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The Ups and Downs of Weight Cycling: How Fad Diets Can Negatively Affect Health

Catherine Jasper

It's advice nearly every patient has heard at least once in their life: you need to lose weight. Often, this is prescribed as a combination of a healthy diet and exercise. However, 'fad diets', so-called due to their fluctuating popularity from societal trends, are seen as quick and easy diet modifications that produce weight loss quickly. For some, these diets are not sustainable and can lead to dangerous cycles of losing weight, easing restrictions, and re-gaining weight that was lost. Weight-cycling is a dangerous effect of fad diets, and the long-term physical and psychological effects of weight cycling can ultimately lead to worse health outcomes. With each cycle of losing and regaining weight, both the body and mind undergo great stress, the cardiovascular and metabolic systems within the body become less efficient and can develop long term complications. Instead, targeting a healthy, well-balanced diet recommended by clinicians can prevent weight cycling and protect against the negative health effects of obesity.

Keywords: *weight cycling, weight loss, diet, exercise, fad diets,*

It's advice nearly every patient has heard at least once in their life: they need to lose weight. Often, this is prescribed as a combination of a healthy diet and exercise. In the modern era, however, weight loss has shifted from a disease management strategy into a more social concept. The advent and prevalence of social media has offered greater connection regardless of location, language, and situation. This double-edged sword creates a space for community and support, but it can also increase feelings of shame and disappointment around gaining weight and classifying oneself as overweight or obese.¹ These feelings allow for the promotion of different—often restrictive—diets, complete with personal stories vouching for their efficacy. Instead of utilizing dietician and physician-led meal plans with a goal of maintaining a healthy weight, popular diets appear to offer quick, effortless weight loss. However, these 'fad diets', so-called due to their fluctuating popularity based on societal trends, are often not sustainable and can lead to dangerous cycles of losing weight, easing restrictions, and subsequent re-gaining of any weight that was lost.² This weight cycling, also known as 'yo-yo dieting' in popular culture, leads to overall weight gain in the long run, and makes it harder to lose weight once the diet resumes.³ While maintaining a healthy diet is an important aspect of weight management, the long-term physical and psychological effects of weight cycling stemming from fad diets can lead to worse outcomes down the road.

Fad diets themselves are as unique and multi-faceted as those who attempt them. Many of the diets focus on managing intake of different classifications of food, like the Atkins™ diet and ketogenic diet. Both diets preach restriction of carbohydrates and instead emphasize the importance of increasing intake of proteins and fats, respectively.⁴ Other diets restrict eating altogether, like

intermittent fasting, which emphasizes timing of meals over content, or detox diets, which advocate liquids and supplements over solid foods. Although diets like these have shown initial weight loss, they are often not well studied or have shown little-to-no long-term benefit.⁴ Despite this, the popularity of these diets and others like them seems to ebb and flow based on social trends. The breeding ground for these trends is often social media, a space where those seeking quick fixes for their weight management are more likely to turn. Led by both a desire to find a supportive community and a wish for weight management solutions, those searching for answers are most likely to uncover information about fad diets.¹ However, the solutions offered by these diets may not be effective for every person and can even lead to worse mental and physical outcomes in the future.¹

One of the greatest issues stemming from popular fad diets has roots in the physical and mental health spaces: weight cycling. This cycle of losing and regaining weight stems from habits learned while following fad diets.² Restrictions are often emphasized by multiple diets, and this can lead to the development of improper eating habits, including skipping meals, ignoring hunger signals, and obsession around caloric intake.² Similarly, a lack of emphasis on exercise increases the risk of regaining any weight potentially lost. Those who participate in fad diets are more likely to cycle through new and different diets due to their cost, difficulty, or popularity in society.^{2,4} However, the fluctuations in weight experienced by these dieters leads to an overall poorer psychological wellbeing.⁵ Feelings of shame and unhappiness may lead someone to pursue a fad diet to lose weight quickly, but weight cycling only exacerbates these feelings.^{1,5}

Excessive weight gain is associated with many negative

physical health effects, specifically within the cardiovascular system. Those seeking to avoid these effects may be inspired to pursue fad diets; however, the physical outcomes of weight cycling can be just as damaging as increased weight gain.⁶ A major change the body experiences during periods of both weight loss and weight gain is fluctuation in sympathetic nervous system activity, which is responsible for controlling heart rate, vascular tone, and glucose production. When these systems go through major changes, the risk for many chronic conditions—like high blood pressure, diabetes, and kidney disease—is higher than when they remain at a consistent level. Similarly, the cardiovascular system undergoes major changes based on caloric intake.⁶ Consuming fewer calories leads to a lower heart rate and blood pressure, and taking in more calories produces a higher heart rate and blood pressure.⁶ Risk increases, however, when these effects are rapidly combined through weight cycling. A phenomenon known as the ‘repeated overshoot theory’ describes difficulties faced by the cardiometabolic systems of the body following the constant changes seen in weight cycling.³ Essentially, as more weight is lost and subsequently regained, it becomes harder for the body to compensate for rapid changes. In times of weight loss, the body is not able to restore blood pressure, heart rate, and blood volume levels to a normal baseline when following a cycle of intense caloric intake.³ The cardiovascular system stands as one of the body systems most impacted by weight changes, but fluctuations caused by weight cycling are just as dangerous by increasing damage to this system.

Like negative rebound effects on the cardiovascular system, weight cycling also leads to poor metabolic effects. Each new diet contributes different restrictions and macronutrient intake requirements, which alter the energy expenditure and metabolic composition of the body.⁷ The macronutrient contents of a meal affect feelings of fullness and can influence cravings for more food. A meal high in protein will keep a person feeling fuller for longer than a meal high in fats or refined carbohydrates, defined as food low in fiber. Moving between a “fat-free” diet and one that focuses on eating mainly fats, for example, can impact how much food is eaten and the ability to use energy from that food throughout the day.⁷ Variability in weight has also been linked to increased fasting insulin and triglyceride levels.⁶ This means fad diets that advertise more energy and a faster overall metabolism can trigger the opposite effect.² Combining the requirements of many fad diets with the increased likelihood of weight cycling spells trouble for the metabolism. Instead, a diet made up of a balance of carbohydrates, fats, and proteins can lead to overall sustained healthy weight management.⁷ Packing the diet with foods high in protein and fiber—like lean meats, beans, vegetables, fruits, and whole grains—keeps the body feeling fuller for longer and reduces the energy it needs to function.⁸ The metabolic stress caused by weight cycling harms internal energy and macronutrient management, producing slower metabolic systems ill-equipped for the rapid weight

fluctuations associated with different diets.³

Maintaining a healthy weight is a goal many can understand. To stay well, decrease mortality, and support health, individuals are encouraged by healthcare providers to make multiple attempts at achieving a healthy weight through proper diet and exercise.⁸ However, fad diets and the weight cycling they cause go against these recommendations. Their accessibility and prevalence in online spaces promote attractive programs advertising quick weight loss with few consequences.¹ But in the long run, mental, emotional, and physical effects from weight cycling counteract the benefits these fad diets claim to offer. Instead, targeting healthy, well-balanced diets recommended by clinicians can prevent weight cycling and protect against the negative health effects of obesity.⁸ Implementing a consistent diet and exercise routines is key for a lifetime of better health.⁸

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