

Macros **VS** Calories

How calorie-focused thinking may be misleading

By Kirsty Baxter

Food is not just the calories that one eats, but it is also a source of information for the body. Food has the ability to influence genes that control disease risk, lifespan, and metabolism. Certain foods can impact blood sugar, or even trigger allergic reactions, inflammation, or autoimmune responses. Food has the potential to provide the body with what it needs to function at its best.

With worldwide concerns about living with obesity and related diseases such as diabetes and hypertension, both of which are rising at exponential rates in Zimbabwe, I am interested in shifting my clients to healthier weights and better health. As a nutritional therapy practitioner of nearly seven years, I promote a lifestyle approach to health through the consumption of whole foods that help protect against obesity-promoting energy imbalance and metabolic dysfunction, rather than calorie-focused or calorie-tracking type diets.

Moreover, I have a particular interest in reducing body fat, particularly visceral or abdominal fat, even though I focus on body weight, rather than body fat. The reasons for this focus are numerous, amongst others that 'spot reducing' is not possible, and that focusing on adopting a healthy lifestyle consistently over time generally results in lowering body weight and supporting long-term health. Prevailing thinking about living with obesity and related diseases holds that quantifying calories should be a principal concern and target for intervention. A calorie is a unit of energy. As related to food energy, calories measure the potential energy a food could release and some of the thinking has been that consumed calories, regardless of their sources, are, equivalent; i.e. 'a calorie is a calorie'.

What are the problems with the idea that 'a calorie is a calorie' and with a primarily quantitative focus on food calories? If one considers how calorie-focused thinking is inherently biased against high-fat foods, many of which may be protective against obesity and related diseases, and supportive of starchy and sugary replacements, which are likely detrimental. Counting calories takes no account of nutrients. And while it seems obvious that choosing wholesome nutritious sources of calories is better than processed, such as high-sugar, and saturated fat foods, you could hypothetically eat a 200g box of Bakers Choc-Kits, which equates to about

1984 kcal, and still lose weight if your total energy expenditure is around 2,000 calories a day. Similarly, a calorie's worth of salmon and a calorie's worth of olive oil (purely fat) have very different biological effects from a calorie's worth of white rice (refined carbohydrate) or a calorie's worth of vodka (mostly alcohol) – particularly with regard to body weight. Furthermore, a given calorie's worth of salmon, olive oil, white rice, or vodka might behave quite differently in the body and produce different ultimate effects. While some calories induce metabolic pathways and hormones that halt appetite and promote energy utilization, others stimulate pathways that promote hunger and energy storage. Even controlling for total calorie intake and energy expenditure from physical activity, qualitative differences in calories have different implications for the body.

Dietary fat has by far the most calories of any of the energy-providing compounds in food: 9 kcal/g as compared with 4 kcal/g for protein and 4 kcal/g for carbohydrates. Therefore, calorie-focused thinking has an inherent bias against dietary fat. This bias leads to public health messages and interventions to decrease the intake of fatty foods or reduce or remove the fat from high-fat foods (often replacing fat with less-calorie-dense, often rapidly absorbable, carbohydrates). Calorie-focused thinking generally endorses foods that are low in fat and calories. Substantial evidence now implicates foods that are low in fat (and, thus, relatively low in calories), like potatoes, white rice, and sugary beverages, in the development and persistence of obesity and risk for related diseases. In opposition to this is a Ketogenic Diet, which is characterised by a macronutrient ratio of high-fat, moderate-to-low protein, and very/low carbohydrate content, where I use its therapeutic mechanisms of action to successfully reverse insulin resistance, lower diabetic blood sugar levels, and is also emerging in cancer as a metabolic therapy, (targeting cancer cell metabolism) rather than a dietary approach.

Shifting the focus to qualitative food distinctions is the way I prefer to help my clients focus on the sources of calories consumed (i.e. a greater focus on types of foods) and on the metabolic changes that result from consuming foods of different types.

Macronutrients are a class of compounds that provide humans with energy and essential nutrients. They are required by



the body in relatively large amounts on a daily basis and make up the bulk of the diet. Proteins, fats, and carbohydrates are the main types of macronutrients that provide the body with energy. Therefore, focusing solely on calories and not considering the role of a varied and healthy diet with the correct macronutrient distribution, forces people to track their calories and still not hit their weight, or health goals.

An advantage of considering/ understanding one's macronutrient ratios ('macros') is that it ensures that some essential nutrients (e.g. carbohydrate, protein, fat, vitamins, minerals, and water) are incorporated into your diet, instead of focusing solely on the calories. Macro calculations are estimated based on body weight, height, and activity levels and can be adjusted to your weight goal.

However, as 'macros' only focus on carbohydrates, protein, and fats, they may overlook the importance of micronutrients, which are nutrients the body needs small amounts of to function properly. This class of nutrients includes minerals, vitamins, and phytonutrients. Minerals are a group of 16 inorganic nutrients that the body needs for normal cell function, growth, and development. The body can't make minerals which are known as essential nutrients, because it is essential for us to consume them. Minerals are grouped into two categories: major minerals and trace minerals. Major minerals are needed by the body on a daily basis in significant amounts to maintain fluid balances in the body e.g. calcium, magnesium, chloride, potassium, sodium, and Sulphur. Trace minerals are minerals that your body only needs a small amount of in order

to function properly, such as copper, iodine, fluoride, iron, manganese, zinc, selenium, and molybdenum. I advocate using the knowledge of macro, micro, and calorie requirements combined with dietary advice about making permanent changes to a healthy balanced diet, as a long-term solution to improved health.

From my research and practice in the areas of living with obesity and related diseases, many of these problems are due largely to food-induced physiology and are not addressable through calorie counting. The first step towards healthier eating is to nourish and energize your body. Healthy eating is based on current research on what and how people should eat in order to live long, healthy lives, taking into account elements from the Mediterranean diet and the hunter-gatherer approach, to encourage eating nutrient-dense, whole foods. A major focus of healthy eating is to replace high quantities of processed foods with vegetables, limited fruits, nuts, seeds, legumes, whole grains, anti-inflammatory fats, and high-quality proteins to promote health, which can be tailored to personal preferences and health needs, such as vegetarian and vegan options. I combined the knowledge of calculating the correct macros and micronutrient distribution with dietary advice about making permanent changes to a healthy balanced diet to support achieving your health and weight goals.

As the saying often attributed to Albert Einstein goes, 'Not everything that can be counted counts'. I believe we should be improving the quality of whole foods on our plates and should be eating foods that do not prompt, or program, us to overeat.