

## Bones and Joints

### *Summary:*

#### **3 Stages of Bone Healing (also for osteoporosis):**

1. *Inflammation - take no or little anti-inflammatories - 5-7 days*
2. *Cartilage scaffolding - take Collagen Booster - 7 days*
3. *Building bone - take Noni Juice, Ostinol by Zycal or Osseoapatite, D3, K2, Boron, & Strontium for 2 weeks or more.*

#### **Osteoarthritis and Joint Issues:**

- *Avoid: carrageenan, nightshades, steroids, and limping.*
- *Supplements: Glucosamine, Chondroitin, MSM, Curcumin, Boswellia, Omega 3 fatty acids, Avocado-soybean unsaponifiables (Piascledine), D3, K2, Boron, Strontium. Most people going for joint replacement were deficient in Boron.*
- *Exercise: Physical Therapy, Knees Over Toes Therapy, Strengthen glutes (butt) not thigh muscles, Qigong, Yoga, Stretches, walk without limping.*
- *Healing Therapies: Comfrey Compress, Vibrating Platform, Infrared and Red Light, Copper Clothing (Incrediwear), Electrical Stimulation (Bone Mender), Braces or support during exercise as needed.*
- *Injections: PRP (platelet rich plasma), Prolotherapy. Hyaluronic acid is less effective. Cortisone shots are harmful.*

**Healing a Broken Bone** - This was what I discovered when I broke my fibula. After the cast was removed 2 days after I broke it, I could feel it move. I used a high boot that stabilized the bone and a knee scooter for transportation. After 4 weeks, I just used a neoprene support and walked normally. I believe it healed this quickly because I immediately searched 'how bone heals' and followed these 3 stages:

1. **Inflammation** stabilizes the break and brings cells and material needed for repair to the break. This take place in the first 5-7 days, so it's important NOT to take anti-inflammatory drugs.
2. **Cartilage scaffolding** -This develops for the next week. Collagen is needed for this stage and provides a structure for calcium deposition. This begins after about 1 week and builds for about a week. I used **Collagen Booster** by Resverage to provide the collagen and necessary supplements.
3. **Calcium and mineral deposition** - Begins after 2 weeks. Don't ever take calcium carbonate - not well absorbed or used. I took a bioidentical calcium supplement called **Osseoapatite** by PHProfessional Health Products, 2/day., which is usually only available through a practitioner, but I found a source online.

#### **These are additional supplements I took while healing:**

**D3**, 5000 IU/day gel caps - for calcium absorption

**K2** 100mcg gel caps - ushers calcium into the bone

**100% Noni juice** 2 oz twice/day,

**Noni juice Studies:**

For periodontal defects:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8041072/>

Studies on Noni for osteoporosis:

<https://www.hindawi.com/journals/omcl/2018/1039364/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5155718/>

<https://www.sciencedirect.com/science/article/abs/pii/S0899900716301976>

**Nancy** uses Strontium as a micro mineral:

<https://academic.oup.com/jcem/article/98/2/592/2833105>

Ipriflavbone: <https://pubmed.ncbi.nlm.nih.gov/9263613/>

**Exercise after my broken right fibula.** After 4 weeks of using the knee scooter, my left knee and hip were painful and out of alignment. This is how I corrected this:

**Never limp** - limping throws the alignment off further. To avoid limping, I marched to keep all joints in alignment.

**Hip brace** - my hips were unstable, so a velcro belt pulled tight kept my hips from spreading, which was throwing off my knees as well.

**Knee brace and copper sleeve.** When going on long walks, I wore the braces. At night I wore a light copper sleeve around my knee. This seemed to heal it by morning.

**Exercises** - I used Bob&Brad as my PTs. They gave foot and leg exercises to rebalance and strengthen the weakened muscles.

I also do leg lifts in all directions, balance on my toes in one deep knee bend and on each foot in a 'Tree Pose'. Keeping the butt muscles in shape is key to maintaining mobility.

