

Defining the Problem

Technically, there is no “obesity” in children, although there has recently been discussion by the Centers for Disease Control (CDC) and the American Medical Association of changing this. Currently, the term obesity is not actually used in those aged two to 19. Normal size in children is assessed by recording height (or length) and plotting it on a standard growth chart. There are separate charts for boys and girls (please see charts on pages 9 and 11). Children who fall between the 85th and 94th percentile are termed “at risk for overweight” category and those above the 95th percentile are “overweight.” Despite the terminology, it is increasingly recognized in medicine that unhealthy weight is significantly affecting the lives of many children and teens just as obesity affects adults. This

Childhood Obesity continued on page 8
A Message from President and CEO, Joseph Nadglowski, Jr.

The need for the OAC and our advocacy and education efforts was demonstrated quite strongly in late September. In Travis County, Texas, the County Commission implemented a new program to test the treatment of morbid obesity by offering a limited number of bariatric surgeries to county employees through their health insurance system. Unfortunately, just a week later, they rescinded the program. Why? This resulted in a huge public backlash based on what I believe is a bias against those affected by obesity.

The public comments shared to the program both online and in the newspaper demonstrated that we have a long way to go in educating the public about obesity and its treatments. Although some comments presented concerns about costs and misunderstandings of bariatric surgery, most were horribly hateful and filled with broad stereotypes.

It is time for all of us to devote more time and effort to do a better job advocating, not only to insurers and elected officials, but also to the general public, about the disease of obesity and the importance of treating it. I encourage all you, especially those of you who have successfully sought treatment for your obesity, to read the article on page 18 and become active advocates.

As always, if you have any questions about any of the OAC’s activities, please do not hesitate to contact our National Office at (800) 717-3117 or info@obesityaction.org.

MEMBERSHIP

Membership in the OAC is important in helping those affected by obesity become educated about obesity and advocate for access to treatment. Whether a patient, family member, friend, professional or organization, the greater our membership the stronger our voice!

To join, please see page 23 for a membership application. For more information, call (800) 717-3117.
In the United States, osteoarthritis (OA) is the most common form of arthritis affecting about 16 million Americans. Obesity is a well established risk factor for osteoarthritis of the knee, and possibly the hip. More than 70 percent of women and 35 percent of men with OA of the knee are overweight. It is characterized by pain at the knee on beginning motion, such as arising from a chair, and increased pain with prolonged use. In the early stages of OA, the pain is relieved by rest, but as the disease progresses, the pain can persist after activity, and even interfere with sleep.

What Causes Osteoarthritis?
Also referred to as degenerative joint disease, OA results from changes in the cartilage matrix that lead to a decreased capacity to retain water. Fissures and cracks develop in the dry cartilage, leading to the exposure of subchondral bone. This leads to osteophyte formation, or the apposition of spurs of bone that impede joint motion. Increased body weight increases the joint load leading to more rapid disease progression.

Other factors may play a role in the development of OA in obese individuals, including alteration in joint biomechanics, increased leptins in the joint and alteration in pain perception. Increased levels of leptins have been found in the joint fluid of patients with OA, and are correlated with body mass index (BMI). Leptins are important in promoting the effects of nitrous oxide and other mediators of inflammation. They may be an important modulator in the cascade of events associated with OA on a cellular level (1).

Measuring Osteoarthritis
A recent study looked at the reaction to physical pain in obese people. Sixty-two patients with OA were studied and about one third of them were obese. Participants got a mild shock to the ankle to measure their pain reflex, or withdrawal. They then got a lesson in coping skills and were retested. All the patients had a milder reaction after the lesson, but the obese patients had a stronger pain reflex than the non-obese during both tests. However, their subjective or reported pain levels were no different than the non-obese persons. This suggests that an obese person may not experience pain at the same level as a non-obese person when a potentially damaging stimulus is occurring. This could lead to more joint destruction and pain as it progresses (2). However, pain is a subjective experience.

The WOMAC Osteoarthritis Index asks patients to rate the severity of their pain using a visual or number scale. BMI correlates positively with reported pain severity as do measures of depression, anxiety and fatigue. One cannot ignore the strong correlation between psychological factors and the perception of pain in obese persons with OA (3).

How is Osteoarthritis Treated?
Treatment of OA is largely symptomatic, aimed at reducing pain and disability. The American College of Rheumatology recommends weight-loss and exercise to reduce the painful and incapacitating effects of OA. A weight-loss of 5 percent of body weight in obese older adults brought a gain in overall function of 18 percent in a recent study. This 18 month study of obese adults with OA of the knee, ranging in age from 60 to 89 with a sedentary lifestyle, measured weight and BMI as well as scales of physical function, pain and biomechanical gait analysis. All participated in...
a weight-loss plan, some through diet only, some though exercise only and some through a combination of both. Participants lost an average of 2 percent of their weight. There was a significant association between the weight-loss and reduction in compressive knee joint loads. The force reduction was four times greater than the actual weight reduction. In other words, for every pound lost, there is a four pound reduction in the load exerted on the knee for each step taken (4). Although there are no studies to correlate weight-loss in humans with reduction in OA disease progression, a finding of this magnitude is compelling.

Medications for Treatment
OA of the knee can be treated with local and systemic medications. Local therapies include topical and injected agents. Although a variety of topical preparations exist, the only one studied for OA is capsaicin. This product is made from hot pepper and works by tuning out the pain. Some burning is common when beginning its use. Intra-articular corticosteroid injections are helpful for OA patients, particularly if the joint has a fluid collection or if inflammation is present. Injection can provide immediate relief for those beginning treatment or experiencing a flare, as well as for those who cannot use oral anti-inflammatory medication.

