

NUTRIENTS THAT SUPPORT MUSCULOSKELETAL HEALTH

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The musculoskeletal (MSK) system includes the muscles, tendons, joints, and bones of the body. Many nutrients contribute to the healthy functioning and integrity of the MSK system. Included below is a summary of 5 common nutrients that significantly contribute to MSK health.

1. **WATER** brings vital nutrients to muscle tissue to support movement and decrease the risk of cramps and strains. Water also eliminates waste products and toxins from the body and helps to protect our joints by providing lubrication and cushioning. The consequences of inadequate water intake/dehydration include: muscle and joint pain, cramping, and fatigue. A general rule of thumb to follow is to consume 0.5-1 litre of water daily for every 50 pounds of body weight.

2. **CALCIUM** is best known for building strong bones. It is also needed for muscular growth and contraction. A deficiency in calcium status can lead to aching joints, muscle cramps, and osteoporosis. Foods such as milk, yogurt, and cheese are good sources of calcium but may not be suitable for individuals sensitive to dairy products. Other healthy foods high in calcium include pinto, navy, red and white kidney beans, sesame seeds, almonds, and dark leafy vegetables.



3. **VITAMIN D** is essential for helping bones absorb calcium, keeping them strong, and preventing osteoporosis. Signs of Vitamin D deficiency may include painful muscle spasms, leg cramps, numbness in the extremities, bony malformations, and arthritic pain. Vitamin D is naturally found in food sources such as cod liver oil, salmon, mackerel, tuna fish, sardines, and egg yolks. Sensible and safe sun exposure is also an important natural source of Vitamin D.

4. **VITAMIN C** plays a vital role in collagen production and tissue repair. Collagen is the building foundation for many body tissues and is found in all MSK structures. There is an abundance of Vitamin C in strawberries, citrus fruits, and vegetables including, red peppers, broccoli, spinach, brussel sprouts and cauliflower.



5. **GLUCOSAMINE SULPHATE** is a normal element of cartilage matrix and joint fluid and provides the body with the building blocks necessary to repair joint damage. As we age, our bodies slow down the production of glucosamine sulphate. Published research suggests that glucosamine sulphate is beneficial for arthritic patients, particularly for those individuals with mild to moderate osteoarthritis of the knees. Some glucosamine sulphate supplements also contain anti-inflammatory herbs that can be combined with other nutrients such as Omega-3 fatty acids to help with arthritic pain.



Sensible eating should include nutritional balance with the correct proportion of quality carbohydrates, proteins, healthy fats, and adequate water intake. Although nutritional supplements can help support MSK health, many nutrients appear to be most effective when consumed in their natural state within whole foods. For additional information on diet, nutrition, and how you can improve your MSK health, visit www.nhwc.ca.

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