**Reversing Osteoporosis** - use the same strategies as with healing bones.

**Jennifer - Incrediwear** - copper clothing. She wears the gloves for arthritis in her hands.

<https://incrediwear.com/>

**Samira - Comfrey** 1 tsp powder or crushed leaves in a couple drops of olive oil - applied externally on a cloth over a broken bone, but not on a joint. Protect clothing - it stains.

**Yarrow** heals cuts. Antibacterial?

**Nancy - Bone Mender** - electronic stimulator. Review of studies on electrical stimulation and bone healing: <https://link.springer.com/article/10.1007/s00068-020-01324-1>

Her nephew used it after an accident. He healed quickly.

**Ostinol by Zycal** is a supplement that she used it after her truck accident. It also helps osteoporosis: <https://ostinol.com/>

## Knee and Hip Joints (Osteoarthritis)

### Mainstream Information:

<https://www.arthritis.org/diseases/osteoarthritis>

**Osteoarthritis** is a disease of the entire joint, including bone, cartilage, ligaments, fat and the tissues lining the joint (the synovium). Osteoarthritis can degrade cartilage, change bone shape and cause inflammation, resulting in pain, stiffness and loss of mobility. It typically develops slowly over time, but after such an injury, it can develop much more rapidly, within just a few years. **OA is not an inevitable aging disease; some people never develop it.**

### Symptoms:

Hips: Pain in the groin area or buttocks and sometimes on the inside of the knee or thigh.

Knees: A “grating” or “scraping” feeling when moving the knee.

Fingers: Bony growths (spurs) at the edge of joints can cause fingers to become swollen, tender and red, sometimes with pain at the base of the thumb.

Feet: Pain and tenderness in the big toe, with possible swelling in the ankles or toes.

### Mainstream Treatment:

Pain medicine: NSAIDS, Steroids, Cymbalta (antidepressant), Lyrica (anti-seizure).

OTC products with capsaicin, menthol and lidocaine.

Exercise: Strengthening exercises, stretching, aerobic exercise, balance exercises.

Weight Loss

Control of Diabetes - High Blood Sugar increases joint stiffness.

Physical Therapy

Braces

Injections: Cortisone, Hyaluronic acid.

Surgery: Joint replacement

### Why are more people getting joint replacements today? Our grandparents didn't suffer as often from degeneration of the joints.

Lack of Boron in the Soil. Boron is needed for rebuilding bone and joints.

Glyphosate in our food and environment. It chelates minerals so we can't absorb them.

### Tips to Avoid Knee Replacement - El Paso Manual Physical Therapy

<https://youtu.be/y6hlm0CpFe8?si=zukkd2v79i2DeSWY>

1. Stop walking for exercise if it causes joint pain.
2. Use a walker or cane when walking. It takes pressure off joints.
3. Be skeptical of doctor's 'bone on bone' diagnosis, if derived only from MRI or X-ray. Usually, the problem can be reversed.
4. Do gentle, not aggressive, stretching.
5. Stretch for less time, but more frequently. Stretch for only 30-60 seconds.

6. Try foot twisting exercise. Rotates the knee.
7. Tailgate swing as often as possible. It moves the fluid inside the knee joint.
8. Massage the muscles on the front of the thigh.
9. Drink water
10. Take joint supplements - take at least 2 months
11. Stop strengthening the quad muscles on front of thigh. If they are the dominant muscle, it compresses the knee joint.
12. Stop strengthening the ham muscles on the back of thigh.
13. **Strengthen the glutes** - the butt muscles. They directly effect the knee joint.\*
14. Get a professional PT from the right clinic - not from a rehabilitation clinic. Most patients there should not have had surgery.

**Important:** Read labels on your food - even organic foods - and **never eat carrageenan**. It causes arthritis and GI inflammation. We injected it into rats to cause arthritis in the lab, when searching for anti-inflammatory drugs. The joints would swell by 50% or more.

**Alta** - Never drink Ensure or Boost.. They both have carrageenan. Also check ingredients in gluten free foods.

Xanthan gum seems to be ok as a thickener, as opposed to carrageenan.

