

# Stop The Bone Thieves

15 Evidence-Backed, Yet Counter-Intuitive Ways to Stop Bone Loss



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# Introduction

The Save Institute was founded to provide natural, evidence-based treatments to prevent and reverse health conditions through remarkable science. We believe that healthy bones should be accessible to everyone. By applying science-based information and natural, drug-free interventions, we can halt and prevent chronic conditions once thought to be an inevitable part of growing older. Our more than 1.5 million Savers spread across 100 countries are a testament to the success of our mission.

Throughout our work, we remain true to our guiding principles, formed by the acronym Save:

- **Science**. Science is at the heart of the Save Institute's mission. We critically assess the science on osteoporosis to bring you the best information and advice. All of our claims are evidence-based and backed by scientific research.
- **Autonomy**. We are 100% independent and autonomous. We don't rely on the backing of Big Pharma or outside advertisers. This allows us to remain true to our mission of providing accurate information about health and lifestyle interventions without a hidden agenda.
- **Value**. We provide information and products of exceptional quality. We pledge to offer resources that provide true value to your life.
- **Ethics**. At the Save Institute we strive to maintain transparency, promote honesty, and uphold rigorous integrity in all of our work.

Join us on this journey towards naturally reversing and preventing osteoporosis and osteopenia, and together we'll arrive at our ultimate destination, which is to help you feel

great, live pain-free, look great, and enjoy life to the fullest.

## Save Our Bones RESTORE Protocol

Whether you're new to the Save Institute or are now ready to begin digging a bit deeper to understand your bone health, the Save Our Bones RESTORE Protocol is a great place to start. The purpose of the protocol is to outline the strategies that will jump-start your journey toward building stronger, healthier bones.

The RESTORE Protocol consists of three core strategies. Each strategy is unique, yet all three complement one another to ensure a comprehensive approach to overcoming osteoporosis and osteopenia. We created the acronym RESTORE to help you remember the three strategies.

**REthink Your Bone Health.** There is a lot of misinformation circulating about osteoporosis, aging, and bone health. It's time to rethink everything you thought you knew about bones. If you consider yourself diseased or sick because you've been diagnosed with osteoporosis or osteopenia, we can help you understand why you're not sick and the difference between healthy and unhealthy bones.

Understanding the science of osteoporosis and osteopenia is the first step to taking action. Armed with knowledge, you can focus on rebuilding and restoring the quality of your bones.

**STOp the Bone Thieves.** Our everyday choices have a profound impact on our health. From the foods we eat to our exercise habits to the medications we take, small decisions have a big impact on bone health. Learn about the bone thieves that steal strength and vitality from your bones. Once you understand the factors that weaken your bones, you can stop these bone thieves in their tracks, preventing further weakening and damage to your bones.

**REbuild Your Bones.** The third and final strategy is to focus on rebuilding and restoring your bone health. This includes providing the essential vitamins and minerals your bones need to stay strong. Supplements are a great source for many of these nutrients, and most can also be found in everyday foods. We're not promoting magic pills or exotic herbs, just wholesome nutrients that many people lack in their everyday diets. By boosting your consumption of these critical bone-building nutrients, you will also feel better, stronger, and full of vitality.

## U.S. Surgeon General's "Bone Health and Osteoporosis Report"

The Surgeon General of the United States is considered the "Nation's Doctor," serving to provide Americans with the best available scientific information on improving their health. In 2004, the Surgeon General released a report entitled, "Bone Health and Osteoporosis Report."<sup>1</sup> The purpose of this report was to detail the prevalence of bone problems in the U.S. population and to offer recommendations regarding prevention and treatment.

According to the report, an estimated 1.5 million people suffer a fracture related to poor bone health each year. This problem is especially prevalent among women, as one out of every two women aged 50 or older will have an osteoporosis-related fracture at some point in her life.<sup>11</sup> Given the risk for physical and mental decline after a fracture, this makes brittle and fragile bones a leading public health problem.

The Surgeon General's report offers a roadmap for

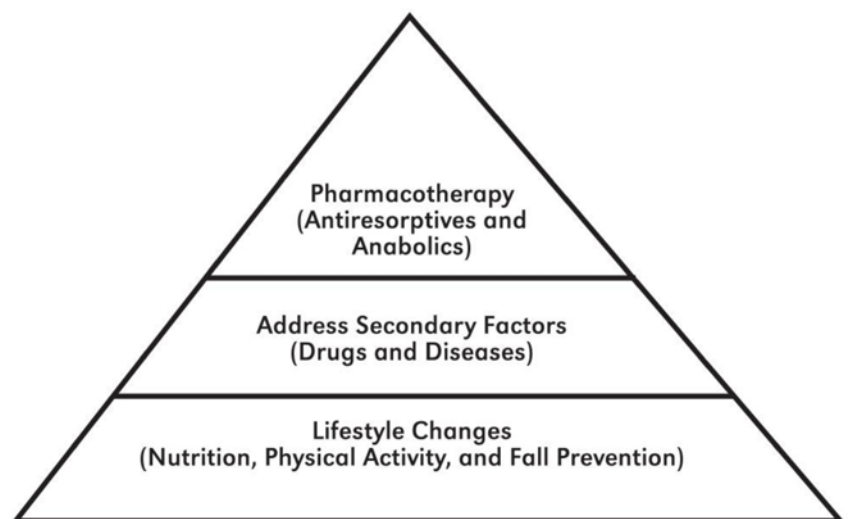
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1 Office of the Surgeon General (US). "Bone Health and Osteoporosis: A Report of the Surgeon General." Rockville (MD): Office of the Surgeon General (US); 2004. Web. [http://www.ncbi.nlm.nih.gov/books/NBK45513/pdf/Bookshelf\\_NBK45513.pdf](http://www.ncbi.nlm.nih.gov/books/NBK45513/pdf/Bookshelf_NBK45513.pdf)



addressing osteoporosis and osteopenia:

*“The first step in the prevention and treatment of osteoporosis and the prevention of fractures is to build a foundation of nutrition and lifestyle measures that maximize bone health.”<sup>2</sup>*



This principle is illustrated in the “pyramid approach”

advocated by the Office of the Surgeon General. Healthy lifestyle strategies form the base of the pyramid and are the recommended first step in preventing osteoporosis and maintaining good bone health. The middle of the pyramid involves addressing secondary causes of osteoporosis and osteopenia, such as medications or other co-occurring medical conditions. Finally, at the tip of the pyramid are

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2 Office of the Surgeon General (US). “Bone Health and Osteoporosis: A Report of the Surgeon General.” Rockville (MD): Office of the Surgeon General (US); 2004. Web. [http://www.ncbi.nlm.nih.gov/books/NBK45513/pdf/Bookshelf\\_NBK45513.pdf](http://www.ncbi.nlm.nih.gov/books/NBK45513/pdf/Bookshelf_NBK45513.pdf)



pharmaceutical interventions.

The Surgeon General believes that osteoporosis drugs should only be prescribed as a last resort. Unfortunately, too many physicians turn the pyramid on its head and go straight to their prescription pad after diagnosing osteoporosis.

At the Save Institute, we know that the science shows that osteoporosis drugs are counterproductive and should be avoided (you can read more about this below). However, we emphatically agree with the approach advocated for in the base of the Surgeon General's pyramid. By addressing lifestyle factors such as diet, exercise, stress, smoking, and more, you can halt the progression of bone loss.