Exercise helps patients with OA improve range of motion and build strength. Quadriceps strengthening exercise also helps patients with OA of the knee improve stability. High impact activities such as running can accelerate the disease. Low impact and aquatic exercise classes, such as those sponsored by the Arthritis Foundation, can be most helpful.

Those who feel too self-conscious to attend a class can exercise carefully on their own. One easy way is with an aquatic belt, available in sporting goods stores. The belt is not a life preserver, but allows the user to “walk” in the water, barely touching the pool floor. Muscles are strengthened during this aerobic activity, with a reduced gravitational stress on weight bearing joints.

Other ways of improving performance without medication include balancing rest and activity and using assistive devices, such as canes or walkers. Bracing the knee is also useful. Newer designs are light and less conspicuous, while unloading a great deal of the weight on the joint. They can be customized to any size, and although these are costly, they are covered under Medicare with a doctor’s prescription.

Hyaluranate is a large polysaccharide molecule that is decreased in the cartilage of OA patients. Viscosupplementation therapy consists of the injection of hyaluronate preparations into the knee joint. Three to five injections of the preparation are administered on a weekly basis. Synvisc and Hyalgan are two commonly used brands. Studies have demonstrated improvement in joint pain when compared with placebo. The injected material is viscous and adheres to cartilage, but the exact mechanism of action is unclear. The procedure can be repeated every six months, and is a good option for those with moderate disease activity.

Osteoarthritis Pain Relief
Most patients do require oral pain relievers of some kind. The American College of Rheumatology recommends beginning therapy with simple analgesics such as acetaminophen. However, there is data that suggests that non-steroidal anti-inflammatory drugs (NSAIDS) are more efficacious and preferred by patients than acetaminophen (5). There is evidence that full dose, or four grams daily, acetaminophen may not be as safe as once thought, and carries a risk of liver toxicity (6). Acetaminophen, in moderate doses of two grams or less per day, can be tried in patients with mild to moderate disease, but patients with more advanced disease are likely to require NSAIDS. NSAID therapy is effective in OA as both an anti-inflammatory and an analgesic. These drugs inhibit cyclooxygenase (COX), an important inflammatory mediator.
While effective, all NSAIDS have associated risk factors, such as gastrointestinal (GI) bleeding and gastritis, as well as edema, hypertension and cardiac effects. The gastrointestinal effects occur less often with COX-2 selective agents such as Celebrex. The use of acid reducers or cytoprotective agents can further reduce the risk of GI complications.

Those with a history of cardiac disease, hypertension, or elevated cholesterol are at increased risk for cardiac complications of NSAIDS, and need to discuss the benefits versus the risks with their physicians. Many obese patients will fall into the high risk category. Patients with renal disease and those using anticoagulants may not be able to use NSAIDS.

Alternative analgesics include tramadol and narcotics. Although not technically a narcotic, Tramadol has narcotic-like action and effect. It is useful for mild to moderate pain, and can reduce the dose requirement for NSAID. It is well tolerated, but the dose must be increased gradually to avoid dizziness and nausea. Narcotic analgesics can be used in patients with severe or advanced OA that failed to respond to traditional agents. Contrary to popular belief, there is no risk of addiction when these agents are used as directed to relieve pain.

Other Forms of Pain Management
Muscle relaxants can improve pain caused by the muscle spasm that often occurs at arthritic joints and in the back. Anti-depressants, which work by increasing brain serotonin levels, are effective in reducing pain perception. The use of sedatives to improve sleep is also important. These agents are well tolerated additions to OA therapy. Glucosamine and chondroitin sulfate have been widely promoted to “reduce joint pain and support healthy cartilage.”

The recently published Glucosamine/Chondroitin Arthritis Intervention Trial (GAIT) compared these products to placebo and to Celebrex. The combination was shown to be effective in moderate to severe pain, but not in mild to moderate pain, and the response to placebo was high (7). I tell my patients to try it and to continue if they find it useful.

Knee Replacement
Total knee replacement is a very successful treatment for advanced OA of the knee. Although a poorer outcome for obese patients has been suggested, a five year study showed no difference in the range of motion or the need for surgical revision between a group of morbidly obese persons and control patients. However, the rate of preoperative complication was higher, particularly related to poor wound healing and infection (8).

Most surgeons do not advocate weight-loss prior to knee replacement, as the nutritional compromise could slow healing further. The obese patient considering knee replacement needs to seek an experienced surgeon, understand the expectations and the need for careful wound care.

About the Author:
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References:
When I decided to have gastric bypass surgery more than three years ago, the decision was all mine. Sure, I saw Al Roker and Carnie Wilson on television, but the ultimate decision was in my hands.

Prior to the surgery, I really did believe that it would be taking the easy way out. Having had the surgery, I know that is further from the truth. I also know that obesity, namely my obesity, was something that I rarely liked to talk about, let alone listen to the advice from others.

Think about it. We, the obese, probably know more about diets and exercise that those of you who are “in shape.” We’ve been on all the diets, purchased the exercise machines, gym memberships and diet pills. We’ve tried points, scales, fruit and hypnosis. We also know that losing weight is the most important, and probably the most difficult thing we can try in our lives.

Losing weight and leaving the obesity behind has been proven without doubt to improve or eliminate co-morbidities that exist as a result of obesity. Diabetes, hypertension, high cholesterol, even depression can be significantly effected by weight-loss.

The question is; however, how to approach a close friend or loved one to discuss their health and their obesity. The answer – very carefully.

