

Common Nutrition Misperceptions

Misperception 1: Weight is a good indicator of health and well-being.

Reality: Weight is the wrong measure for virtually everything that it is commonly used for. The critical issue is to know what constitutes weight, lean or fat mass, because an athlete losing weight through caloric restriction may be losing more lean mass than fat mass, which would have a significantly negative impact on performance.

Misperception 2: The energy cost of exercise is always the same.

Reality: Humans are always finding ways to become more energy efficient. Exercise more, and we eventually find a way to burn less energy to do this exercise. Exercise makes us more energy efficient by increasing cellular mitochondrial content and function and improving oxygen delivery and utilization.

Misperception 3: Only eating too much will make you fat.

Reality: Humans are amazingly effective fat-manufacturing machines. Eat too much food, you make fat. Eat too little food, you lose muscle and the relative fat mass increases.

Misperception 4: Low-calorie diets are an effective weight-loss strategy.

Reality: Low-calorie diets are doomed to fail. Adaptive thermogenesis leads to remaining the same weight on lower energy intake, but the resultant weight is comprised of a higher proportion of fat mass that makes you look bigger and increases cardiometabolic risks.

Misperception 5: Supplements are an effective means of improving nutritional status.

Reality: Very high doses of nutrient supplements often lead to lower tissue sensitivity and greater risk of toxicity. It's not just about getting enough; it is about never letting the cellular tank run out and never letting it overfill.

Misperception 6: Focusing on “perfect foods” assures good nutritional status.

Reality: People who continuously eat the same few foods because they believe these foods are “healthy” are at risk of malnutrition. There is no perfect food.

Misperception 7: Only eating sugar will make you fat.

Reality: There are many ways to increase insulin and make more fat besides eating refined carbohydrates (i.e., sugar), including letting yourself get really hungry or eating large meals. Although it should not be consumed in great quantities if not exercising, you would be hard-pressed to find anything better to give a hard-working athlete than a sugar-containing electrolyte beverage during exercise.

Misperception 8: Diets help you lose body fat.

Reality: The body's logical adaptation to an inadequate energy intake is to lower the amount of the tissue that needs energy: lean mass.

Misperception 9: 3,500 calories equal 1 pound of body tissue.

Reality: In humans, 3,500 calories do not equal 1 pound. Humans have adaptive mechanisms that adjust to irregular caloric intakes for survival. Bomb calorimeters, on which this calorie-to-weight relationship was established, do not.

Misperception 10: Eating (kcal in) the same calories as expended (kcal out) daily sustains weight.

Reality: The commonly stated “calories in, calories out” paradigm does not work as commonly applied in 24-hour units. Humans have an endocrine system that reacts in real time.