In this guide, you'll learn about the top 15 bone thieves and how to stop them. Please note that these are only some of the worst offenders when it comes to your bone health but there are others that must be addressed to achieve optimal bone health. optimal bone thieves that are detrimental to your bone health. Let's get started.

# 15 Ways to Stop the Bone Thieves

## 1. Stop taking osteoporosis drugs.

There are two main classes of osteoporosis drugs: antiresorptive agents that are designed to reduce bone loss, and anabolic agents that are formulated to build new bone.<sup>3</sup> Bisphosphonates such as Fosamax (alendronate), Boniva (ibandronate), and Reclast (zoledronic acid) are among the most common antiresorptive drugs prescribed to patients diagnosed with osteoporosis. The rationale for prescribing bisphosphonates is that they slow bone loss but in reality this does more harm than good. To understand why, we need to explore the bone remodeling process.

This might surprise you: bone is a highly dynamic tissue that

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3 Drake MT, Clarke BL, & Khosla S. "Bisphosphonates: Mechanism of Action and Role in Clinical Practice." Mayo Clinic Proceedings. September 2008. 83: 1032-1045. Web. <https://www.sciencedirect.com/science/article/pii/S0025619611606071>

continuously undergoes change. There are two main types of cells necessary for bone remodeling: osteoblasts that create new bone cells and osteoclasts that remove old bone cells. There is a constant dynamic interplay between these two cell types, and their balanced activity produces the healthiest bones. Old bone material is cleared out, only to be replaced with newer, stronger bone. The constant changeover of bone tissue ensures that bones stay strong and resilient.

Osteoporosis drugs such as bisphosphonates stop osteoclasts from performing their necessary functions.<sup>4</sup> This means that they slow down the breakdown of bone tissue. At first, this may seem beneficial, but science has shown that old bone must first be removed for new bone to be deposited. Simply reducing osteoclast activity prevents old bone cells from being replaced. Instead, bones become thick and brittle, and while they may appear denser, they're actually more susceptible to fracture. Research has shown that patients taking bisphosphonates develop large crystals in place of healthy bone mineral.<sup>4</sup> This may cause bones to appear denser on a bone density scan (DXA scan), but in reality

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4 Shah FA, Lee BE, Tedesco J, Wexell CL, Persson C, Thomsen P, Grandfield K, Palmquist A. "Micrometer-Sized Magnesium Whitlockite Crystals in Micropetrosis of Bisphosphonate-Exposed Human Alveolar Bone". *Nano Letters*. 2017. 17 (10): 6210-6216. Web: <http://pubs.acs.org/doi/full/10.1021/acs.nanolett.7b02888>

they are weakened as a result of the drugs. Moreover, taking bisphosphonates has been associated with a higher risk of atypical fractures of the femur.<sup>5</sup> Shockingly, the very drugs intended to strengthen bones harm them.

Despite the evidence showing that bisphosphonates and other osteoporosis drugs in effect weaken bones, doctors continue to prescribe these medications. Sadly, these drugs also carry harmful side effects, including a higher risk of atrial fibrillation<sup>6</sup>, osteonecrosis of the jaw<sup>7</sup> (ONJ, a disfiguring jaw condition), and esophageal cancer<sup>8</sup>. Stop taking osteoporosis drugs to avoid weaker bones along with potentially

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5 Schilcher J, Michaelsson K, Aspenberg P. "Bisphosphonate Use and Atypical Fractures of the Femoral Shaft." The New England Journal of Medicine. May 5, 2011. 364:1728-1737. Web. <https://www.nejm.org/doi/full/10.1056/NEJMoa1010650>

6 Sharma, Abhishek, M.D., et al. "Risk of Serious Atrial Fibrillation and Stroke With Use of Bisphosphonates: Evidence From a Meta-analysis." CHEST. October 2013. 144(4): 1311-1322. Web. <http://journal.publications.chestnet.org/article.aspx?articleid=1691936>

7 Rasmusson L, Abtahi J. "Bisphosphonate Associated Osteonecrosis of the Jaw: An Update on Pathophysiology, Risk Factors, and Treatment." International Journal of Dentistry, Volume 2014. September 2014. Web. <https://www.hindawi.com/journals/ijd/2014/471035/>

8 Cardwell C, et al. The Journal of the American Medical Association. Exposure to Oral Bisphosphonates and Risk of Esophageal Cancer. Volume 304, Number 6, August 11, 2010, 657-663. Web. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3513370/>

devastating side effects.

## 2. Stop drinking milk.

The best thing you can do for your bones is to drink large quantities of milk, right? Wrong! Unrelenting advertising campaigns from the dairy industry have convinced many people, including doctors, that milk builds stronger bones. Indeed, anyone who remembers the iconic “Milk Does a Body Good” and “Got Milk?” ad campaigns has seen the marketing power of the American dairy industry at work. Despite this, a large body of scientific evidence suggests that drinking milk is detrimental to your bone health.

The reason why milk is thought to be good for bones is because of its high calcium content. One cup of skim milk contains 300 mg of calcium.<sup>9</sup> However, only focusing on calcium ignores the other properties of milk that make it problematic for your bones.

First, milk is acidifying. It lowers your serum pH, which triggers the release of alkalizing molecules to keep your pH in balance.

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9 University of California San Francisco Medical Center. “Calcium Content of Foods.” 2004. Web. [https://www.ucsfhealth.org/education/calcium\\_content\\_of\\_selected\\_foods/](https://www.ucsfhealth.org/education/calcium_content_of_selected_foods/)

The calcium in your bones is one of your body's largest sources of alkaline compounds. So although milk technically adds to your calcium consumption, drinking milk causes calcium to be leached from your bones. That results in a net loss of calcium.

A second problem with drinking milk is lactose intolerance. Many people have some degree of difficulty digesting lactose. This is yet one more reason why milk is an unhealthy choice.<sup>10</sup>

Finally, drinking milk increases the risk of prostate and ovarian cancer. One study found that women who drank three cups or more of milk per day had a 19% higher risk of ovarian cancer than those who had more modest milk consumption.<sup>11</sup>

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10 Harvard T.H. Chan School of Public Health. "Calcium: What's Best for Your Bones and Health?" 2018. Web. <https://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/calcium-and-milk/calcium-full-story/#calcium-from-milk>

11 Genkinger JM, Hunter DJ, Spiegelman D, et al. "Dairy Products and Ovarian Cancer: A Pooled Analysis of 12 Cohort Studies." *Cancer Epidemiology, Biomarkers, and Prevention*. 2006; 15:364-72.

### 3. Stop excessive stress.

Chronic stress is detrimental to almost every aspect of your health, and your bones are no exception. When you feel stressed, your brain signals your adrenal glands to release a class of hormones called glucocorticoids. Cortisol, also known as the fight-or-flight hormone, is the primary one. Once released, cortisol signals the liver to increase the production of glucose. The evolutionary purpose of cortisol is to flood your body with quick energy so that you can fight or flee in response to danger.

In addition to its effects on glucose metabolism, cortisol directly affects your bone health in the following ways:

- **Decreased calcium absorption.**<sup>12</sup> Cortisol alters your body's ability to metabolize calcium. Specifically, it signals the intestines to absorb less calcium. At the same time, it signals the kidneys to increase their excretion of calcium as waste, making it more difficult to obtain calcium from the foods you eat.