First, always keep in mind everything that I said previously. You are now attempting to tell us, your loved ones, something that we already know. Our life will significantly improve if we lose weight. Second, you’re about to discuss a very personal and private issue. And, finally, losing weight is probably the hardest thing we’ve ever tried to do in our lives and it is the source of tremendous frustration.

Evaluate your relationship with the person you are about to talk with.

- Have you had such personal conversations before?
- If so, what was your loved one’s reaction?
- Can you be sure that you’re not going to come off as condescending or a know it all?

The table to the right lists five suggestions to help you approach your loved one/friend.

Talking to a Non-relative

Let’s say you’re planning on speaking with a friend. Perhaps someone with whom you have a very good relationship, but not one as close as you would with a family member. Remember, do your homework before you speak with your friend. A wealth of information can be found easily on the Internet, in your library or even at your own doctor’s office.
Before you approach your friend, imagine the situation if it were reversed. Would you appreciate a friend’s advice or would you find it intrusive or uncomfortable? Treat your friend as you would want to be treated and approach them in that way. Let them know that you care about them. Emphasize that this discussion has nothing to do with how they look. Remind them that they are living for you as well as themselves, and that you want them around as long as possible.

Approach Them in a Truthful and Honest Way
As I said, we know losing weight is good for us, it’s just the past failures and frustration that gets in our way. Let them know how much you care about them. Emphasize that this discussion has nothing to do with how they look. Remind them that they are living for you as well as themselves, and that you want them around as long as possible.

Provide Information…Not Diet Suggestions
Use the Internet or your library to research the benefits of weight-loss and provide your loved one with the studies to back up your advice.

Be Supportive
If you’re going to go this far, then you should be prepared to go all the way. Don’t stop at “I’m here for you,” or, “if you need anything call me.” Go further. Attend those weight-loss meetings with them. Put yourself on the same nutrition and exercise program that they may go on.

Never Suggest a Diet, or Even Surgery
Look into different options with them after you’ve broached the subject. If you suggest something and it doesn’t work, you most likely have set yourself up to be blamed for any failure. Let us make our own decisions, while providing a helping hand along the way.

Know the Boundaries
Only you know how far you can delve into someone’s personal life. Be extra sensitive so that you can detect even the slightest feeling of your loved one being uncomfortable and stop the conversation.

About the Author:
Gary J. Viscio, Esq. is an attorney who specializes in appeals for denials of obesity surgery, reimbursement and coverage, as well as obesity discrimination. In July 2003, he underwent weight-loss surgery, and to date has lost more than 160 pounds. He is a member of the Obesity Action Coalition Advisory Board, Obesity Help Advisory Panel and the Board of Directors of the National Spinal Cord Injury Association. He has handled insurance litigation matters for nearly 15 years.
includes the recognition of “adult” co-morbidities such as sleep apnea, depression, diabetes and hypertension – even in children younger than age 10.

**Contributing Causes**

Just as there is no single factor known to cause obesity in adults, there is no one cause in children. Contributing causes in children include, but are not limited to: genetic predisposition, overeating, lack of physical activity, lack of sleep, time spent watching television or playing video games, consumption of high-calorie liquids (such as soda) and eating away from home. Despite the glut of new studies in the area, one single factor is unlikely to explain the striking increases that have been observed.

While genetics gets discussed frequently when it comes to children, it is unlikely that our genes have changed radically enough in the past two decades to account for the dramatic shift in childhood weights. More likely is that, just as in adult obesity, we are seeing the compound result of these multifactorial problems as they are converging in younger generations. Some of these contributing causes include the following:

**Changes in Diet**

On the most basic level, children today eat more calories than ever before. In a 20 year period between 1977 and 1996, caloric intake increased by approximately 120 calories per child per day. This could amount to almost 12 extra pounds per year assuming the extra calories are not compensated for by physical activity.

More children also obtain increasing numbers of calories from refined sugars such as high fructose corn syrup (HFCS) and highly processed and fatty foods. HFCS has garnered particular attention as consumption in those more than two years of age has increased approximately 1000-fold and it has been specifically researched to increase factors related to obesity.

Soda is the most significant source of HFCS in children’s diets; however both soda and sweetened juice intake are associated with higher childhood BMI. Overall, for the addition of each sugary beverage in a child’s diet, the odds of a child becoming obese as an adult increases by 60 percent.

Other dietary associations include low intakes of dairy foods, high intakes of fatty foods and low intakes of fiber containing foods like whole grains. Finally, breastfeeding appears to be of benefit in reducing the risk of childhood obesity by 22 percent. A meta-analysis looking at nine studies of nearly 70,000 people also found that the duration of breastfeeding impacted this risk. Although, it is worth noting that other studies have found no relationship between breastfeeding and body weight.

**Changes in Eating Habits**

Along with how much and what children eat, how and in what environment they eat may be impacting weight. Hours spent watching television, specifically eating in front of a television, has been linked to weight gain for several reasons. The average child in the U.S. spends 20 hours per week watching television. Up to 20 percent of this time is accounted for by meals eaten while watching TV. Specifically, watching TV while eating is associated with both increased weight and poorer food choices – especially lower intakes of fruits and vegetables. Eating meals at home is also associated with lower weights.

