CLINICAL VIGNETTE

Teaching Patients How to Eat Healthier: Practical Strategies for the Primary Care Setting

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Case Report

The patient is a 54-year-old male with a past medical history significant for hypertension and diet controlled diabetes. He schedules an appointment because he's finding that his blood pressures have been trending upwards over the last year. Prior to that, his readings were in the upper range of normal. He notes that he has gained 25 pounds over the past year and that his blood pressure readings were much better 25 pounds ago.

Medications include simvastatin 40 mg, lisinopril 10 mg, and aspirin 81 mg. He reports no drug allergies. His social history is remarkable for exercising aerobically 30 minutes five times per week. He tries his best to make good food choices but his frequent work-related events makes it very difficult for him not to indulge. He doesn't smoke and he averages about 4-5 glasses of wine per week. His family history is remarkable for obesity, type 2 diabetes, and coronary disease.

His physical examination reveals a blood pressure of 143/88 mm hg., pulse of 72 beats/minute, height of 5 feet 8 inches, weight of 195 lbs., BMI of 29.6, and body fat of 29.4%. His physical examination is generally unremarkable.

Labs were remarkable for fasting glucose 114 mg/dL, HDL-C 38 mg/dL, triglycerides 180 mg/dL, LDL-C 118 mg/dL.

At the end of the office visit, the patient says that he doesn't want to increase his medications. He asks for some quick nutrition tips and advice to help him lose the 25 pounds.

General Discussion

According to the Centers for Disease Control and Prevention, nearly one in every three American adults is obese, and an additional one in three is overweight[1]. Primary care physicians are well aware that obesity rates have contributed to worsening health outcomes and an explosion of health care costs, as obesity contributes to numerous health conditions including Type 2 diabetes, hypertension, metabolic syndrome, cardiovascular disease, certain cancers, etc[2].

Primary care practices are a critical component of obesity management, since they often serve as the patients' primary point-of-contact with the health care system. Unfortunately, most studies show that screening and counseling for obesity does not consistently occur during primary care office visits. Recent literature indicates nearly 50 percent of visits did not include a record of the height and weight data necessary to calculate BMI[3]. For clinically obese patients (BMI $\geq$ 30), 63 percent did not report any counseling from their physician[3]. Studies have shown that basic counseling about healthy behaviors takes less than five minutes[4]. However, most physicians do not incorporate such counseling into the office visit setting[5].

Although most physicians recognize which patients would benefit from weight loss, only a minority of physicians give patients practical advice on how to do so[6]. A 2010 study by Stop Alliance for Obesity found that 89 percent of primary care physicians believe it is their responsibility to help overweight or obese patients lose weight, but only 28 percent of those surveyed said that someone in their practice has been trained to deal with weight-related issues[6]. Although 9 out of 10 obese patients in their survey had been told by their health care professional to lose weight, only one in three was given any specific guidance on how to lose weight.

When physicians are asked why they don't typically provide counseling in regard to weight loss and nutrition, they most often cite time constraints, lack of experience in nutritional counseling, and skepticism that such counseling will yield success[7-9]. There is, however, compelling evidence in the literature that providing nutritional advice to patients significantly increases the likelihood for successful weight loss success[10].

I will review five simple, practical, and easy to teach strategies that can help patients to effectively lose weight and maintain for the long term. Each of these strategies is supported by literature and all five can be easily integrated into an office visit and taught to patients in less than five minutes.

1. Food Journaling

Clinicians can refer patients to one of the many reliable electronic food journal websites, which allows patients to record and analyze their eating habits on a daily basis. Documenting and monitoring what one eats on a consistent basis is one of the best predictors of weight loss success[11]. In a 2008 NIH study, those who documented what their food intake for at least five days per week were nearly twice as likely to reach their weight loss goals as those who did not[11]. There are many reasons why food journaling is so helpful. The documentation process fosters a sense of personal responsibility and accountability. The process also teaches patients the nutritional content of what they are eating. Few actions encourage changes in behavior as much as the full awareness of what is actually in one's diet. With the advent of the smart phones and the internet, the food journaling process has become relatively simple and affordable to just about everyone. Some websites and applications such as www.sparkpeople.com and www.loseit.com are free.