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12 Lukert BP, Raisz LG. "Glucocorticoid-induced Osteoporosis: Pathogenesis and Management." *Annals of Internal Medicine*. 1990; 112: 352-364.



- **Inhibition of osteoblasts, the bone-creating cells.**

Your bones are living tissue that continuously remodel themselves. Osteoblasts are types of bone cells that deposit collagen-containing proteins and minerals to create new bone tissue. Prolonged exposure to cortisol results in decreased production of new osteoblasts.<sup>13</sup> Cortisol also signals existing osteoblasts to stop producing collagen, a critical component of healthy bone tissue. As a result, your bones become weaker and more prone to fracture.

- **Acidification of your pH.** Chronic exposure to cortisol lowers serum pH, causing the body to become more acidic. This results in a loss of calcium and other valuable minerals from your bones.

Scientific studies have shown that people with elevated levels of circulating cortisol – a sign of high stress – have greater bone mineral density loss.<sup>14</sup> Years of excessive stress

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13 Delany AM, Gabbitas BY, Canalis E. "Cortisol downregulates osteoblast alpha1(I) procollagen mRNA by transcriptional and posttranscriptional mechanisms." *Journal of Cellular Biochemistry*. 1995; 57:488-494.

14 Dennison E et al. "Profiles of Endogenous Circulating Cortisol and Bone Mineral Density in Healthy Elderly Men." *The Journal of Clinical Endocrinology & Metabolism*. September 1, 1999; 84:3058-3063.

contributes to osteoporosis and osteopenia.

To counteract the harmful effects of elevated cortisol levels on your bones, find ways to reduce stress. Regular exercise, yoga, meditation, and setting better boundaries can all help you de-stress and reduce your risk of osteoporosis and osteopenia.

## **4. Stop eating too much animal protein.**

The average American consumes 270.7 pounds of meat per year (only Luxembourgers eat more).<sup>15</sup> That works out to approximately 3/4 pounds of meat daily, with chicken being most popular, followed by beef and pork.

Eating too much animal protein presents a challenge for your kidneys, which are responsible for filtering waste products from the blood. When your digestive system breaks down animal proteins, acidifying byproducts such as urea, uric acid, and adenine are produced. These overtax your kidneys and

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15 National Public Radio. "A Nation of Meat Eaters: See How It All Adds Up." June 27, 2012. Web. <https://www.npr.org/sections/thesalt/2012/06/27/155527365/visualizing-a-nation-of-meat-eaters>

cause your pH to drop.<sup>16</sup> In response, the kidneys release alkalizing bicarbonate, but once the bicarbonate is depleted because of chronic acidosis, your bones release calcium and other alkalizing minerals. That is why excessive consumption of animal protein has negative long-term effects on bones. In a study of 85,900 women, those who consumed more than 95 grams of protein each day were at a 20% greater risk of suffering a forearm fracture compared to those who consumed 68 grams or less.<sup>17</sup>

A misperception that animal protein, such as beef, chicken, and pork, is the only “real” source of protein can be in part blamed for its high consumption. Savers know that this couldn’t be farther from the truth. Although some plant proteins are not “complete,” meaning they do not contain all nine essential amino acids, your body gets all of the amino acids it needs when you eat a variety of plant-based foods. These amino acids work as building blocks for your body to create new protein molecules. It is okay to eat meat in

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16 Harvard T.H. Chan School of Public Health. “Protein.” 2018. Web. <https://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/protein/>

17 Feskanich, D., et al. “Protein consumption and bone fractures in women.” *American Journal of Epidemiology*. 1996. 143: 472-479.

moderation, but it is important to switch to healthier free-range chicken or grass-fed beef.

## **5. Stop taking inorganic calcium supplements.**

One of the most common recommendations from doctors to osteoporosis and osteopenia patients is to take a calcium supplement. Unfortunately, most calcium supplements contain inorganic calcium, such as calcium carbonate and di- or tri- calcium phosphate which can harm your bones and your overall health.

In nature, calcium is found in two forms: organic and inorganic. Inorganic calcium is derived from non-living sources such as coral, oyster shell, calcium carbonate, citrate, or dolomite. These forms of calcium are essentially rocks and have poor bioavailability.

Despite this, doctors frequently recommend inorganic calcium supplements, often in large doses. Supplementing with too much inorganic calcium can cause calcium molecules to lodge in your internal organs and arteries.

Calcium is a hard mineral. Because of this, excessive deposits

in your blood vessels can cause them to harden. This presents a risk for your cardiovascular health. A meta-analysis of 15 studies comprising 8,151 participants found that those who took calcium supplements had a 27% higher risk of heart attack compared to those who took a placebo.<sup>18</sup>

Organic calcium, found in plants, is a much better choice. Biochemically, the calcium found in rocks is the same as calcium found in bone or other living materials. In practice, though, organic calcium is highly bioavailable when compared to inorganic calcium. Additionally, organic calcium supplements are typically derived from aquatic plant sources, which contain additional bone-healthy compounds besides calcium. These organic supplements are absorbed more readily than inorganic calcium.<sup>19</sup>

Choose an organic calcium supplement to ensure better absorption. Although supplements are an important

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18 Bolland MJ, Avenell A, Baron JA, Grey A, MacLennan GS, Gamble GD, Reid IR. "Effect of Calcium Supplements on Risk of Myocardial Infarction and Cardiovascular Events: Meta-analysis." *British Medical Journal*. 2010;341:3691.

19 Chaturvedi P. et al. "Comparison Of Calcium Absorption From Various Calcium-Containing Products In Healthy Human Adults: A Bioavailability Study." *The FASEB Journal*. 2006;20:A1063-A1064. Web.

component of the [\*\*Osteoporosis Reversal Program\*\*](#), they cannot replace a healthy diet. You should focus on consuming a variety of bone-smart foods that contain dietary calcium in conjunction with other healthful nutrients.

## **6. Stop consuming inflammatory foods.**

The Medical Establishment is finally starting to recognize chronic inflammation as one of the main culprits of many modern-day health problems, including osteoporosis, cancer, and Alzheimer's disease. In fact, the presence of inflammatory markers has been directly linked to an increased risk for osteoporosis and osteopenia. In a recent study of 800 postmenopausal women, individuals with the highest levels of inflammatory markers had an astonishing 276% greater risk of hip fracture over a seven year period.<sup>20</sup>

Although there are many genetic and environmental causes of inflammation, diet is a major culprit. Much of the typical Western diet contains proinflammatory foods that contribute to chronic, low-grade inflammation. This inflammation

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20 Barbour KE, Boudreau R, Danielson ME, et al. "Inflammatory Markers and the Risk of Hip Fracture: The Women's Health Initiative." *Journal of Bone Mineral Research*. 2012; 27:1167-1176.

gradually leaches strength and quality from your bones.

Watch out for the following foods that increase inflammation:<sup>21</sup>

- **Refined grains.** White flour, white rice, pasta, and other refined grains have most of their fiber stripped away in the refining process. This lack of fiber causes your blood sugar to spike and increases inflammation.
- **Sugar.** Studies have shown that sugar has strong proinflammatory effects.<sup>22</sup>
- **Oils rich in omega-6 fatty acids.** Omega-6 fatty acids are mainly found in sunflower oil, grape seed oil, canola oil, and corn oil. These oils (and foods cooked in them) have a strong proinflammatory effect.
- **Trans fats.** Trans fats, found in some margarine, fried foods, baked goods, and refrigerated doughs, are highly inflammatory.