Today’s children average eating one third of their calories away from home, up one fifth of their calories in the 1970s. Most of these calories are from prepared foods which tend to be higher in sugar and fat and served in larger portions. Children are also 15 percent less likely to be overweight if meals, especially dinner, are eaten together with their family on most days of the week. Related research on school lunch programs has shown that children who serve themselves (select their own portion sizes) are less likely to overeat compared to those who are served a fixed, large portion of food. Finally, skipping breakfast appears to be a risk factor for childhood overweight.
Mood and Behavior
Carrying excess weight in childhood can negatively impact self-esteem and mood in children, but it also appears that mood may be a contributing cause to weight gain. A study conducted by RAND showed that girls with behavioral problems in kindergarten were up to 81 percent more likely to be overweight by second grade compared to their counterparts. This does not appear to be a risk factor for boys.

According to investigators at Stanford University, children who have problems with anger or frustration are 6.6 times more likely to become overweight or obese. These researchers also found that highly emotional children and those who had regular food-related tantrums were 2.3 and three times more likely to become overweight respectively.

Exercise and Physical Activity
Exercise habits and overall activity levels play a clear role in weight management and maintenance. In childhood, lower activity levels are tied to higher weights in almost all studies. Data from 2003 collected by the CDC reported that 25 percent of U.S. children engage in no free-time physical activity. According to the Institute of Medicine, 62 percent of children have no physical activity outside of school, and enrollment in physical education programs in the U.S. had dropped by 14 percent since 1991, with few than one-third of children now participating.

Other Lifestyle Issues
Some unique risk factors for childhood obesity have emerged out of studies looking at family and lifestyle. One of these is sleep habits. Studies that look at weight and sleep duration in children have shown that those who sleep less than 10 hours per night are 245 percent...
more likely to be overweight compared to children who get 12 to 13 hours of sleep. This is thought to be largely due to the impact of sleep on hormones (like leptin and ghrelin) that are involved in the regulation of appetite and metabolism. Another study showed that among children aged three and four, a small (30 minute) reduction in daytime napping equated to as much as 6.6 times increase in the prevalence of overweight.

As mentioned above, hours spent watching TV is highly associated with increased weight. This includes not only the duration of time spent watching TV (which, in part, means that kids are sedentary rather than engaging in physical activity), but also the kind of TV they watch.

Studies focusing on the impact of advertising, for example, have shown that children who see multiple ads per day for unhealthy and fattening foods are significantly more likely to be overweight when compared to those who see fewer ads or those who see ads for healthy foods. This suggests that it is not only hours watched, but the content viewed impacting food choices that ultimately influences weight. In addition to television, time spent in front of a computer or playing video games appears to have a similar impact. There is also some evidence that having a parent who is a smoker is associated with increased weight gain in childhood.

Socioeconomic Status
While children of all income classes develop problems with weight, there is a greater risk to children from low-income homes. This is believed to be based on several issues including available food choices, food insecurity and safety (families living in unsafe neighborhoods are less likely to allow their children to play outdoors in the neighborhood.)

Genetics
In general, children who are born to overweight or obese parents are more likely to be overweight or obese themselves. It may be hard to see what aspects of the weight gain in the child are related to genetics and what are related to lifestyle in these situations. We do know that if a mother is obese during pregnancy, it is almost twice as likely that her child will be obese. One analysis has shown that children of obese parents are 13 to 15 percent more likely to be obese compared to those of non-obese parents.

The condition of insulin resistance which predisposes people to both diabetes and obesity has both genetic and environmental causes. Researchers are also busy examining gene variants that may directly contribute to obesity. Earlier this year, for example, a defect in a gene called INSIG2 was found to be associated with obesity. This obesity-predisposing gene is present in around 10 percent of the population. Researchers predict they will find other genes in the future that also contribute to obesity.

Where do we start?

Clearly, childhood obesity is a complex issue that is not fully understood. Most obesity experts agree that we need to look at interventions on many levels: government, school, community and home.

If you have a child who is struggling with weight, the first step is identifying and acknowledging the problem. Despite the increased awareness of childhood obesity, studies have shown that both parents and doctors frequently fail to identify the problem. If you suspect your child has a weight problem, if your child has expressed concerns, or if others (such as teachers, friends, family, members or coaches) have expressed their concern for your child, then it is probably a good idea to talk to your doctor. A physician can help to determine whether your child’s weight is appropriate and can help to rule out medical conditions that may cause or contribute to the problem. If your physician is knowledgeable about childhood nutrition and weight management, they may also be able to offer support and advice for diet and ex-
exercise. If your physician is not knowledgeable in these areas, it may be more appropriate to ask for a referral to a dietitian or other health professional.

Experts agree that diet alone is not a solution for childhood obesity. Any successful treatment must include not only diet, but also exercise, education and counseling for both the child and family. Dietary modification for children usually requires not only assessing their energy and nutritional needs, but also teaching them proper eating habits that they can use for the rest of their lives.

Healthy eating is often as important as calories in managing weight in children. Sometimes very simple measures such as eliminating high-calorie drinks, and adding fresh fruits and vegetables make a big difference. A dietitian or nutritionist who specializes in childhood nutrition is usually best-qualified to provide this care.

Physical activity is not only important for weight management in kids, but also for their general health. The 2005 USDA Dietary Guidelines for Americans recommends a full hour of exercise seven days a week for children and teens.

Exercise can take any form – from walking to school to playing an organized sport. If your child has engaged in little or no physical activity, then they may need to start slowly. Consider choices that are easily accessible such as those offered through schools or community centers. Activities that can be done as a family like walking or a home exercise video are also easy ways to start. If your child has a health issue or other problem making exercise difficult, you can ask your doctor for a referral to a physical therapist or exercise specialist. This can be especially important for kids with physical challenges like asthma.

