

Discuss protein requirements and conditions related to excess and deficiency of protein in our culture.

Protein requirements

Protein requirements change daily depending on one's health and well-being: They are directly related to energy needs. (Roehl 1996) It is important to note that the body does not store protein so it requires a fresh source every day.(Bauman 2005)

There are generally two ways to determine protein requirement in a diet. Assuming the adult person is in maintenance mode, one suggestion is to multiple the body weight in kilograms by .8 (gram of protein per kilogram needed).(Roehl 1996) For example, a 150-pound person needs about 54 grams of protein.

Another method, favoring external factors affecting protein needs, is to use a ratio of protein calorie value to total caloric intake such as used by the World Health Organization (WHO). For example, approximately 8 to 9 percent of total daily calories should be in the form of protein.(Bauman 2005) Note that protein needs will be higher for those with an illness, injury or in athletic training (a building diet). Requirements might be higher than the RDA in vegetarians whose dietary protein sources are primarily those that are less well digested, such as some cereals and legumes.(American Dietetic Association 2003)

Quality v. quantity

More important than the quantity is the quality of protein which depends upon the way it was raised, produced, farmed and processed. In addition, as healthy consumers, we must also look at the environmental impact of our choices.

The quality of proteins varies, with some providing more digestible protein than others. For example, isolated soy protein can meet protein needs as effectively as animal protein, whereas wheat protein eaten alone, for example, may be 50% less usable than animal protein. (Pitchford 2002) Understanding the types of proteins and micro-proteins will better establish any new regime.

Plant sources work as complementary proteins and are a necessary part of a healthy life. In fact, I'm surprised we haven't started seeing the next generation of powerbars – it will be a living, sprouting bar with complementary protein, herbs for healing, green powders and all the goodies to make it the ultimate in healthy snacks. The vending machines will be refrigerated and the packaging will be a minimalist's dream. I could go for one right now, with a shot of carrot juice and ginger on the side...

Whether we choose our protein source from animals or plants there are a variety of factors affecting our choices and resources of protein, as well as all food sources, such as income, occupation, location, education, political beliefs, emotional needs, stress factors, nutrition knowledge, ethnicity,

religion and physiological characteristics (age, gender).(Whitnel and Rolfes 1996)

Results and conditions related to protein excess:

As the noted nutritionist, Nevin Scrimshaw, said, "Persons who can afford to do so will generally eat far more than their requirement and include proportionately more protein of animal or legume origin." America is no exception. Heck, we're the role model. With an average consumption at about 100 grams of protein a day we consume over twice the RDA's recommendations. (Bauman 2005) Let's face it - we are gluttonous pigs! In fact, we have become addicted to our own hamburgers as years of animal product consumption has created a combination of physical and psychological needs.(Pitchford 2002) Addicted to our own hamburgers - imagine.

We are also a country that doesn't chill on a regular basis. We run like rats adding stressors on a regular basis. This stress "leads to a fatty, refined sugar diet which leads to trendy diets such as Atkins diet which in turn leads to a reduction of whole plant foods and their associated nutrients". (Bauman 2005) People like their comfort foods.

Symptoms of protein excess include acidic blood, calcium deficiency and a tendency to carcinogenic and other degenerative diseases. (Pitchford 2002). A diet high in protein has been linked to chronic diseases such as osteoporosis, kidney disease, atherosclerosis and cancer.(Bauman 2005)

Animal protein may lead to heart disease, secondary hyperparathyroidism, osteoporosis and myopia. (Roehl 1996)

In addition, excessive consumption of protein often reflects a larger portion of animal protein compared to plant protein. Production of animal protein plays a significant role in regards to the health of our environment and the future of our planet such as soil erosion, water abuse, lost export revenue, resource waste. (Cornell University 1997)

Results and conditions related to protein deficiency:

Protein deficiency is possible even with sufficient calorie intake. Examples include those with alcoholic liver damage, bulimics, consumers of high quantities of sugar, vegans who a) do not chew food well; b) seldom eats grains legumes, nuts, or seeds; c) greatly over-eats; or d) eats many highly processed sweets and other non-foods. (Pitchford 2002)

Diets with animal protein can fall short of protein requirements as well. This could be a result of poor quality, insufficient quantity or decreased absorption as seen in Crohn's disease. (Clearinghouse 2003)

Deficiency is seen most often in low income areas where protein sources are few and far between. Symptoms include wasting and shrinkage of muscle tissue, oedema (build-up of fluids, particularly in the feet and ankles), anaemia (the blood's inability to deliver sufficient oxygen to the cells, usually caused by dietary deficiencies such as lack of iron) and slow growth (in children). (<http://www.betterhealth.bic.gov.au> 2005)

Personal growth

A three-day journal with my new book of food counts revealed a scary truth – as conscientious as I am, my diet is a disaster for the average human let alone someone with MS!

My new goal – to “eat a plant-based diet, with no more than 50 percent of protein from animal sources, for ecological benefits to the soil and one’s digestive system.”(Bauman 2005)

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