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True or False?

—Test your knowledge of protein

The RDA (Recommended Daily Allowance) for protein (0.8 g/kg/day) is adequate for all ages.

False.

Several studies have suggested that the dietary protein requirement for older adults is greater than the currently recommended 0.8 g/kg/day (Campbell W 2001, 1994, 1996). The original method of determining protein requirements calculated minimum requirement as a threshold to prevent disease rather than a level to optimize muscle strength. More recent research suggests that a higher protein intake of 1.0 to 1.3 g/kg/day may be required in older individuals (Morais J 2006) while other studies suggest up to 1.6 g/kg/day in the older adult to achieve the greatest strength and muscle mass gains during exercise (Evans WJ 2004).

We eat too much protein in our diets already.

False.

Contrary to popular belief that there is too much protein in adult diets already, 15–38% of adult men and 27–41% of adult women have dietary protein intakes below the RDA (Kerstetter J 2003). This figure rises with the older population, many of whom cannot afford a high-quality protein. There are indications that approximately 50% of free-living elderly people and 25% of the institutionalized elderly habitually consume less than this amount of protein. Also, those who purchase supplements such as Ensure for example often do not consume the entire serving as directed – usually due to timing of supplements (evenings) when fluid intake tends to be voluntarily limited to minimize nocturia.

At some point, people just become “too old” to gain new muscle strength.

False.

A longitudinal study of initially healthy elderly women found that those who habitually consumed between 0.9 and 1.2 grams/kg/day developed fewer health problems over the subsequent ten years than those consuming less than 0.8 g/kg/day (Vellas B 1997). Another clinical study in 90 year olds in a nursing home demonstrated that those who consumed whey protein achieved more muscle mass and strength than those who did not.

Too much protein causes calcium loss in the bones, weakening the bones.

False.

Old school thinking believes that increased protein causes calciuria (calcium excreted in the urine) and will ultimately weaken bone (Feskanich D 1996; Cooper C 1996). New research however demonstrates higher dietary protein does not adversely affect bone health. In fact, it appears likely that there is a positive association between protein intake and bone health. Calciuria associated with high protein diets is now believed to be due to greater uptake of calcium, not a greater loss of calcium from the bone (Kerstetter J 2003; Bonjour J-P. 2005; Wengreen 2004).

A high protein diet causes kidney disease.

False.

100% whey protein isolate is one of the most easily digested and most easily absorbed forms

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of protein available. Its Biological Value (a mark of the quality of a protein and how easily it is absorbed by the body) is extremely high, and in conditions such as renal failure where protein intake must be limited, it is most prudent to consume the highest quality proteins such as whey protein isolate and egg white proteins, versus lower quality proteins such as red meat and dairy, that produce more problematic metabolic waste by-products and residues.

Previously it was believed that high protein diets lead to kidney failure. In fact evidence linking these events is exceptionally weak. Athletes for example are known to consume as much as 2 g/kg/day of protein but there is no evidence of this population being at greater risk for impaired renal function (Lemon P 1996).

If you have celiac disease, do not use whey protein in your diet.

False.

People with celiac disease are usually instructed not to ingest wheat or gluten. There is no wheat or gluten in **Creo Mundi Protein Drink** (Whey Protein Isolate).

All proteins are created equal.

False.

Evidence continues to accumulate that some proteins are better than others in terms of the body's ability to absorb and utilize the protein and essential amino acids. Even the way they are processed can affect the biologically active ingredients. For example, ion-exchange processing of whey denatures (destroys) the protein sub-fractions (including the powerful immune-booster, lactoferrin) through the use of heat and chemicals thus eliminating one of the main reasons for using whey protein in your diet.

Soy protein powders are also available. The body however does not easily absorb soy protein - it has a low biological value - meaning a significant percentage of the

protein passes through your body unused. It is an inferior source of protein to whey protein. Still others contain lower-grade (and less expensive) whey proteins (e.g. whey protein concentrate, whey peptides, and hydrosolate) rather than 100% whey protein isolate. These lower quality whey proteins contain lactose, which may cause allergic responses and gastro-intestinal upsets.

When choosing a whey protein, choose a product that has gone through an ultra-low temperature process. This is beneficial because the protein is not denatured (damaged) from an extensive heat treatment. Choose whey protein isolate over whey protein concentrate, whey protein blend, soy protein, or ion-exchange protein. Whey protein isolate is the most pure form and provides the greatest benefit.

Chronic muscle loss affects 30% of people over the age of 60, and >50% of those over 80.

True.

Muscle loss associated with aging (sarcopenia) is a widespread syndrome with an accompanying increase in morbidity and mortality and a profound effect on quality of life and ultimately survival (Baumgartner R, Koehler K 1998). Progressive sarcopenia leads to the development of frailty, an increased likelihood of falls, and impairment of the ability to perform routine daily tasks (Boyd C 2005). Loss of muscle mass is the largest contributing factor to strength decline and associated disability in older men and women (Doherty TJ 2003).

Chronic muscle loss cannot be stopped or reversed.

False.

Insufficient protein intake is one of a number of factors that lead to sarcopenia (and increasing protein intake is one factor in

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treatment). Aging is also associated with a decline in food intake. This is also considered an important factor in the development and progression of sarcopenia. This anorexia of aging “increases the risk of developing severe muscle wasting, such as occurs during illness or other potential catabolic states such as after hip fracture. This wasting, if severe, can lead to cachexia and progressive functional decline.” (Doherty 2003).

Providing *good tasting* research-quality protein supplements such as **Creo Mundi Protein Drink** (Whey Protein Isolate) before muscle loss begins may be one way of addressing this issue. In other words, choose a nutrient-dense source of easily-absorbable protein.

Resistance exercise is also recommended to prevent muscle loss. While it is not easy to reverse sarcopenia, it is possible to at least maintain and somewhat improve muscle strength, even into your nineties.

>50% of women older than 65 years who break a hip in a fall never walk again.

True.

Usually this is because there is a pre-existing loss of muscle before the trauma. When a fall occurs that fractures the hip, the sudden loss of function can push people over the threshold that makes recovery of normal function unlikely to occur. (Wolfe 2006).

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