Childhood Obesity continued on page 23
Exercise is an important habit to develop. It is essential to weight-loss and optimal health. Exercise is one of the most important keys to one’s success as a weight manager. Developing exercise as a part of your lifestyle is a process involving several things.

First, you need to make a decision to incorporate exercise into your life. Second, determine your motivation. Make it powerful. Once you have decided why you want to exercise and make a commitment, then you can set a goal and make a plan.

Your goals should be SMART. By this, I mean that they should follow a formula, which is as follows:

**S**pecific: Choose one specific behavior per goal to work on.

**M**easurable: Can you measure this against a baseline?

**A**ttainable or Action Based (behaviors): Is the goal attainable? Use action words when writing goals such as "I will" and "I do" rather than “try, should, would, could.”

**R**ealistic: Do you have honest and realistic expectations of yourself with your time, body, likes/dislikes?

**T**imely: Is the time allotted reasonable and manageable for you right now? And when will it conclude?

**DISCLAIMER:** To develop an exercise program that best suits your pre or post-operative needs, please consult with your physician. It is important to talk with your doctor before beginning any exercise program.

By Arrin Fleck, BS, NSCA-CPT
Now let us look at how to put these two principles together and start our plan. Here are some examples of poor and well-written goals:

**Poor** goals:
**Increase cardiovascular exercise.**
*Better:* I will walk five days per week for 30 minutes.

**Lose weight.**
*Better:* Lose 10-15 pounds by walking four days a week for 30 minutes a day.

**SMART** goals:
- I will increase my exercise by walking three times a week for 15 minutes each time.
- I will relax in the hot tub at the gym for 10 minutes after my two workouts this week.
- I will take the stairs down once a day at work, every day this week.

The easiest program for most people to begin is a walking routine. Realistically, any movement that you do is better than none. Do what works for you right now in your life. Everyone is different and has different likes, dislikes and abilities.

A good tool to have is a pedometer, it is very motivating and helps to keep you on track with your daily activity level.

For those considering surgery, it is best to begin this process prior to your procedure. By doing so, you prepare for life after surgery, lose weight, become healthier and make the recovery process easier and sometimes faster.

Maintain your program up until surgery and then begin again right after surgery. There are a few limitations depending on your specific procedure. Check with your surgeon for specifics.

In general, you should resume a walking routine immediately after surgery. Walking can be outside, on a treadmill (no incline), at the mall and walking videos. Most can ride a stationary bike as well. Some other appropriate exercises are:

- Seated knee marches
- Seated knee extensions (kicks)
- Pillow squeeze between knees
- Standing side leg lifts
- Toe/heel raises
- Arm circles
- Neck stretches

Remember these few things about exercise: make it simple, make it realistic, make it happen and most importantly make it fun! The most important commitment you make is to your health and wellness!

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**About the Author:**

Arrin Fleck, BS, NSCA-CPT, is an exercise physiologist educator at Scottsdale Healthcare and Scottsdale Bariatric Center in Scottsdale, AZ. She was recently a presenter at the American Society for Bariatric Surgery annual conference.
I’ve heard that a new weight-loss drug is coming out on the market. What is it and how does it work?

Answer provided by Anthony Vu Huynh, DO

Waiting in the Wings: Rimonabant for Weight Reduction

Rimonabant was developed by the pharmaceutical company Sanofi-Aventis. It had some positive effects on weight-loss, cardiovascular risk factors and helping people quit smoking. In February 2006, the FDA did not approve rimonabant as a smoking cessation medication, but announced possible approval as a weight-loss drug with undisclosed requirements. While rimonabant is waiting for possible FDA approval in the United States, it has been available in the United Kingdom since June 2006, and in Germany since September 2006 for weight-loss management.

How does rimonabant work?

Rimonabant acts on the endocannabinoid system (ECS). Cannabinoid substances, found in marijuana and isolated in 1964, have some effect on appetite stimulation. In the early 1990s, studies traced the receptors binding these substances in animals, then found anandamide, the first cannabinoid substance. In 1995, the second cannabinoid substance was discovered in gut and brain, named 2-AG. Hence, the ECS exists in animals unrelated to the use of marijuana. Subsequently, the ECS was determined to play a role in regulation of energy balance, food intake and metabolic processes. The relationship between ECS and appetite control has been demonstrated in several studies in rats. In one study done in the United Kingdom in 1999, the rats were fed with 30 grams of food, and then half of them received injections of cannabinoid substance. The result was over-eating behavior observed in these rats compared to the ones that did not receive cannabinoid substance. The second study in 2002 was also in the United Kingdom, where they measured the levels of these cannabinoid substances in rats before and after eating. They found the level increased before meal and decreased after meal, mainly in the brain. These findings confirmed the effect of cannabinoid substances in appetite control.

Rimonabant works by blocking the receptor of the cannabinoid substances in the brain as well as the gastrointestinal tract, fat tissues, heart and liver. As the result, it suppresses appetite, as well as produces changes in body fat and glucose metabolism.

How do we know rimonabant works in humans?

“RIO-North America” was a large study conducted at multiple centers across North America from August 2001 to April 2004 with 3,045 overweight and obese adult participants. In this study, after four weeks of a low-calorie diet and increased activity
levels, patients were given either a placebo (no active ingredient) or two different doses of rimonabant (5mg/day or 20mg/day) for one year. The average weight-loss after one year was 6.3 kg in the 20 mg dose group versus 1.6 kg in the placebo group, and the waist circumferences was reduced in the two groups, 6.1 cm versus 2.5 cm, respectively. There was no significant weight-loss seen in the lower dose (5mg/day) group.

