

12 Essential Building Blocks for Bone Growth

Summary: Learn how postmenopausal women can naturally support bone density with nutrition, minerals, exercise, hormones, and gut health.

Postmenopausal women are at significantly higher risk for **osteoporosis and osteopenia**, but declining hormones are only part of the story. Bone loss is deeply influenced by **dietary patterns, mineral balance, digestion, inflammation, gut health, and lifestyle factors**—many of which are within your control.

Did you know:

- The body may pull **calcium, phosphorus, and trace minerals from bones** under certain conditions and with some medications.
- Bones function as **mineral storage warehouses**, releasing nutrients when intake or absorption is insufficient.
- **Jawbone resorption** often occurs when dietary calcium and minerals are poorly absorbed.
- Aging adults often have a harder time **regrowing jawbone** after dental extractions and procedures.

These factors highlight why bone health must be approached **holistically**, not with calcium alone.

12 Essential Building Blocks for Bone Growth

Supporting bone density after age 60 requires a **systems-based approach** that includes:

1. A nutrient-dense, mineral-rich diet
2. Healthy digestion and nutrient absorption
3. A healthy gut microbiome
4. A wide variety of leafy greens
5. Strategic supplementation
6. Adequate healthy fats
7. Quality protein
8. Weight-bearing exercise

9. Hormonal availability and balance
10. Stress (and sleep) management
11. Hydration
12. Patience and consistency

Let's explore each of these in more detail.

1. Nutrient-dense, Mineral-rich Diets

Diets high in vegetables, fruits and whole foods are nutrient/mineral rich and correlate with better bone density and lower risk of osteoporosis than diets high in processed foods.

Nutrient-dense, Mineral-rich diets are typically rich in foods that support bone health:

- Potassium (leafy greens, bananas)
- Magnesium (nuts, seeds, legumes)
- Vitamin C (fruits and vegetables)
- Vitamin K (kale, spinach)
- Protein and minerals (pasture-raised meats)

These nutrients help with:

- bone mineralization
- collagen formation
- reducing bone breakdown

This eating usually limits:

- processed foods
- high sodium items
- sugar and sugary beverages

High sodium intake can increase urinary calcium loss, which may negatively affect bones over time.

2. Digestion, Metabolism, and Nutrient Absorption

Strong bones depend on the body's ability to **digest, metabolize, and assimilate nutrients**.

Enzymes break food down into absorbable nutrients. They are produced and released in different parts of the digestive tract, including:

- The **mouth** (salivary enzymes)

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- The **stomach** (hydrochloric acid and proteases)
- The **pancreas** (amylase, lipase, protease)

The liver makes **bile** and the gallbladder stores and releases it to digest fats and absorb nutrients properly.

3. A Healthy Gut Microbiome

Healthy gut **bacteria** play a role in:

- Mineral absorption
- Vitamin K2 production
- Inflammation regulation
- Hormone metabolism

Poor digestion or gut imbalance can prevent calcium and minerals from reaching bone tissue, even with adequate intake.

4. Eat a Broad Spectrum of Leafy Greens

Leafy greens provide a **wide range of bioavailable minerals** and phytonutrients essential for bone remodeling. Variety matters—each green offers a different mineral profile.

Aim to rotate:

- Kale
- Collards
- Swiss chard
- Arugula
- Dandelion greens
- Mustard greens

5. Strategic Supplementation

Calcium cannot function alone. **Over 80 minerals and cofactors**, including magnesium, phosphorus, potassium, zinc, boron, vanadium, vitamins D and K2—are required to properly assimilate calcium into bone.

Supplement with high quality, bio-available, food-based multi-minerals with minerals in the right ratio/proportion to calcium.

6. Quality Protein

Consume adequate amounts of quality protein daily. Focus on quality over quantity but aim for at least one gram of protein per ideal/lean pound of body weight each day, with a 100 gram daily minimum for anyone who weighs over 100 pounds. Quality proteins are organic and eaten with healthy fats.

7. Healthy Fats

Because many nutrients are **fat-soluble**, consuming **healthy fats** (olive oil, avocado, omega-3s, grass-fed butter) are necessary for nutrient absorption.

Organic meat, dairy products, and eggs result in generally higher levels of omega-3 fatty acids, making them more heart-healthy than other fats. In addition to enzymes like protease and trypsin, our bodies require cofactors from healthy fats to properly digest proteins and make them bio-available for assimilation. **Eat animal fat**, i.e. meat fat, fish oil, butter, **with animal proteins**. **Eat animal or plant-based fats**, i.e. olive or coconut oil, **with plant proteins**.