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21 Harvard Medical School. "Foods that Fight Inflammation." August 13, 2017. Web. <https://www.health.harvard.edu/staying-healthy/foods-that-fight-inflammation>

22 Aeberli I, Gerber PA, Hochuli M, et al. "Low to moderate sugar-sweetened beverage consumption impairs glucose and lipid metabolism and promotes inflammation in healthy young men: a randomized controlled trial." June 15, 2011. Web. <https://www.ncbi.nlm.nih.gov/pubmed/21677052>



- **Alcohol.** In small quantities, red wine, beer, and tequila contain nutrients that are beneficial to your bones. However, drinking more than one or two alcoholic beverages per day can inflame your liver and other organs.

In general, avoiding processed foods is the best way to combat inflammation. This includes foods that contain toxic synthetic chemicals, additives, and preservatives. A good rule of thumb is to read the ingredients list on the label of all packaged food you eat. If it is lengthy or contains a large number of unfamiliar compounds, choose whole, unprocessed food alternatives.

## 7. Stop smoking tobacco products.

The negative effects of smoking tobacco on lung health are well documented. But smoking is also one of the leading preventable risk factors for osteoporosis and osteopenia.<sup>23</sup>

Smoking tobacco has a direct effect on your risk for osteoporosis or osteopenia related fractures. A worldwide

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23 National Institutes on Health. "Smoking and Bone Health." 2018. Web. <https://www.bones.nih.gov/health-info/bone/osteoporosis/conditions-behaviors/bone-smoking>

meta-analysis comprising 59,232 people linked smoking to an 84% higher risk of hip fracture.<sup>24</sup> Making matters worse, smokers take longer to recover from fractures.<sup>25</sup>

The exact mechanisms that link cigarette smoking to osteoporosis and osteopenia risk are not yet clear. One study found that cigarette smoking causes excessive amounts of two proteins that trigger the development of osteoclasts.<sup>26</sup> As mentioned above, osteoclasts are cells that break down bone tissue so it can be replaced with new bone. If osteoclasts become overactive, however, they can break down healthy bone tissue and weaken your bones. Smoking may also reduce the activity of bone-building cells called osteoblasts. Collectively, this imbalance between osteoblasts and osteoclasts leads to osteoporosis and osteopenia.

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24 Siris ES, et al. "Identification and Fracture Outcomes of Undiagnosed Low Bone Mineral Density in Postmenopausal Women: Results from the National Osteoporosis Risk Assessment." *Journal of the American Medical Association*. 2001;284:2815-2822. Web. <https://www.ncbi.nlm.nih.gov/pubmed/11735756>

25 Kanis JA, et al. "Smoking and Fracture Risk: A Meta-Analysis." *Osteoporosis International*. 2005;16:155-162.

26 Ma D, et al. "Smoke-Induced Signal Molecules in Bone Marrow Cells from Altered Low-Density Lipoprotein Receptor-Related Protein 5 Mice." *Journal of Proteome Research*. 2012;11:3548-3560.

The good news is that after smoking cessation, the risk of osteoporosis is gradually reduced. Results from the U.S. National Osteoporosis Risk Assessment found that current smokers were 58% more likely than never-smokers to be diagnosed with osteoporosis.<sup>27</sup> This number dropped to 14% among former smokers. Clearly, it's never too late to quit. If you're a smoker, quit as soon as possible. It's one of the most positive changes you can make for your bone health and overall wellbeing.

## **8. Stop consuming excess sugar.**

Sugar affects your brain, digestive system, heart, immune system, skin, and more. Yet refined white sugars are pervasive in pre-packaged foods. From pastries to pasta sauces, canned fruits to condiments, sugars are added to many foods. Americans consume an average of 73 grams of sugar per day, far higher than the recommended 50 grams for a

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27 Siris ES, et al. "Identification and Fracture Outcomes of Undiagnosed Low Bone Mineral Density in Postmenopausal Women: Results from the National Osteoporosis Risk Assessment." *Journal of the American Medical Association*. 2001;284:2815-2822. Web. <https://www.ncbi.nlm.nih.gov/pubmed/11735756>

person following a 2,000 calorie per day diet.<sup>28</sup> Even the recommended amount of sugar may be too high, as eating as little added sugar as possible is best for your bone and overall health.

Consuming large amounts of sugar has a profound effect on your body's ability to utilize bone-healthy minerals. For example, sugar is highly acidifying, triggering calcium loss from your bones in order to restore an alkaline serum pH.<sup>29,30</sup> Sugar also causes greater magnesium excretion, meaning you're left with less of this important mineral necessary to strengthen your bones.<sup>31</sup>

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28 Bowman SA, et al. "Added Sugars Intake of Americans: What We Eat in America, NHANES 2013-2014." Food Surveys Research Group. May 2017. Web. [https://www.ars.usda.gov/ARSUserFiles/80400530/pdf/DBrief/18\\_Added\\_Sugars\\_Intake\\_of\\_Americans\\_2013-2014.pdf](https://www.ars.usda.gov/ARSUserFiles/80400530/pdf/DBrief/18_Added_Sugars_Intake_of_Americans_2013-2014.pdf)

29 Tjaderhane, L. and Larmas, M. "A High Sucrose Diet Decreases the Mechanical Strength of Bones in Growing Rats." *Am J Clin Nutr.* 1998;128:1807-1810. Web. <https://www.ncbi.nlm.nih.gov/pubmed/9772153>

30 Lemann, J. "Evidence that Glucose Ingestion Inhibits Net Renal Tubular Reabsorption of Calcium and Magnesium." *Am J Clin Nutr.* 1976 ;70:236-245. Web.

31 Swaminathan R. "Magnesium Metabolism and its Disorders." *The Clinical Biochemist Reviews.* 2003 May; 24(2): 47-66. Web. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1855626/>

Excess sugar consumption also prevents the absorption of copper, particularly when consumed with high levels of fat.<sup>32</sup> Given the co-occurrence of fat and sugar in unhealthy treats, this can impair your ability to absorb the copper necessary for healthy bones. Poor copper absorption also contributes to oxidative stress. Oxidative stress occurs when you eat unhealthy foods or are exposed to environmental toxins, triggering the production of unstable molecules called free radicals. These free radicals damage your cells, including your bone cells. Because copper has potent antioxidant properties it fights back against free radicals, along with other antioxidants. Additionally, copper is necessary for the cross-linking of collagen and elastin, both of which are part of your bones' flexible connective tissue in the bone matrix.

In addition to preventing you from utilizing the minerals your bones need, sugar directly weakens existing bone tissue. When in the presence of sugar, certain proteins bond to the sugar molecule to produce Advanced Glycation End products, or AGEs. AGEs weaken the collagen fibers that form

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32 Wapnir RA and Devas G. "Copper deficiency: interaction with high-fructose and high-fat diets in rats." The American Society for Clinical Nutrition, Inc. January 1995. Vol. 61 no. 1; 105-110. Web. <http://ajcn.nutrition.org/content/61/1/105.abstract>

a skeletal infrastructure for your bones.<sup>33</sup> This increases your risk of bone fractures and impairs your bone strength.