After the first year of the study, the patients on rimonabant were randomly reassigned to either receive placebo or continue the same dose of 5mg and 20mg; while the original placebo group continued receiving the placebo. At the end of the two-year period, the group who continued the 20mg dose of rimonabant was able to maintain an average weight-loss from baseline of 7.4 kg (16 pounds), whereas the treated patients who switched to a placebo regained most of their weight. There was no significant weight-loss during the second year in the groups taking the placebo or the low dose rimonabant (5mg/day) for two years. The results showed that the weight-loss in patients taking 20mg of rimonabant is clinically significant and well maintained during the second year.

Regarding rimonabant’s effect on cardiovascular risk factors, the study showed increased levels of high density lipoprotein cholesterol (HDL-C, or “good” cholesterol) and decreased levels of fasting insulin in patients receiving either 5mg or 20mg of rimonabant, but the triglycerides levels decreased only in patients receiving the 20mg dose. Levels of total cholesterol and LDL-C (“bad” cholesterol) were not significantly different among the three studied groups. In addition, a subgroup study showed that more smokers on 20mg rimonabant quit smoking than smokers on placebo (27.6 percent versus 16.1 percent).

Is rimonabant safe?

In terms of the safety of rimonabant, the percentage of patients who dropped out of the study due to adverse reactions were 7.2 percent in placebo group, 9.4 percent in the 5mg dose group and 12.8 percent in the 20mg dose group. Those side effects observed were mild and short term including psychiatric disorders (depressed mood, anxiety, irritability, and insomnia), nervous system effects (headache, dizziness) and gastrointestinal tract problems (nausea, diarrhea). There was no increase in heart rate, change in electrocardiogram or other cardiovascular problems.

In conclusion, the two-year data from the phase III multicenter RIO trials showed positive result for weight-loss and cardiovascular risk factors after one year of treatment with rimonabant and was sustained over the two-year period with tolerable side effects. The cost for one month supply of 20mg per day of rimonabant is about 80 euros or 102 U.S. dollars. Sanofi-Aventis optimistically thinks that this drug will be available in the U.S. by the end of this year. The major question is whether insurance companies will see the benefit, not only for weight-loss but also for a reduction in cardiometabolic risk factors.

**About the Author:**

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**References**

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Rimonabant works by blocking the receptor of the cannabinoid substances in the brain as well as the gastrointestinal tract, fat tissues, heart and liver. As the result, it suppresses appetite, as well as produces changes in body fat and glucose metabolism.
These days, dining out has become the norm rather than the exception. Gone are the days when dining out was a unique event saved for special occasions with the entire family present. With our hectic lifestyle and busy schedules, dining out is sometimes a necessity, and for many it may mean eating out several times per week and for more than one meal in a day. In addition, having an abundance of eateries available, ranging from breakfast carts to fast food chains to high end restaurants, may make even the most health conscious person feel overwhelmed.

Usually, when we eat out we are consuming a lot of extra calories, mainly from fats and large portions, not to mention the extra sodium. While not always easy, it is possible to stay on track with a healthy eating plan while still enjoying the pleasures of dining out.

**General Tips for Eating Out:** This list helps individuals make better choices when eating out.

1. Plan ahead; try to read the restaurant menu first. The Web site [www.menupages.com](http://www.menupages.com) has many menus available from major cities. Or, call the restaurant ahead and ask them to fax or email you the menu.

2. When choosing a restaurant, try to avoid buffets. The multitude of choices will likely cause you to consume extra unwanted calories.

3. Don’t arrive to the restaurant starving. You will be too tempted to snack on breads, nuts, etc. which will quickly rack up the calories.

4. Don’t be afraid to ask how something is prepared. Broiled fish is better than fried fish, however if it is broiled in butter then that is not the best choice.

5. Request sauces, gravies and dressings on the side. Ask how vegetables are prepared and always order them steamed. For side dishes, ask to double up on vegetables and omit potatoes, rice or french fries.

6. Omit high calorie toppings such as sour cream, mayonnaise or tartar sauce. Mustard, tomato sauce and salsa are all lower fat alternatives where appropriate.

7. Ask the server to remove the bread basket from the table. Avoid rolls, bagels, croissants and pastries which can add 200-400 calories to your meal. For a sandwich, order it on whole wheat or pita bread.

8. Avoid these cooking methods: au gratin, fried, cream sauces or soups, “cream of,” breaded, alfredo, battered and parmiagiana. Instead, choose healthier preparations: au jus, steamed, poached, grilled, baked, lightly sautéed, barbequed and roasted.

9. Be careful of mayonnaise based salads such as potato salad, macaroni salad, cole slaw, etc.

10. Don’t waste your calories on drinks. Choose water, diet soda, unsweetened iced tea, etc. Monitor your servings of alcohol as well.
For the Post-Surgical Patient: Once you have had weight-loss surgery, it is still possible to dine out at your favorite restaurants. It is more challenging during the early post-op period because of individual tolerances. This may be the time to forgo dining out until you tolerate more solid foods. Once you are cleared to dine out more often, feel free to enjoy while remaining mindful of healthy alternatives. The following are some helpful tips:

1. Do not arrive to the restaurant starving; therefore, you will avoid eating too quickly. This will decrease the chance of any food getting “stuck.” In addition, by slowing down you will feel fuller faster; hence consume less total calories.

2. Order an appetizer for your entrée or order from the children’s menu. When ordering, avoid anything fried or in a heavy cream sauce or gravy.