8. Weight-Bearing Exercise Builds Bone

Bones respond to **mechanical stress**. Weight-bearing and resistance exercises stimulate osteoblasts (bone-building cells).

Examples include:

- Strength training
- Isometric exercises
- Walking with resistance
- Yoga and Pilates

Muscle growth stimulates bone growth.

From the groundbreaking LIFTMOR trial, learn how simple, targeted strength training can help women ages 40–85+ improve bone density, balance, and long-term independence.

9. Hormone Availability and Balance

Bone remodeling depends on hormonal balance:

- **Testosterone and progesterone** *grow* bone by stimulating bone formation with osteoblasts
- **Estrogen** helps *maintain* existing bone with osteoclasts

⚠ **Medication Awareness:** Bisphosphonate drugs (e.g., Boniva, Fosamax) may increase bone density on scans by helping *osteoblasts* to grow bone but can interfere with *osteoclasts* that replenish and maintain bone. They potentially lead to brittle “honeycomb” bone structures prone to fracture.

10. Stress (and sleep) Management

Do you notice how quickly kittens, puppies and children grow? And that they sleep a lot? When we are maturing, we grow with deep sleep. When our body is mature, we recover/rejuvenate with deep sleep. So as adults, **we need deep sleep to build bone.**

We cannot regenerate or grow bone cells in “fight or flight” or under stress. Stress can interfere with sleep and other normal bodily functions that facilitate bone growth:

- **Stress hormones** inhibit the conversion of cartilage cells into bone cells.
- Chronic stress can decrease the production of **growth hormones**, which are needed for bone growth.
- Chronic stress can inhibit the activity of **osteoblasts**, which are responsible for building new bone tissue.

For optimal health, most **adults should aim for around 1.5 to 2 hours of deep sleep (delta wave sleep) per night, typically 25% of their total sleep time**, assuming they are getting the recommended 7-9 hours of sleep per night.

11. Adequate Hydration

Are you truly hydrated? **75% of us are actually dehydrated!** Hydration isn't just about drinking water, but rather how and when electrolytes are consumed. Some people drink alkaline water, but do you know how healthy hydrogen is to healing?

In fact, structured hydrogen water has anti-oxidative, anti-inflammatory, and anti-aging effects and improves inflammation, asthma, Alzheimer and Parkinson, rheumatoid arthritis, and diabetes.

In order to be truly hydrated to support bone growth, aim to consume half your body weight in ounces of water daily, and acquire a water system/supply within your means that fits your lifestyle and budget.

12. Patience and Consistency

Bone remodeling is slow. Meaningful changes often take **12 months or longer**, and even a **1% improvement** in bone density is clinically significant.

Bone density assessments include:

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- DEXA¹ scans—may offered at your local pharmacy, clinic, or health fair without a prescription
- REMS² radiation-free scans—may be offered through your local providers or at OsteoStrong³
- Peripheral screening tests (heel, wrist)
- 3-D CBT⁴—**Jawbone density** can be measured via 3D CBT (Cone Beam Tomography) with some holistic, biological dentists (who perform cavitation surgery in house. Be sure to wait 12+ months post-cavitation surgery before rechecking jawbone density at the surgery site.)

For More Information and Support

Consult your functional health professionals, Google how to grow bone, and consider: internet resources, including draxe.com; the Bone Up Program⁵ at Greens and Genes; and OsteoStrong.

Key Takeaways

Bone Health Is Built, Not Prescribed

There is **no single pill** that replaces the combined impact of nutrition, movement, digestion, minerals, hormones, and lifestyle. Supporting bone density after age 60 requires **education, experimentation, and consistency**.

The more you understand your body, the more empowered your choices become.

¹ Centers for Disease Control. Facts About Bone Density (DEXA Scan). CDC. 2025.
<https://www.cdc.gov/radiation-health/data-research/facts-stats/dexa-scan.html>

² National Center for Biotechnology Information. Radiofrequency Echographic Multi Spectrometry (R.E.M.S.): New Frontiers for Ultrasound Use in the Assessment of Bone Status—A Current Picture. NIH. 2023. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10217295/>

³ OsteoStrong. Empower Your Life with the Ultimate Longevity Solution. 2026.
<https://www.osteoststrong.me>

⁴ Food & Drug Administration. Dental Cone-beam Computed Tomography. FDA. 2026.
<https://www.fda.gov/radiation-emitting-products/medical-x-ray-imaging/dental-cone-beam-computed-tomography>

⁵ Greens and Genes. Bone Health. 2026. <https://www.greensandgenes.com/services>