After joint replacements, she used acupuncture to get through the pain. She had a congenital socket that was malformed. After the first hip was replaced, the other hip took the burden and had to be replaced as well. After the knees are replaced, you can't kneel.

**Jennifer - Avoid nightshades** (tomatoes, peppers, eggplants, goji berries, potatoes) - cause inflammation in some people.

### Supplements:

**Glucosamine sulfate** is commonly prescribed in Europe, but mostly neglected in the US:

**My Experience:** I learned about this in 1997 when I had severe knee pain after moving into a house and carrying boxes up steps and walking on hardwood floors for the first time. My left knee became so weak that I had to lean against a wall to walk up the steps. After taking glucosamine sulfate (NOT hydrochloride) 1500 mg/day, my knee returned to normal. I think it's my weakest knee because I drove a car with a clutch through Philadelphia for years. It's a repetitive motion injury. It no longer gives me trouble unless I injure it.

In the 1990s some studies showed glucosamine sulfate helped osteoarthritis without side effects experienced with NSAID pain killers:

<https://www.sciencedirect.com/science/article/abs/pii/S1063458405800068>

<https://europepmc.org/article/med/1300310>

Recent research is still variable in showing the effects, although the vast majority of the studies show significant improvement with the use of glucosamine. This study showed why some of the results vary between studies. Since profit of this supplement is minimal, research is limited. <https://onlinelibrary.wiley.com/doi/abs/10.1002/art.22728>

**Chondroitin sulfate** acts much like glucosamine to restore joints. The usual dose is 1200 mg/day and can be taken with the glucosamine.

Take both after a meal for several months to see if these work for you. It doesn't work for everyone.

**MSM (methylsulfonylmethane)** - works well in combination with glucosamine to further reduce pain and swelling in the knee. Research:

<https://link.springer.com/article/10.2165/00044011-200424060-00005>

**Sue** High dose MSM (8 gm) is also good for allergies

**Avocado-soybean unsaponifiables** are extracts of the avocado and soybean. The brand name is Piascledine and this may reduce cartilage deterioration. This review of 4 RCTs with either hip or knee OA, showed significant pain reduction, especially in those with knee OA, but therapy should continue at least 3 months to determine personal effectiveness. <https://www.sciencedirect.com/science/article/pii/S1063458407003184>

This list of ingredients does not indicate it's organic soy.

<https://www.amazon.com/Piascledine-300-30-Capsules/dp/B07NMMRSN4>

**Curcumin or Turmeric** are anti-inflammatories and may give stomach pain or interfere with some blood pressure drugs. They are as effective as ibuprofen for pain, but more effective for function. Add black pepper so it is absorbed better.

This mouse study showed that it slowed the progression and pain associated with OA in mice:

<https://arthritis-research.biomedcentral.com/articles/10.1186/s13075-016-1025-y>

This is a double blind, randomized controlled trial (RCT). It showed that in 8 weeks, a bioavailable form of curcumin significantly lessened pain in 50 OA patients.

<https://www.sciencedirect.com/science/article/pii/S0949265815301913>

**Omega 3 fatty acid** help with heart and joint issues. DHA is more effective for inflammation than EPA. Never take these supplements if they have a fishy smell. Keep refrigerated.

**Boswellia** - has the same effect as curcumin. This review of eleven RCTs, including 1009 patients, compared the effects of Boswellia or Curcumin to either placebo or NSAIDs and showed significantly less pain and more function of the joints with either supplement, comparable to the effects of NSAIDs, without the side effects.

<https://www.sciencedirect.com/science/article/abs/pii/S0049017218300027>

**Boron - 3 mg/day.** A trace element that is deficient in modern food. Deficiency has been linked to knee problems. It helps the uptake of calcium, magnesium and other minerals and is anti-inflammatory.

[https://ibn.idsi.md/vizualizare\\_articol/157942](https://ibn.idsi.md/vizualizare_articol/157942)

**Samira** - tried food grade borax for arthritis in her hands. She puts a little on her wet finger tip and takes this twice/day followed by water, and also uses Celtic salt as a source of minerals. The borax helps her hands, even though she still eats nightshades from her garden. Three days after missing the supplement, her hands started aching. She will add to it to her garden next year.

