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OBESITY *is a Disease*

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With recent developments among leading medical groups paving the way, there is now agreement among medical experts that obesity is a disease state based on scientific evidence, rather than the result of individual lifestyle choices.

In 2012, the American Association of Clinical Endocrinologists (AACE) declared obesity a chronic disease and explained the rationale for this designation. Subsequently, AACE and a number of other professional medical societies then brought this proposal to the American Medical Association (AMA) where differing opinions on this matter were carefully considered. In the end, the AMA agreed in 2013 that obesity should be considered a chronic disease, just like diabetes, hypertension, or asthma. "Recognizing obesity as a disease will help change the way the medical community tackles this complex issue that affects approximately one in three Americans," AMA board member Dr. Patrice Harris said in a statement following the decision. She also suggested the new definition would help in the fight against type 2 diabetes and heart disease, which are linked to obesity.

Like any other chronic disease, obesity is caused by interactions among genes, environment and behavior. This means that obesity is inherited to a degree within families, but that the degree of obesity is also determined by behavioral and cultural determinants within the family and the environment in which the family lives.

Obesity fulfills the three essential characteristics of a disease established by the AMA itself. First, a disease is characterized by recognizable signs or symptoms. For obesity, this is an elevated body mass index (BMI), which is your weight in kilograms divided by height in centimeters squared; it may seem like complicated math, but you can find internet sites where you can enter your weight in pounds and height in inches to get your BMI result. This will tell you whether you are overweight, with BMI between 25 and 29.9, or obese with a BMI of 30 or above. In addition, the waist circumference is used to assess fat accumulation in the abdomen. We know that more fat in the abdomen (the "apple" shape) is associated with more metabolic problems than fat in the hips and thighs (the "pear" shape).

The second characteristic is that a disease involves abnormal functioning in some part of the body. In obesity, this could pertain to the hypothalamus in the brain, which regulates food intake and hunger. Normally, the hypothalamus would be satisfied with a healthy body weight, but, in obesity, is a driver for excess calorie intake. Another example is fat tissue can become infiltrated with inflammatory cells leading to abnormal secretion of factors into the blood stream. These factors then alter metabolism in other organs in the body and act to increase insulin resistance and risk of type 2 diabetes and metabolic syndrome, a cluster of conditions such as increased blood pressure, high blood sugar and abnormal cholesterol levels that increase your risk for heart disease and other health problems, such as stroke.

Finally, a disease causes harm or even increased mortality. Clearly, obesity satisfies this criterion as well since it can lead to a wide variety of metabolic problems (diabetes, hypertension, dyslipidemia, which is an abnormal amount of cholesterol and/or fat in the blood, non-alcoholic fatty liver disease, infertility, cardiovascular disease) and so-called mechanical problems due to excess body weight (sleep apnea, osteoarthritis, urinary stress incontinence, immobility). High levels of body weight can also be associated with a shorter life span and decreased quality of life.

What obesity is not is a lifestyle choice. People who are obese generally do not want to be obese. Surveys have shown that over 90 percent of people with obesity have seriously attempted to lose weight at some point, and 50 percent are currently trying to lose weight. People with obesity face discrimination in employment, college admissions, romance, airplane seating, medical care and income. That is not to say that people with obesity cannot lead full, productive, happy lives; they can and do. At the same time, obesity carries with it significant health risks. Efforts and resources that people expend in attempts at weight loss indicate that a lower body weight is often a desired outcome. Unfortunately, billions of dollars are spent in interventions that do no good. These interventions include herbal remedies, magic exercise programs, and other gimmicks that will "melt the fat off" as advocated in cable TV commercials and by TV doctors. If these interventions sound too good to be true, THEY ARE!

The fact that obesity is a disease does NOT allow individuals to ignore the responsibility of adopting a healthy lifestyle as part of the treatment. Healthy meal choices with less caloric intake together with increased physical activity are critical in combatting obesity. However, it is no secret that achieving weight loss and sustaining weight loss over time are difficult. This difficulty

arises from the body's own mechanisms that caused the excess body weight in the first place. After weight loss, the amount of energy the body burns at rest goes down, appetite-stimulating hormones like ghrelin [GREL-in] increase, the hormones that make you eat less decrease, and psychological food choices become oriented to calorie- dense items enriched in sugars and fats.

All of this physiology makes people gain the weight back to the original higher body weight. In this way, obesity protects obesity. This is one of the reasons why endocrinologists believe that obesity is a disease.

The good news is that we have new and better tools to treat obesity, which can fight back against the body's own efforts at maintaining high body weight. Scientific evidence supports the success of structured lifestyle intervention programs that include care from health care professionals, healthy meal patterns that include reduced caloric intake, meal replacements, behavioral counseling and increased physical activity. In addition, we have new weight-loss medications that have been proven to be safe and effective in clinical trials and have been approved by the Food and Drug Administration (FDA). Medicines approved in 2012 include Qsymia® and Belviq®, and two additional new medications are being evaluated by the FDA for approval in the fall of 2014. These medications should be considered as additions to lifestyle changes and will produce greater weight loss than achieved by lifestyle modification alone. This is because most of the medications work by suppressing appetite, and, in this way, improve the ability of individuals to be compliant with a reduced-calorie meal plan. This helps patients lose more weight, and, more importantly, to keep it off over a longer-duration of time.

Obesity fulfills the three essential characteristics of a disease.

The people that benefit the most from these weight loss interventions are people with obesity-related complications. Weight loss has been scientifically proven to treat metabolic syndrome and prediabetes by preventing progression to type 2 diabetes, to help control diabetes itself with less need for conventional diabetes medications, to lower blood pressure, and to improve blood lipids, sleep apnea, osteoarthritis, urinary stress incontinence, gastrointestinal reflux and other problems.

So what can you do to help yourself? Talk to your health care team, your specialist, your endocrinologist, about whether you are overweight or obese. Your health care team will assess whether you have any obesity-related complications that can be treated with weight loss. Discuss a reasonable goal for weight loss—not just pounds, but how this weight loss can improve your health. Ask about tools that can help—would a registered dietitian be helpful, a commercial weight loss program, or a specific dietary plan? Are there web resources or smartphone apps that could be helpful? Are there exercise goals that trainers, sports clubs, or local

community resources could help you achieve? Would you be a candidate for a weight-loss medication, or even bariatric surgery? All these are important questions to discuss with your clinical team to combat the disease of obesity and its related complications.

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