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Perspective

Relation between Calorie Intake and Obesity in Human Body

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DESCRIPTION

In accordance with dietary recommendations, eating well can help people stay healthy and ward off disease, but when it comes to obesity the theory is that an unbalanced intake of energy is the root of the problem. The WHO defines obesity and overweight as the abnormal or excessive buildup of fat that may harm one's health [1]. The imbalance between calories consumed and expended as a result of increasing consumption of high-energy foods that are rich in fat and decreased physical activity is still in accordance with the WHO, the main cause of overweight and obesity. The WHO does not however, list specific foods or eating habits that may contribute to the causes of obesity. Despite proposing dietary advice to prevent overweight and obesity, such as by reducing fats, sugar and sodium, WHO does not mention any additional causes of obesity. Additionally, it is advised to eat meals high in fiber and minerals and oilseeds.

Effect of calorie intake on obesity

When the primary cause of obesity is thought to be an imbalance between calorie intake and expenditure, it is anticipated that lowering calorie intake will instantly alleviate the energy imbalance and reverse obesity [2]. For long-term weight loss maintenance calorie reduction should be accompanied by an improvement in the nutritional quality of the diet even though a high calorie intake may be linked to a high BMI.

An energy deficit is necessary for weight loss, according to the 2013 American Heart Association guidelines for the management of overweight and obesity in adults. Energy shortage however, is a result of dietary, physical activity and metabolic changes [3]. Adults who are overweight or obese can lose weight using a number of dietary strategies and even those that advocate calorie restriction link it to a shift in food preferences.

Only one of the diet types is based primarily on lowering calorie intake. The calorie content of foods, as well as their nutritional makeup and each person's unique metabolic makeup, all have an impact on calorie intake. More specifically, different macronutrients and even subtypes of a macronutrient, such as basic and complex carbohydrates and different types of lipids, have diverse physiological effects and different metabolic processes within the human body.

For instance, carbohydrates are first stored as glycogen in cells, but once that storage capacity is reached, they are primarily converted to fat [4]. Complex carbohydrates take longer for cells to absorb, transport and use, each person's metabolism and insulin sensitivity affect how quickly simple carbohydrates and sugars are metabolized. Contrarily, complex carbs take longer to digest and absorb. Some complex carbohydrates, such as resistant starch, resemble the structural makeup of fibers but are incapable of being used as fuel.

Due to the whole-grain diet's negative effects on other nutrients' digestibility as well as the rise in resting metabolic rate and stool energy content, there was a loss of about 100 kcal/d. These demonstrate how whole grains can help people lose weight and become less adipose without changing the nutritional value of their diets.

Since 1 g of fat contains twice as many calories as 1 g of other macronutrients, calorie counting is fundamentally biased against fat. They emphasize that many dietary sources of fat may be preventative of obesity and disorders associated with it. Thinking in terms of calories also supports starchy and sugary substitutes, which can be unhealthy.

Several Asian and Latin American countries consider white rice and potatoes to be staple foods. These foods are frequently eaten with vegetables and legumes as part of freshly prepared meals, which are frequently relished mindfully [5]. The metabolic impact of a meal differs significantly from that of individual foods, which collectively affect a meal's glycemic index.

As a result, it appears that eating patterns and composition play more significant roles in the genesis of obesity than food calorie content. Cultural, environmental, economic and social issues might also be significant. The effects of fatty acid metabolites,

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flavonoids, gut-brain metabolic communication, brown and beige fat, microbiota and early life events on eating patterns remain largely unexplored. It is crucial to consider healthy eating as a method of weight loss and health enhancement that goes beyond calorie counting.

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