3. Share an entrée with a friend or ask for half your order to be put in a take away bag.

4. Ask for a smaller spoon or fork to help slow you down.

5. Set your utensil down between bites to control your pace.

6. Avoid bread, rolls or buns as you will fill up on unwanted, nutrient poor calories.

7. Remember to chew well. This would be a good time to be a good listener so you can give yourself time to chew.

8. Make sure the food that you are ordering is moist enough. This would be a good time to order foods, “au jus” or in a red sauce or with a little olive oil and garlic.

9. Focus on choosing lean meats and vegetables. Good choices of lean proteins are ground beef, turkey, or fish such as flounder, halibut, skate and cod. Moist chicken and tofu are also good options.

10. Share dessert or choose sorbets or fresh fruit. Better yet, skip dessert and just enjoy a tea or coffee.
The Importance of Post-Treatment Patient Advocacy

It is important that all those who have received treatment voice their stories to the media, congress and anyone else who will listen. Positive stories demonstrate to the general public that access to treatment improves patients’ overall quality of life and health.

Why Is It Important to Advocate?

As you know, advocacy is the act of pleading or arguing in favor of something, such as a cause, idea or policy, and all those who were affected by obesity at one point in their lives need to continue to advocate for access to treatment for the millions of individuals still affected by this disease.

As stories about obesity and morbid obesity continue to become more prevalent in the media, many times they contain negative publicity about weight-loss therapies.

For instance, in recent months, weight-loss surgery received a large amount of negative national media attention; however, very few weight-loss surgery patients responded with their positive stories.

It is important that all those who have received treatment voice their stories to the media, congress and anyone else who will listen. Positive stories demonstrate to the general public that access to treatment improves patients’ overall quality of life and health.

Where Can I Start to Advocate?

The Obesity Action Coalition (OAC) encourages proactive advocacy by focusing attention in the following areas:

- Insurers (This is an important one! If your therapy was covered by your insurance provider, voice your opinion and let them know the differences it has made in your life.)
- Media (If you see a negatively focused weight-loss treatment article in your community, respond to it. Write your response to the editor and author of the article. Urge them to publish your article as well to show both sides.)
The OAC is excited to release its "Understanding Obesity" poster. This 18x24 color poster is designed to provide individuals with a basic knowledge of obesity, who it affects, the health risks associated with it and much more. The poster also features a body mass index (BMI) chart that allows viewers to calculate their BMI and determine if they are Underweight, Normal, Overweight, Obese or Morbidly Obese.

This FREE poster is an excellent resource for patients and healthcare professionals. The OAC encourages healthcare professionals, community centers, fitness centers and others to order this poster and help spread awareness.

For more information on the “Understanding Obesity” poster or to order a copy, please visit the OAC Web site at www.obesityaction.org or contact the OAC National Office at (800) 717-3117.

The OAC has become a powerful voice for all those affected by obesity and morbid obesity. The OAC continually attends national and state level meetings/conventions to build awareness in the obesity community, educate those affected by obesity, distribute materials to healthcare professionals and much more.

Quite often, the OAC is contacted by local and national media to comment on topics, such as television programs that portrayed obesity in a negative/positive manner, radio broadcasts that discussed this disease and print stories that featured an obesity-related topic.

In 2005/2006, the OAC appeared in more than 30 print publications, one nationally televised program, two radio broadcasts and a number of Internet Web sites which discussed obesity/morbid obesity.

The following is a list of some of the publications/television programs in which the OAC appeared:

- ArriveNet
- Axcess News
- Capital City Weekly
- Dayton Daily News
- Pharmacy Choice
- St. Petersburg Times
- The Today Show
- US Weekly magazine
- USA Today

For a full list of publications and links to the articles that the OAC has appeared in, please visit the “OAC In The News” section of the OAC Web site. If you see a topic in the media that you would like the OAC to comment on, please contact the National Office at (800) 717-3117 or email info@obesityaction.org.
My name is Curtis Sumner. In October of 2004, I had gastric bypass surgery. The day of surgery I weighed 378 pounds. As far back as I can remember, I suffered from obesity almost all of my life. Today, I am 18 months post-op and have had no adverse complications and have lost 202 pounds.

It's not fun when this illness robs you of life, happiness and friendships, not to mention all of the other psychological factors that play a part on our emotions. You struggle with feelings of failure after following diet after diet only to put back on the weight that was lost with additional weight added. There is hope though, and all is not lost.

In my situation, obesity was a combination of many factors, such as physical hunger, depression, anxiety and boredom. Genetic disposition may have also played a part in it, but can't be totally blamed on it in my case. More than anything, it was the physical hunger. Whichever weight-loss method a person chooses, there comes the realization that it takes determination and commitment. Diets don't always work for various reasons.

I followed every diet I could to lose the weight, and failed at every attempt. My last hope was weight-loss surgery. For me, this surgery was successful and totally eliminated my hunger. Now, I eat to survive.

Although the physical hunger has been stopped, I now have to fight the urges to eat out of boredom or depression. I make a conscious effort to wisely choose what I put into my mouth. If I do give into eating something it is because I want it and can limit myself to smaller portions. I realized that even
In conclusion, you have made an important life changing step toward a healthier future. While we know cooking at home is the preferable choice when watching fat and calories, there are ways to fit in restaurant dining as well. If you know that you are going out to eat one evening, try to be extra cautious during that day. Cut back on your portions, do some extra exercise. Moderation is key; however, you don’t want to look back at your meal or your dining experience with guilt.

Planning ahead can help you enjoy your dining experience without sabotaging your diet control and healthy eating habits. Planning ahead also enables individuals to know what their options are before arriving. That way your experience can be nothing short of enjoyable.

