VITAMIN B2 | RIBOFLAVIN

Summary of benefits:

Functions as an antioxidant to reduce oxidative stress and inflammation of nerves (72).
Contributes to the formation of coenzymes which assist in protein, fat, and carbohydrate metabolism (73).

Foods high in riboflavin:
Beef
Firm tofu
Milk
Salmon
Mushrooms
Lean pork chops
Spinach
Avocado
Almonds
Eggs
(146)

Vitamin B2, also known as riboflavin, is considered a vital micronutrient due to its capacity to generate two essential cofactors, FAD (flavin adenine dinucleotide) and FMN (flavin mononucleotide), which play a crucial role in supporting energy metabolism. Dietary intake of riboflavin serves as the exclusive source of FAD and FMN for the enzymes they interact with, which are referred to as flavoproteins, owing to their collaboration with the flavins (FAD and FMN) [17].
Genuine deficiencies in riboflavin can lead to a condition known as ariboflavinosis, although it is relatively rare in developed nations. Ariboflavinosis manifests in various ailments affecting mucous membranes, such as those of the mouth, throat, and skin, along with associated eye problems. Suboptimal deficiencies have been noted in a small subset of populations, but generally don't give rise to severe health-threatening conditions.
Certain groups stand more likely to benefit from riboflavin supplementation. Namely, adolescent and young adult women, particularly in the UK where riboflavin fortification in food isn't as extensive as in the US and Canada. The geriatric population, who often have suboptimal riboflavin intake, might also benefit from riboflavin supplementation.

In addition to maintaining adequate riboflavin levels, supplementation may serve potential cardiovascular benefit in people with two copies of a specific gene variant, known as MTHFR 677TT, who exhibit abnormally elevated levels of homocysteine due to defects in folate metabolism. At low doses riboflavin supplementation has been shown potential for reducing blood pressure and homocysteine levels in these individuals. Furthermore, higher doses of riboflavin (around 400 mg taken in divided doses throughout the day) may have a therapeutic effect on migraines.
It is worth noting that while riboflavin deficiency can arise from a poor diet, adopting a healthier dietary pattern can help rectify this deficiency. Supplementation is not obligatory, but it may be advisable for individuals confirmed to have the MTHFR 677TT variant or for anemic individuals undergoing iron repletion therapy, as optimizing riboflavin intake can enhance the efficacy of supplemental iron [18-26].

Dosage Rationale:

The RDA of riboflavin is 1.3 mg and 1.1 mg for men and women 19 years and older, respectively. Hence, we opted for 1.3 mg of riboflavin in our Super U formula to reduce the likelihood of deficiency absent the provision of copious amounts which might cause digestive upset and would likely be passed through the urine.
It's important to note that while these statements are based on available information in the scientific literature, it is always advisable to consult with a healthcare professional before making any changes to your supplementation or health routine.

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