To decrease your consumption of added sugars, you may need to retrain your taste buds. Avoiding processed foods is an important step in preventing the overconsumption of sugar.

## 9. Stop consuming excess sodium.

Americans consume more than 3,400 mg of sodium per day, far more than the recommended 2,300 mg, and many other Western countries show similar patterns of sodium consumption.<sup>34</sup> The American Heart Association has warned for years that the typical Western diet contains too much sodium. Excessive sodium consumption has been linked to increased risk for high blood pressure, heart disease, stroke, and it also harms your bones.

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33 Odetti P, Rossi S, Monacelli F, Poggi A, Cirnigliaro M, Federici M, and Federici A. "Advanced Glycation End Products and Bone Loss during Aging." *Annals of the New York Academy of Sciences*. 2006; 1043:710-717.

34 Centers for Disease Control and Prevention. "Get the Facts: Sodium and the Dietary Guidelines." October 2017. Web. [https://www.cdc.gov/salt/pdfs/sodium\\_dietary\\_guidelines.pdf](https://www.cdc.gov/salt/pdfs/sodium_dietary_guidelines.pdf)

When blood sodium levels are elevated, the kidneys receive a signal to excrete calcium. In a study of 1,010 adults, sodium was the leading cause of excreted calcium, far above potassium, creatinine, phosphorus, dietary protein, or other compounds.<sup>35</sup>

The balance of sodium to potassium is equally important. Table salt contains 40% sodium and 60% chloride and is devoid of other minerals. Sea salt, on the other hand, contains potassium, iron, zinc, and other bone-healthy minerals. Too much sodium without the presence of potassium leads to chronic acidosis, which leads to calcium loss from your bones. Getting enough potassium, on the other hand, leads to lower bone resorption and increased bone formation.<sup>36</sup>

To prevent bone loss caused by excess sodium, keep daily sodium consumption below 2,300 mg. Cutting back on

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35 Ho SC, Chen YM, Woo JL, Leung SS, Lam TH, Janus ED. "Sodium is the Leading Dietary Factor Associated with Urinary Calcium Excretion in Hong Kong Chinese Adults." *Osteoporosis International*. 2001;12:723-731.

36 Sebastian A, Harris ST, Ottaway JH, Todd KM, and Morris, RC. "Improved Mineral Balance and Skeletal Metabolism in Postmenopausal Women Treated with Potassium Bicarbonate." *New England Journal of Medicine*. 1994; 330:1776-1781.



processed food is one of the easiest ways to slash your sodium intake. Always choose fresh or frozen foods over canned alternatives, as canned foods typically contain high levels of sodium. When you add salt to your meals, reach for alkalizing sea salt. Also, make sure you eat plenty of potassium-rich fruits and vegetables to restore a healthy sodium-potassium balance.

## **10. Stop living a sedentary lifestyle.**

Only one in five Americans meet the Center for Disease Control and Prevention's physical activity recommendations.<sup>37</sup> As countries around the world become more industrialized, physical activity levels tend to decline. Many spend most of the day at a desk and ignore physical activity. All of that sitting directly impacts health. One recent study found that adults who sat for more than 11 hours per day were 40% more likely to die within the next three years than those who sat for

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37 Centers for Disease Control and Prevention. "Facts about Physical Activity." 2014. Web. <https://www.cdc.gov/physicalactivity/data/facts.htm>

less than four hours per day.<sup>38</sup> In addition to reducing overall mortality risk, engaging in more physical activity each day reduces the risk of osteoporosis and osteopenia.<sup>39</sup>

The benefits of exercise for bone health were part of a breakthrough discovery by a German surgeon named Julius Wolff, who practiced medicine in the 19th century. Wolff's Law states that bones adapt to the weight-bearing loads under which they are placed.<sup>40</sup> Based on that principle, engaging in weight bearing exercise causes bones to remodel, so they become stronger, more flexible, and more fracture-resistant. By staying active, you can reverse bone loss and increase bone strength. Exercise also promotes the development of collagen, the protein fibers that contribute to bone flexibility – also known as tensile strength.

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38 Van der Ploeg HP, Chey T, Korda RJ, Banks E, Bauman A. Sitting Time and All-Cause Mortality Risk in 222 497 Australian Adults. *Arch Intern Med*. 2012;172(6):494–500. Web: <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/1108810>

39 Howe TE, et al. "Exercise for Preventing and Treating Osteoporosis in Postmenopausal Women." *Cochrane Systematic Review*. 2011. Web. <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD000333.pub2/abstract>

40 Ruff C, Holt B, Trinkaus E. "Who's Afraid of the Big Bad Wolff?: Wolff's Law and Bone Functional Adaptation." *American Journal of Physical Anthropology*. 2006;129:484–498.

To reap the amazing benefits of exercise for your bone health and overall well-being, begin gradually and work your way up to more intense exercise. Exercises that cause your lower body to bear a load will strengthen your leg and hip bones which are the most common fracture sites among older adults.

## **11. Stop drinking excess alcohol.**

The link between alcohol and bone health is nuanced because not all forms of alcohol are inherently bad for bones. For example, red wine contains the antioxidant resveratrol. In animal studies, resveratrol has been shown to work synergistically with other phytochemicals to prevent weight gain and bone loss in postmenopausal mice and rats.<sup>41</sup> Similarly, beer contains the mineral silicon, which is beneficial for bone health.

Despite these beneficial compounds, alcoholic drinks are detrimental to your bones. The fermentation process that produces ethanol (the alcohol compound in beer, wine, and

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41 Rayalam S, Della-Fera MA, Baile CA. "Synergism between Resveratrol and Other Phytochemicals: Implications for Obesity and Osteoporosis." *Molecular Nutrition and Food Research*. 2011; 55:1177-1185.

spirits) causes alcoholic beverages to become acidifying. This means that they lower your serum pH, which in turn, leads to a loss of vital minerals from your bones.

It is also important to note that not all alcoholic beverages are created equal. Conventionally grown grapes are listed in the Environmental Working Group's "Dirty Dozen," which ranks produce by its pesticide residue.<sup>42</sup> This means that wine often contains trace amounts of harmful pesticides. Many winemakers also add sulfur dioxide as a preservative, a compound that can cause allergic reactions. Alcoholic drinks may also contain bisphenol A (BPA), arsenic, and artificial flavors, all of which are detrimental to your health. The high level of toxins in alcoholic beverages contributes to their acidifying effect, leaching strength from your bones. Plus, drinking too much alcohol makes it more difficult for your body to absorb Vitamin D, which is essential to help prevent and reverse osteoporosis and osteopenia.<sup>43</sup>

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42 Environmental Working Group. "The Dirty Dozen." 2018. Web. <https://www.ewg.org/foodnews/dirty-dozen.php>

43 Turner RT et al. "Chronic Alcohol Treatment Results in Disturbed Vitamin D Metabolism and Skeletal Abnormalities in Rats." *Alcoholism Clinical and Experimental Research*. 1988;12:159-162.