2. Downsize

Brian Wansink and his team at Cornell have published numerous studies over the last decade showing that the size of our plates, bowls, silverware, serving containers, drinking glasses directly impacts how much we consume. Our environment has a very powerful effect on what we eat and how much we eat. For example, patients ate 51% more popcorn when given a large container rather than a medium container, 22% more food when using 12 inch plates vs. 10 inch plates, 31% more ice cream when given a large bowl rather than a small bowl, 14% more ice cream when using a large spoon rather than a small spoon, and 77% more juice when using short, wide glasses rather than tall, narrow glasses[12,13]. Based on this compelling research, I suggest that clinicians recommend that their patients use smaller plates (10 inch), smaller bowls, smaller silverware, and tall narrow glasses. By making these small adjustments in their environment, patients will find themselves consuming less calories and subsequently lose weight without having to actively think about it. Consuming approximately 100 fewer calories per day translates to about 10 pounds of weight loss in a year's time so these seemingly minor changes in the environment can have very significant positive effects over the long term.

3. Slow Down

It turns out that the speed with which patients eat relates to how much they eat. Eating slower is associated with eating less food and fewer calories. One interesting study was performed at The University of Rhode Island in 2006. Thirty patients were invited to have lunch on two separate occasions. On the first occasion, they were instructed to eat as quickly as possible (average length of meal was nine minutes) while on the second occasion they were instructed to eat slowly and put their utensils down after every bite. The patients ate about 10% less food when they were instructed to eat slowly[14] . I recommend that clinicians counsel their patients to eat their meals slowly. Although the average American meal is eaten in about 10 minutes, it takes about 20 minutes for the brain to sense "fullness cues" from the oral cavity, esophagus, and stomach. Thus, meals should take a minimum of 20 minutes. Some useful techniques for slowing down the speed of eating is to put utensils down with each bite, to drink water during the meal, to use smaller plates/bowls/serving containers, and even to use a timer if necessary.

4. Eat Before You Eat

It turns out that eating or drinking certain foods or beverages before meals can be extremely helpful in restricting calories consumes with that meal. For example, researchers from Penn State University fed patients a medium sized apple fifteen minutes before

lunch. They found that the patients ate on average 187 fewer calories with that meal when compared to when they ate an equal calorie amount of applesauce or apple juice prior to the meal. Having the apple shortly before lunch was helpful in reducing appetite and the total amount consumed[15]. It appears that the apple's satiating effects were mainly mediated through the fruit's fiber content and the mastication process reducing appetite through neural signaling mechanisms. Similarly, women who ate a large salad before lunch consumed about 12% fewer calories during the meal (salad calories included) than those who didn't have a pre-meal salad[16].

5. Breakfast

Most clinicians know about the importance of eating a health breakfast but not all are aware just how important it is. Eating a healthy breakfast has been shown to help patients consume fewer calories, reduce LDL-cholesterol, and lose weight. In one study, researchers examined the effects of eating breakfast on calories consumed and cardio-metabolic parameters. For the first two weeks of the study, patients ate a healthy whole-grain cereal with low-fat milk. For the second two weeks of the study, these same patients followed the same protocol but were instructed to skip breakfast. They found that during the first two weeks, the patients ate 100 fewer calories per day and had better cardio-metabolic parameters[17]. As previously mentioned, consuming 100 fewer calories per day over the course of an entire year translates into about 10 pounds of weight loss, so this is a very significant finding. I recommend that clinicians encourage patients to eat a healthy, low-fat breakfast each morning. If a patient has limited time in the morning, whole-grain oatmeal or cereal can be reasonable options.

Resolution of Clinical Scenario

At the end of the office visit, I spent five minutes reviewing these five nutritional principles with the patient. In particular, I recommended that he sign up for one of the free online food journaling websites, downsize his plates, bowls, utensils, etc., be sure to take at least 20-30 minutes for each meal of the day, eat a medium apple before dinner each evening, and to have a bowl of whole-grain oatmeal for breakfast each morning. We arranged for him to follow-up with me in three months to monitor his progress.

Take Away Pearls

1. Clinicians should both identify those patients where excess weight is contributing negatively and proactively counsel patients about practical strategies to help lose weight.
2. Strategies that are supported by the literature include consistent food journaling, downsizing plates, bowls, utensils etc., slowing down the eating process, eating a high fiber low-fat food (such as an apple or salad) just before big meals, and having a healthy breakfast.
3. These strategies can be taught to patients in less than five minutes or listed on a patient education sheet that is distributed during office visits.

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