About the Author:
Staci Stone, RD, CDN, is a registered dietitian who works for Columbia University in NY with the Center for Advanced Surgery. She specializes in working with the bariatric population, providing nutrition counseling both pre and post surgery.

OBESITY IS A DISEASE.
Treatment is a lifelong commitment.
Surgery is not a quick fix.

with weight-loss surgery, the weight can be gained back. It is important to maintain a proper protein and vitamin intake, and I watch calories religiously.

Obesity is something that no one can really understand unless they walk in our shoes. I can recall my former employer of a very popular restaurant chain telling me that they would never promote me because I was morbidly obese. No one really knows the amount of prejudice we suffer and the amount of guilt we feel when we try on our own to lose weight and fail.

One thing that helped me to make my decision is the fact that I had to take a good long look at my inner self. I had to forgive myself and had to start liking myself. I just simply got tired of fighting a losing battle. I decided five years ago that I was going to take charge of my life, and no matter what it took I would get it back.

Since my surgery, I am now able to think more clearly and can see the denial that I was in about my own struggles with it. I will always carry a picture of myself as I looked prior to surgery. I never want to forget that part of my life because that is who I was and still am. I am the same no matter at what size, and I deeply care about those of you who also suffer from this illness.

I want to be of encouragement to others and let you know that there is help. I want to start a support group in my area to help people that are suffering from obesity to make the decisions they need to make to help them start their weight-loss, or encourage them to proceed with their treatment choice.

It is not always our fault that we are obese. There is more to winning this battle than just pushing away from the table. I want to let you know that this surgery actually saved me from an early demise, and had I not had it I would not be here to write you today. Because of weight-loss surgery, I have a new life, and I have my life back.

To view before and after pictures of Curtis, please visit the “Patient Stories” section on the OAC Web site.

Would You Like to Share Your Personal Story with the OAC?

The OAC encourages patients to share their personal story of how they have been affected by obesity. Those who share their story will receive a complimentary one-year membership in the OAC. Please visit the OAC Web site at www.obesityaction.org or contact the OAC at (800) 717-3117 for details.
What if I Don’t Know How to Write My Own Story?

Not a problem, the OAC offers many tools for you to become an effective advocate, such as its advocacy guides, state guides, tips and hints on writing your legislators, employers, insurers and much more. And, the OAC will also help you write your story. For great examples of patients sharing their stories, visit the “Patient Stories” section of the OAC Web site at www.obesityaction.org.

What Should I Say?

- Share your personal story of how obesity has impacted your life.
- Many times we are told by patients that they feel they have been given a second chance at life because of the many simple and important tasks they can now accomplish, such as tying their shoes or playing with their children. If you have successfully treated your obesity through bariatric surgery or other obesity management services, share your methods and highlight your quality of health and life improvements.

Conclusion

Post-treatment advocacy is extremely important to build awareness of the positive effects of weight-loss treatments and to ensure access to care for all those affected by this disease.

You must continue to “Raise Your Voice” and build proactive relationships with influential decision makers by telling them your positive stories dealing with weight-loss treatment options. Only then, will they be aware of and understand the true impact of access to care for the millions affected by obesity.

The OAC urges you to share your story and illustrate the impact that treatment has had on your overall health. Your letters, phone calls and e-mails make a tremendous difference. If you haven’t already done so, please “Raise Your Voice” and start advocating today!
Education and counseling are important to help kids make changes that will be lasting. It is usually important that both the child and the family participate in this area of care. As discussed above, many issues related to mood, lifestyle and environment have significant impacts on weight in children. If these issues can be addressed with the whole family, it is likely to have the most positive influence on the child.

Other treatments are also used in addressing obesity in children. Depending on age, health, growth status and other factors, children may be candidates for other medical treatments. These include medical weight management programs, drug treatments and weight-loss surgery. The latter treatments are usually reserved for teens, but are finding growing acceptance as childhood obesity is better understood.

Conclusion
Childhood obesity is a complex condition that needs to be addressed on many levels. It is important for families who are affected to not only understand the causes, but also to have access to appropriate care for their children.

About the Author:
Dr. Jacqueline Jacques is a Naturopathic Doctor with more than a decade of expertise in medical nutrition. She is the Chief Science Officer for Catalina Lifesciences LLC, a company dedicated to providing the best of nutritional care to weight-loss surgery patients. Her greatest love is empowering patients to better their own health. Dr. Jacques is a member of the OAC Advisory Board.

To view the references cited in this article, please visit the October 2006 issue of “OAC News” on the OAC Web site at www.obesityaction.org.
The mission of the Obesity Action Coalition is to elevate and empower those affected by obesity through education, advocacy and support.

About the OAC

The Obesity Action Coalition is a non profit patient organization dedicated to educating and advocating on behalf of the millions of Americans affected by obesity. By strictly representing the interests and concerns of obese patients, the OAC is a unique organization with a patient-focused approach to obesity. To learn more about the OAC, visit www.obesityaction.org or contact the National Office at (800) 717-3117.

OAC Resources

Through education and advocacy, patients need to get involved to help drive change in the obesity community. The OAC provides several beneficial resources for patients, as well as professionals.

- OAC Introductory Brochure
- Obesity Action Alert
- OAC News
- State-specific Advocacy Guides
- Understanding Obesity Brochure
- Understanding Obesity Poster
- Advocacy Primer: Your Voice Makes a Difference
- The OAC Web site: www.obesityaction.org

All OAC resources are complimentary and may be ordered in bulk. To request materials or an order form, please contact the OAC National Office at (800) 717-3117 or send an email to info@obesityaction.org.