Moderation is the key, so the occasional glass of beer or wine will not be harmful. Whenever possible, choose organic wines that do not contain sulfites. Drinking beer from bottles, rather than cans that are often lined with BPA, is also a good choice. The National Institutes of Health recommends that women drink fewer than seven drinks per week, while men should drink fewer than 14.<sup>44</sup>

## 12. Stop drinking sodas.

The awful health effects of soda consumption continue to mount, yet 49% of adults drink at least one such beverage per day.<sup>45</sup> This bad habit increases the risk for osteoporosis and osteopenia, and also makes you more susceptible to obesity, cardiovascular disease, type 2 diabetes, cancer, and more.

There are several reasons why soda is detrimental to your bone health. Like many other sugar-rich foods, soda acidifies

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44 National Institute on Alcohol Abuse and Alcoholism. "Drinking Levels Defined." 2018. Web. <https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/moderate-binge-drinking>

45 Centers for Disease Control and Prevention. "Get the Facts: Sugar-Sweetened Beverages and Consumption." 2017. Web. <https://www.cdc.gov/nutrition/data-statistics/sugar-sweetened-beverages-intake.html>

your serum pH. The primary acidifying compound in cola is phosphoric acid. Diets high in phosphoric acid have been associated with lower bone density and increased hip fractures.<sup>46</sup> Soda also contributes to weight gain because of the empty calories it contains. And don't think that switching to diet soda is any better. Diet soda also contributes to weight gain<sup>47</sup> and contains harmful artificial sweeteners.

Dark-colored colas such as Pepsi and Coke are particularly problematic. Manufacturers add the chemical 4-methylimidazole (4-MI) to create their classic deep brown color. In animal studies, consuming 4-MI is associated with a higher risk of cancer.<sup>48</sup> Although Pepsi and Coke changed their formulas in 2012 to reduce 4-MI, it has not been

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46 Karen B Williams, RDH, PhD. "Bone Density and Consumption of Cola Beverages." *Journal of Dental Hygiene*. 2007; 82. Web: <http://jdh.adha.org/content/82/1/7.full.pdf>

47 Tate DF, Turner-McGrievy G, Lyons E, Stevens J, Erickson K, Polzien K, Diamond M, Wang X, Popkin B. "Replacing caloric beverages with water or diet beverages for weight loss in adults: main results of the Choose Healthy Options Consciously Everyday (CHOICE) randomized clinical trial." *American Journal of Clinical Nutrition*. 2012;95(3):555-63. Web: <http://ajcn.nutrition.org/content/95/3/555>

48 Chan, P.C., Hills, G.D., Kissling, G.E. et al. "Toxicity and carcinogenicity studies of 4-methylimidazole in F344/N rats and B6C3F1 mice." *Archives of Toxicology*. 2008; 82: 45. Web: <https://link.springer.com/article/10.1007/s00204-007-0222-5>

completely removed from the ingredient list.

When it comes to soda consumption, your best choice is to steer clear of them entirely. When you crave a cool beverage, enjoy a glass of sparkling ice water with a lemon or lime wedge. Tea and coffee in moderation are acceptable choices if you need a caffeine kick.

### **13. Stop taking prescription medications that weaken bones.**

People are commonly prescribed medications to treat a variety of chronic medical conditions. In many cases, though, prescription drugs may make bones weaker.<sup>49</sup> Sadly, most physicians remain unaware of the negative effects of these medications on bone health. If you are currently taking any medications, now is a great time to find out if any of them are included in the list below:

**Thyroid medications.** For those with hypothyroidism, taking

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49 Panday, Keshav, Gona, Amitha, and Humphrey, Mary Beth. "Medication-induced Osteoporosis: Screening and Treatment Strategies." *Therapeutic Advances in Musculoskeletal Disease*. 2014. 6:185-202. Web. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4206646/>



synthetic thyroid hormone (levothyroxine, or Synthroid) helps to regulate their endocrine function. However, excessive thyroid hormone supplementation stimulates the activity of osteoclasts, the cells that break down bone tissue.<sup>50</sup> Of course, untreated hypothyroidism can cause fatigue, depression, weight gain, memory impairment, and slowed heart rate, so make sure you get your thyroid hormone levels tested on a regular basis to ensure they are within the appropriate range.

### **Medications that lower insulin resistance.**

Thiazolidinediones (TZDs) lower insulin resistance and are prescribed to people with type 2 diabetes. Examples of these drugs include pioglitazone (Actos) and rosiglitazone (Avandia). These drugs also raise the risk for bone fractures, as they slow the rate of new bone formation.<sup>51</sup>

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50 Ongphiphadhanakul B, Puavilai G, and Rajatanavin R. "Effects of TSH-suppressive Doses of Levothyroxine on Bone Mineral Density in Thai Women." *Journal of the Medical Association of Thailand*. September 1996. 79:563-567. Web. <https://www.ncbi.nlm.nih.gov/pubmed/8996984>

51 Wei Wei and Yihong Wan. "Thiazolidinediones on PPAR $\gamma$ : The Roles in Bone Remodeling." *PPAR Research*. 2011:867180. Web. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3205770/>

**Loop diuretics.** Loop diuretics such as furosemide, torsemide, and bumetanide increase sodium loss and are prescribed for congestive heart failure. Because one-third of your body's sodium is found in your bones, loss of sodium directly causes bones to weaken. If sodium drops too low, bones lose calcium and osteoclasts increase their rate of bone resorption.<sup>52</sup>

**Antidepressants.** Selective serotonin reuptake inhibitors (SSRI) such as sertraline (Zoloft), fluoxetine (Prozac), and escitalopram (Lexapro) are the most commonly prescribed class of antidepressants. In addition to making more serotonin available in the brain, these medications inhibit the production of the brain chemical dopamine. This leads to hormonal changes, alterations in your stress hormone levels, and weaker bones with double the risk of fragility fractures.<sup>53</sup>

**Glucocorticoids.** Glucocorticoids suppress the immune system and are used to treat autoimmune conditions,

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52 L. Rejnmark, L. Mosekilde, and F. Andreassen. "Diuretics and Osteoporosis." *Nordic Medicine*. February 1998. 113:53-59.

53 Eliyahu Dremencov, Mostafa El Mansari, and Pierre Blier. "Effects of Sustained Serotonin Reuptake Inhibition on the Firing of Dopamine Neurons in the Rat Ventral Tegmental Area." *Journal of Psychiatry and Neuroscience*. May 2009. 34:223-229.

allergies, asthma, and certain types of cancers. They also play a role in apoptosis, or programmed cell death (cell suicide). This means that taking a glucocorticoids like cortisone, dexamethasone, or prednisone can cause osteoblasts and osteoclasts to die. The result is greater bone resorption and weaker bones.<sup>54</sup>

**Anticoagulants.** Anticoagulants such as heparin affect Vitamin K levels, disrupt Vitamin D metabolism, and prevent calcium from being deposited in bone.<sup>55</sup>

**Anticonvulsants.** Anti-epileptic drugs such as phenobarbital, phenytoin, and carbamazepine double a woman's risk for hip fracture.<sup>56</sup> These drugs appear to inhibit Vitamin D absorption

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54 R.N. De Nijs. "Glucocorticoid-induced Osteoporosis: A Review on Pathophysiology and Treatment Options." *Minerva Medicine*. February 2008. 99:23-43.

