

SELENIUM

WHAT IS SELENIUM?



- *Selenium is an essential trace element.*
- *It acts as an antioxidant and anti-inflammatory agent.*
- *About 500 million to 1 billion people worldwide are selenium deficient.*
- *It is rare to see selenium deficiency in the US, but it is seen in other countries like china, where the soil has a low concentration of selenium.*
- *Selenium is found in foods.*
 - *The level of selenium in food depends on the amount of selenium there is in the soil.*
 - *Some foods include: seafood, cereal, and meat.*
- *About 28%-46% of the total selenium pool is in skeletal muscle.*
- *Selenium plays an important role in reproduction, thyroid hormone metabolism, DNA synthesis, and protection from oxidative damage.*

WHY IS SELENIUM IMPORTANT?

- *It is needed for the immune system to work properly.*
- *It is an important antioxidant and helps produce active thyroid hormone.*
- *It helps decrease the chance of further oxidative damage to DNA, lipids, and lipoproteins, which might play a role in preventing atherosclerosis and cancer.*
- *The occurrence, virulence, or progression of some viral infections are linked to selenium deficiency.*
- *Some studies note selenium is important for the brain.*
 - *Studies have seen greater incidences of depression, anxiety, confusion, and hostility in individuals with low selenium levels*
 - *Improved moods were seen when subjects supplemented with selenium*



WHOSE AT GREATER RISK FOR DEFICIENCY?

1. *Individuals who had bariatric surgery or severe GI conditions (Crohns disease)*
2. *Individuals who follow medical diets to treat metabolic disorders*
3. *People living in selenium deficient regions*
4. *People undergoing kidney dialysis*
5. *People with HIV*



HOW MUCH OF SELENIUM IS NEEDED?

Age	Males (mcg)	Females (mcg)	Pregnancy(mcg)	Lactation(mcg)
Birth to 6 months	15	15		
7-12 months	20	20		
1-3 years	20	20		
4-8 years	30	30		
9-13 years	40	40		
14-18 years	55	55	60	70
19-50 years	55	55	60	70
51+ years	55	55		

**CONTACT US FOR MORE INFORMATION ON NUTRITIONAL SUPPLEMENTS
AT: GNG@FAIRWAYVENTURESGROUP.COM**

RESOURCES

1. Shreenath, A. (2020, October 03). *Selenium deficiency*. Retrieved February 10, 2021, from <https://www.ncbi.nlm.nih.gov/books/NBK482260/>
2. *Selenium*. (2020, March 25). Retrieved February 10, 2021, from <https://www.hsph.harvard.edu/nutritionsource/selenium/#:~:text=It%20is%20found%20naturally%20in,the%20metabolism%20of%20thyroid%20hormones.>
3. Tinggi U. (2008). Selenium: its role as antioxidant in human health. *Environmental health and preventive medicine*, 13(2), 102–108. <https://doi.org/10.1007/s12199-007-0019-4>
4. Office of dietary supplements -selenium. (n.d.). Retrieved February 10, 2021, from <https://ods.od.nih.gov/factsheets/Selenium-HealthProfessional/>
5. Selenium supplement (Oral route) side effects. (2021, February 01). Retrieved February 10, 2021, from <https://www.mayoclinic.org/drugs-supplements/selenium-supplement-oral-route/side-effects/drg-20063649?p=1>
6. Selenium. (2021, January 01). Retrieved February 10, 2021, from <https://lpi.oregonstate.edu/mic/minerals/selenium>
7. Bell, D. (n.d.). Selenium toxicity: Radiology reference article. Retrieved February 10, 2021, from <https://radiopaedia.org/articles/selenium-toxicity?lang=us>
8. Rayman, M. P. (2000). The importance of selenium to human health. *The lancet*, 356(9225), 233-241.
9. Thomson, C. Assessment of requirements for selenium and adequacy of selenium status: a review. *Eur J Clin Nutr* 58, 391–402 (2004). <https://doi.org/10.1038/sj.ejcn.1601800>