**Nancy:** Borax is a combination of boron, oxygen and sodium. She takes **Pure Encapsulation boron glycinate** 2 mg, but tests with kinesiology. She also takes Magnesium and Potassium from Pure Encapsulation and Zymogen minerals tested. She takes various forms of Magnesium for jumpy legs.

**Sue had trouble with magnesium**, but found that she does well with Magnesium Taurate from Cardiovascular Research. <https://www.swansonvitamins.com/p/cardiovascular-research-magnesium-taurate-125-mg-180-caps>

**Samira** has trouble with many forms of magnesium. They give her migraines. We discussed possible solutions and other forms of magnesium. Nancy likes the Xymogen brand of supplements.

**Exercises** - PTs are helpful. Bob&Brad and El Paso Manual are on YouTube and give helpful exercises and advice for specific problems. Here are 2 videos that may stop knee arthritis:

**Bob&Brad:** <https://youtu.be/CprGgFsGNhs?si=7qr7Wrihko9rQVO6>

**\*El Paso Manual PT:** <https://youtu.be/dKQOMd8B-y4?si=6jkhSuTOPA95IDUt>

**Knees Over Toes** - Rehab Program for joints and back. Dr Berg found this helpful for his own joint problems.

<https://youtu.be/HXt5kTTTrho?si=rGXo5P7DLLdqyOCd>

<https://www.atgonlinecoaching.com/>

Book: **Knee Ability Zero** - 3400 ratings average 4.7 on Amazon

<https://www.amazon.com/Knee-Ability-Zero-Ben-Patrick/dp/B09KNGDYGL>

**Book** for more ideas - I just found this author Will Harlow on YouTube and was impressed.

**Thriving Beyond Fifty: 78 Natural Strategies to Restore Your Mobility, Avoid Surgery & Stay Off Pain Pills in Your Fifties... and Beyond!** This gets 156 rating averaging 4.4 stars.

**Nancy:** Stretching at the PT after her car accident has helped. She has handouts for us. Half an hour/day makes a big difference. Do the opposite movement gently when an activity causes a repetitive movement on one direction. It's improved her stamina and balance. She's now back to weeding her garden.

**Jennifer:** Qigong has made huge difference in core strength and mobility - knees and flexibility. She presented a demonstration of her Qigong practice in our March 6, 2023 meeting.

She uses **Nature's Plus - Glucosamine, Chondroitin and MSM Ultra RX-Joint:**

<https://www.swansonvitamins.com/p/natures-plus-ultra-rx-joint-180-tabs>

**Both Nancy and Jennifer have incorporated their physical therapy and Qigong, respectively, into their daily routine and it's made a huge difference in how they feel. It's a reminder that we must develop a routine if we want to maintain our health.**

### **Injection treatments for joints:**

**Platelet-rich plasma (PRP)** is a natural concentrate of blood growth factors extracted from the patient and injected into the joint to treat degenerative lesions in the knee. WOMAC Score is a measure of combined pain, stiffness and functionality of the arthritic joint.

**Sue:** Husband tore meniscus about 10 years ago. PRP shot painful for a day, but his knee healed after one shot. His knees are now getting worse again.

**Connie:** Took a friend years ago for PRP shots in her knee. The first shot was successful, but the doctor was pushing knee replacements. He wasn't interested in giving her a second shot. She went to 2 other doctors and the results were not good. In fact, the last doctor couldn't find her vein to collect her blood for the plasma injection. She gave up and got a knee replacement.

**Sports Medicine Doctors do PRP shots on athletes,** rather than doing joint replacements.

### **Research:**

**Platelet-rich plasma: intra-articular knee injections produced favorable results on degenerative cartilage lesions.** Kon E, et al.

<https://link.springer.com/article/10.1007/s00167-009-0940-8>

100 patients with chronic knee degeneration were treated with PRP and evaluated before and at the end of their treatments and at 6 and 12 months. The improvements in stability of the joints were significant and lasted through the 6 month follow up, but declined by the 12 month follow up.