55 Panday, Keshav, Gona, Amitha, and Humphrey, Mary Beth. "Medication-induced Osteoporosis: Screening and Treatment Strategies." *Therapeutic Advances in Musculoskeletal Disease*. 2014. 6:185-202. Web. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4206646/>

56 L.J. Stephen, A.R. McLellan, J.H. Harrison, D. Shapiro, M.H. Dominiczack, G.J. Sills, and M.J. Brodie. "Bone Density and Antiepileptic Drugs: A Case-Controlled Study." *Seizure*. 1999. 8:339-342. Web. [https://www.seizure-journal.com/article/S1059-1311\(99\)90301-1/pdf](https://www.seizure-journal.com/article/S1059-1311(99)90301-1/pdf)

and lower levels of bone-enriching Vitamin K. Plus, anti-epileptic drugs increase inflammation, trigger the production of osteoclasts, and therefore cause more breakdown of bone tissue.

**Contraceptives.** Oral contraceptives are widely prescribed, but they can lower levels of vitamin B6 and B12. This causes the inflammatory compound homocysteine to accumulate, contributing to a higher risk for osteoporosis and hip fractures.<sup>57</sup>

**Opioids.** Opioids are commonly prescribed for acute pain related to injuries or surgery. However, long-term use can lead to serious problems. Opioids disrupt hormone activity, contribute to osteoporosis, and increase the risk of fracture (particularly in older adults).<sup>58</sup> Natural alternative forms of pain relief should be taken when necessary to protect your bones.

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57 F. Lussana, M.L. Zighetti, P. Bucciarelli, M. Cugno, and M. Cattaneo. "Blood Levels of Homocysteine, Folate, Vitamin B6 and B12 in Women Using Oral Contraceptives Compared to Non-Users." *Thrombosis Research*. 2003. 112:37-41. Web. <https://www.ncbi.nlm.nih.gov/pubmed/15013271>

58 C. Mattia, E. Dibussolo, and F. Coluzzi. "Non-analgesic Effects of Opioids: The Interaction of Opioids with Bone and Joints." *Current Pharmaceutical Design*. 2012. 18:6005-6009. Web. <https://www.ncbi.nlm.nih.gov/pubmed/22747537>

**Benzodiazepines.** Benzodiazepines such as diazepam (Valium), clonazepam (Klonopin), and alprazolam (Xanax) are prescribed to treat anxiety. However, they also affect dopamine. Like antidepressants, lowering levels of dopamine affects other hormones that contribute to bone loss.<sup>59</sup>

**PPIs, H-2 blockers, antacids.** Antacids, H2 blockers (Pepcid), and proton pump inhibitors such as omeprazole (Prilosec) or lansoprazole (Prevacid) are commonly prescribed to prevent acid reflux. However, neutralizing stomach acid inhibits the absorption of calcium and other vitamins that are necessary for the health of your bones. This leads to loss of bone strength and increased risk of fractures.<sup>60</sup>

Please note that stopping certain medications abruptly, such as selective serotonin reuptake inhibitors, can be dangerous.

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59 D. Xing, X.L. Ma, J.X. Ma, J. Wang, Y. Yang, and Y. Chen. "Association between Use of Benzodiazepines and Risk of Fractures: A Meta-Analysis." *Osteoporosis International*. 2014. 25:105-120.

60 Tetsuhide Ito and Robert T. Jensen. "Association of Long-Term Proton Pump Inhibitor Therapy with Bone Fractures and Effects on Absorption of Calcium, Vitamin B12, Iron, and Magnesium." *Current Gastroenterological Reports*. 2010. 12:448-457. Web. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2974811/>

Always talk to your prescribing provider before discontinuing a medication. And remember that there are many natural alternatives to manage medical conditions that won't lead to drug-induced osteoporosis.

## **14. Stop blindly trusting Big Pharma and the Medical Establishment.**

Albert Einstein (1879-1955) is one of the most respected scientists who ever lived. His most famous equation, the mass-energy equivalence formula  $E = mc^2$ , changed the course of physics and our understanding of the universe. He was also a fervent deep and independent thinker.

"Unthinking respect for authority," said the legendary theoretical physicist, "is the greatest enemy of truth."

These wise words especially hold true when it comes to Big Pharma, the Medical Establishment, and your bones. To clarify, it's not that doctors are deliberately lying to you or hiding the truth. In many cases, they're simply out of touch with the latest research about bone health.

In fact, the U.S. Department of Health and Human Services

found that once a new piece of scientific research emerges, it takes up to 17 years before doctors routinely incorporate that information into their medical practice.<sup>61</sup> Seventeen years is a long time to wait for accurate, evidence-based information.

Moreover, osteoporosis drugs are a multi-billion dollar industry, meaning that pharmaceutical companies have a vested interest in convincing doctors that their patients are suffering from a serious disease and that their drugs are the only viable treatments. Plus, billions are spent on marketing and advertising by pharmaceutical companies each year and \$200+ million is spent on US lobbying efforts. Even more shockingly, Big Pharma companies spend far more on marketing than they do on research.<sup>62</sup>

Mounting evidence proves that the Medical Establishment ignores or suppresses newer science showing that

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61 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3241518/>

62 2 Swanson, Ana (February 11, 2015). "Big Pharmaceutical Companies are Spending Far More on Marketing than Research." Washington Post. [https://www.washingtonpost.com/news/wonk/wp/2015/02/11/big-pharmaceutical-companies-are-spending-far-more-on-marketing-than-research/?utm\\_term=.a131b8ccd294](https://www.washingtonpost.com/news/wonk/wp/2015/02/11/big-pharmaceutical-companies-are-spending-far-more-on-marketing-than-research/?utm_term=.a131b8ccd294)

osteoporosis drugs do more harm than good.<sup>63, 64</sup>

At the Save Institute, we recognize that when armed with knowledge, you are in the best position to make decisions about your health. Rather than believing you have a serious disease, you can take charge of your bone health. The keys to overcoming osteoporosis and osteopenia are in your hands. Through diet, exercise, supplements, and other healthy living strategies, you can reverse osteoporosis and rebuild stronger bones.

We encourage all Savers to feel empowered and to have honest conversations with their doctors about their bone health. Tell your doctor what you have learned and the steps you are taking to improve the health of your bones. Together, we can fight back against Big Pharma and the Medical Establishment to ensure that every person has access to honest information and non-harmful interventions to reverse osteoporosis and osteopenia.

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63 Singer N. "Drug Suit Raises Questions for Doctors, and Juries." New York Times. November 10, 2010. Web. <https://www.nytimes.com/2010/11/11/health/11bone.html>

64 Newman N. "Big Pharma, Bad Science." The Nation. Web. August 5, 2002. <https://www.thenation.com/article/big-pharma-bad-science/>



## 15. Stop believing you have a disease.

Before the year 1994, relatively few people received an osteoporosis diagnosis. The label was reserved for those who had already fractured a bone. But in 1994, the World Health Organization (WHO) decided that osteoporosis needed greater attention and treatment. At a conference hosted by the International Osteoporosis Foundation, an organization heavily influenced by drug companies and medical equipment manufacturers, the WHO declared osteoporosis a major public health problem. WHO leaders introduced new parameters to diagnose this newly-invented “disease”: bone density, measured by DXA scans. From that day onward, millions of people were told they had osteoporosis, a bone “disease”. The drug giant Merck capitalized on this updated diagnostic system to sell its new drug Fosamax, which was introduced in 1995. In a few short years, millions of women were prescribed an unnecessary (and dangerous) drug for a disease that was created at that fateful WHO conference.<sup>65</sup>

The WHO also introduced a new condition called osteopenia,

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65 1 WHO (1994). “Assessment of fracture risk and its application to screening for postmenopausal osteoporosis. Report of a WHO Study Group”. World Health Organization technical report series 843: 1-129. PMID 7941614.

referring to risk of developing osteoporosis. That means that osteopenia is the risk of developing a risk of experiencing a fracture. If that convoluted thinking does not make sense to you, don't worry: it doesn't make sense to us either.

