MAGNESIUM DEFICIENCY AS A RISK FACTOR FOR MUSCLE CRAMPS IN ATHLETES

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Abstract: *Magnesium as a minerals plays a crucial role in neuromuscular function, electrolyte balance, and energy metabolism, all of which are essential for optimal athletic performance. It is important minerals for basal metabolism in all our cells. Magnesium deficiency has been increasingly recognized as a potential risk factor for the development of muscle cramps in athletes, particularly during prolonged or high-intensity physical activity. Inadequate magnesium levels may impair muscle relaxation, increase neuromuscular excitability, and disrupt calcium and potassium regulation, thereby predisposing athletes to exercise-associated muscle cramps. Factors such as excessive sweating during exercise, insufficient dietary intake, and increased metabolic demands place athletes at heightened risk of magnesium depletion. But supplementation of magnesium doesn't show exact relationship between magnesium deficiency and muscle cramps in athletic populations. In this lecture it will be highlighting underlying physiological mechanisms and evaluating current evidence on magnesium supplementation as a preventive strategy.*

Key words: *Magnesium Deficiency, Muscle Cramps, Supplementation, Athletes*