Calcium Overview

Why We Need It?
Calcium is the most abundant mineral in the body, essential for strong bones and teeth, muscle function, nerve signaling, and heart health. Since the body cannot produce calcium, adequate dietary intake or supplementation is necessary.

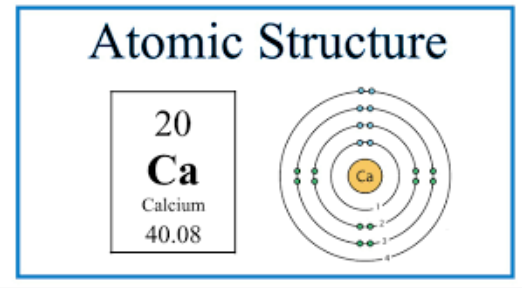
Functions in the Body
Bone & Teeth Health: Essential for bone mineralization and preventing osteoporosis.
Muscle Function: Supports muscle contraction and relaxation.
Nerve Transmission: Helps transmit nerve impulses for brain and muscle communication.
Heart Health: Regulates heart rhythm and blood vessel function.
Hormone & Enzyme Activation: Plays a role in metabolic processes and hormone release.

Daily Recommended Intake (RDI):
Children (4-8 years): 1,000 mg/day
Children (9-18 years): 1,300 mg/day
Adults (19-50 years): 1,000 mg/day
Women (51+ years) & Men (71+ years): 1,200 mg/day
Pregnant & Lactating Women: 1,000-1,300 mg/day
Upper Limit (UL): 2,500 mg/day (excess intake may cause kidney stones and impaired absorption of other minerals).

Benefits of Supplementation
- Supports strong bones and teeth, reducing fracture risk.
- Aids in muscle performance and prevents cramps.
- Helps regulate heart rhythm and blood pressure.
- May reduce the risk of osteoporosis in older adults.
- Supports nerve function and mood stability.

Most Bioavailable Form
Calcium Citrate: Easily absorbed, ideal for those with low stomach acid.
Calcium Carbonate: Contains the highest amount of elemental calcium but requires stomach acid for absorption.
Calcium Hydroxyapatite: A natural form found in bones, highly bioavailable.
Calcium Lactate & Calcium Gluconate: Lower calcium content but well-absorbed.

Best Food Sources
Dairy Products: Milk, cheese, yogurt.
Leafy Greens: Kale, bok choy, collard greens.
Seafood: Sardines, salmon (with bones).
Legumes & Nuts: Almonds, tofu, chickpeas.
Fortified Foods: Plant-based milks, cereals, orange juice.



Conclusion
Calcium is essential for bone strength, muscle function, and overall health. While dairy remains a primary source, plant-based and fortified foods provide alternatives. For those at risk of deficiency, calcium supplementation in bioavailable forms can support optimal health.