In fact, Michael McClung, director of the Oregon Osteoporosis Center, critical of the newly invented disease category osteopenia, declared, "We have medicalized a non-problem."<sup>66</sup>

It is true that many people over age 50 have less bone mass than they did at age 20. Before 1994, this wasn't called osteoporosis. It was simply called aging. Having lower bone mass is not inherently a disease. In fact, lower bone density is a relatively poor predictor of risk for a fracture.<sup>67</sup> The quality of your bone composition is more important than quantity of bone tissue, yet this is completely ignored by the Medical Establishment.

It takes time to shift your thinking about bone health. The

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66 Kolata, Gina (September 28, 2003). "Bone Diagnosis Gives New Data But No Answers". New York Times.

67 Wilkin T.J. "Bone densinometry is not a good predictor of hip fracture." BMJ. 2001 Oct 6; 323(7316): 795-799. Web: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1121341/>

Medical Establishment and Big Pharma have convinced the public that a diagnosis of osteoporosis or osteopenia means they are vulnerable, sick, and in need of drugs to improve their bone health. This could not be farther from the truth.

Rather, the evidence points to the fact that osteoporosis and osteopenia are not diseases and that the existing diagnostic criteria is mostly arbitrary. This is why the next step after realizing that you've been lied to about your so-called disease is to mentally break free from its shackles – not only because of the liberation and stress-reduction that follows, but also because, science has begun to show how it can actually lead to positive changes in your physiology.<sup>68</sup>

Once you disown the disease, you can begin to follow a course of action to effectively rebuild your bones.

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68 Bradley P. Turnwald, J. Parker Goyer, Danielle Z. Boles, Amy Silder, Scott L. Delp & Alia J. Crum *Nature Human Behaviour* volume 3, pages48-56 (2019)

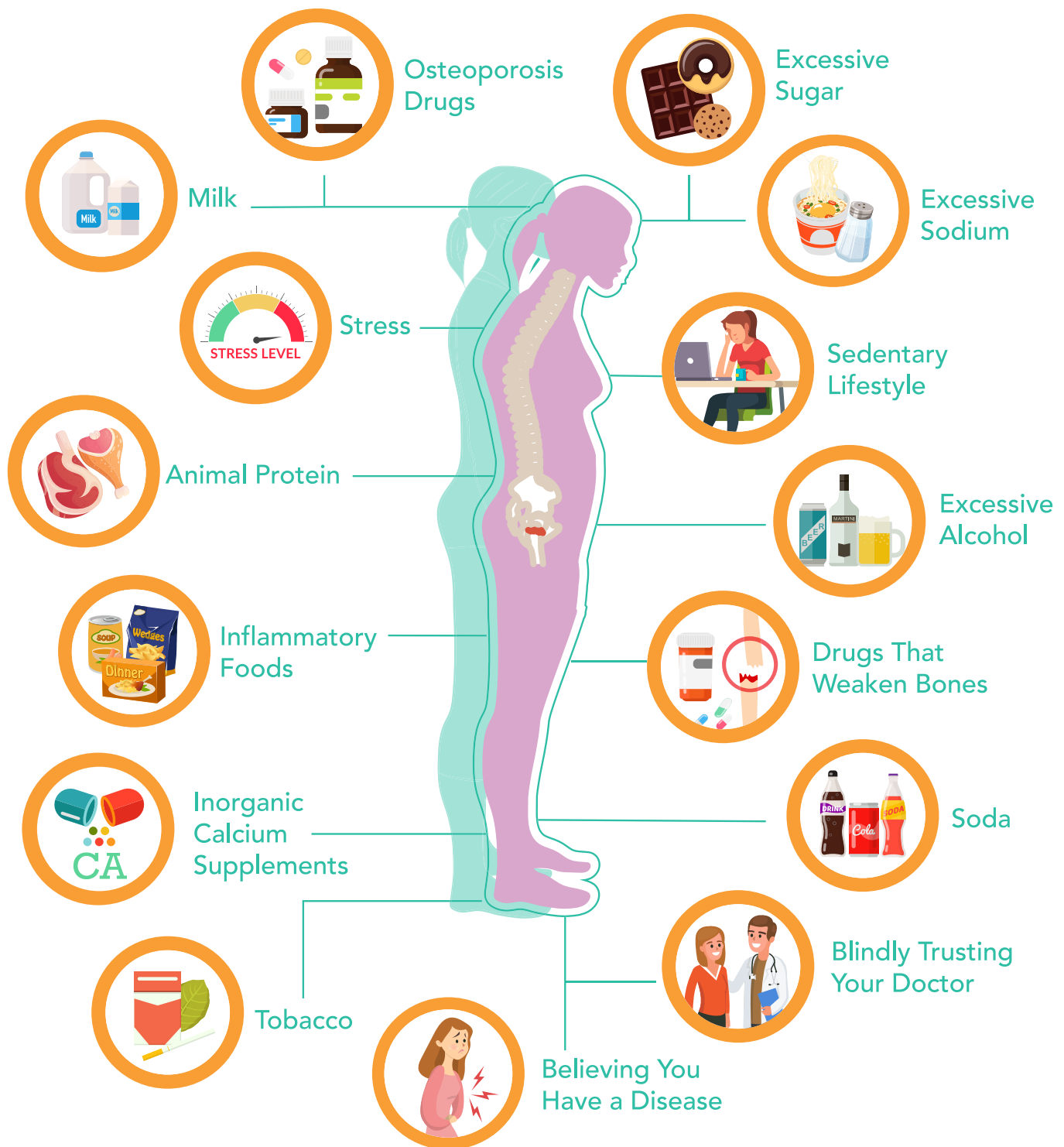
# Conclusion

The Medical Establishment and Big Pharma have framed osteoporosis as a devastating disease that can only be stopped with the use of prescription drugs. The information contained in this report proves that small, everyday choices actually have a big impact on your bone health. These “bone thieves” are slowly stealing the life from your bones. They can also increase your risk of diabetes, cancer, cardiovascular disease, and other conditions. Stop the bone thieves in their tracks by taking action today.

While we've presented you with some of the worst “bone thief” offenders, there are more out there. Moreover, as the RESTORE Protocol's name suggests, the next, and most crucial step after stopping the “bone thieves”, is to rebuild your bones. This is what's covered in the [\*\*Osteoporosis Reversal Program\*\*](#).

We recommend printing the diagram on the following page and keeping it somewhere handy such as on your refrigerator.

# The Top 15 Bone Thieves





# We've Reinvented Osteoporosis Treatment.

The Osteoporosis Reversal Program is a revolutionary evidence-based safe, natural, and side-effect-free method for preventing and reversing bone loss.



[LEARN MORE](#)