**Treatment of knee joint osteoarthritis with autologous platelet-rich plasma in comparison with hyaluronic acid.** Spaková T, et al.

[https://journals.lww.com/ajpmr/abstract/2012/05000/treatment\\_of\\_knee\\_joint\\_osteoarthritis\\_with.5.aspx](https://journals.lww.com/ajpmr/abstract/2012/05000/treatment_of_knee_joint_osteoarthritis_with.5.aspx)

120 patients were divided into 2 groups and injected with either PRP or hyaluronic acid. Those receiving PRP had significant improvement at the 3 and 6 month follow ups.

**Comparison between intra-articular infiltrations of placebo, steroids, hyaluronic and PRP for knee osteoarthritis: a Bayesian network meta-analysis.** Migliorini, et al.

<https://link.springer.com/article/10.1007/s00402-020-03551-y>

Data from 30 RCTs (3463 patients) were collected. At 3, 6 and 12 month follow-ups, PRP showed the best WOMAC scores, followed by the Placebo, Steroids and hyaluronic acid.

**Hypertonic dextrose prolotherapy (HDP)** is an injection of a concentrated dextrose solution for the purpose of local treatment of musculoskeletal pain and possible enhancement of repair mechanisms. This systematic review and meta-analysis examines the clinical utility of HDP injection for treatment of knee osteoarthritis (OA). **Research:**

**Meta-analysis of clinical trials focusing on hypertonic dextrose prolotherapy (HDP) for knee osteoarthritis.** Jun Wang, et al

<https://link.springer.com/article/10.1007/s40520-021-01963-3>

Five randomized, controlled studies with a total of 319 treated patients were included in the final analysis. HDP treatment significantly improved total WOMAC score, knee pain and function.

### Sources for Supplements:

#### Connie:

**D3:** <https://www.swansonvitamins.com/swanson-ultra-high-potency-vitamin-d-3-coconut-oil-5000-iu-60-sgels>

**Noni juice:** <https://www.swansonvitamins.com/swanson-organic-certified-organic-noni-32-fl-oz-946-ml-liquid>

**K2:** <https://www.swansonvitamins.com/swanson-ultra-high-potency-natural-vitamin-k-2-menaquinone-7-from-natto-100-mcg-30-sgels>

**Collagen Booster:** <https://www.swansonvitamins.com/reserveage-organics-ultra-collagen-booster-biocell-collagen-derma-90-caps>

**Osseopapite:** <https://central-family-practice.myshopify.com/products/osseopapite-plus?variant=28579845703>

#### Nancy:

**Joint Food:** <https://www.jointfood.com/>

**Boron glycinate by Pure Encapsulation:** <https://www.pureformulas.com/product/boron-glycinate-by-pure-encapsulations/1000005169>

**Selenium by Pure Encapsulations:** <https://www.pureformulas.com/product/selenium-citrate-by-pure-encapsulations/1000002491>

**New Chapter -Bone Strength:** <https://www.swansonvitamins.com/p/new-chapter-bone-strength-take-care-270-tabs>

As always, check with your doc for drug interactions.

**Jennifer** also found a supplement that makes a big difference in the arthritis in her fingers. It's Nature's Plus Ultra Rx Joint Extended Delivery, a combination of glucosamine, chondroitin and MSM. She gets it from Swanson Vitamins.

**Nancy** uses Pure Encapsulation Strontium for bone strength. She takes it once/week. You don't want to take too much. Also **Iprifavone\*** a unique flavonoid that supports bone density. She



also takes a fermented New Chapter Bone Strength which is plant sourced. It has many supplements in one. She changes these things around so her body doesn't get use to one thing.

\***Ipriflavones** is a synthetic derivative of naturally occurring isoflavone, manufactured from daidzein. It has been shown to inhibit osteoclast formation without suppressing the rate of bone formation.<sup>602</sup> IP also shows bone-forming activity through proliferation of osteoblast cell lines and inhibition of parathyroid hormone activity.<sup>603</sup> More than 60 human study trials have been published in the last 10 years evaluating ipriflavone for prevention and treatment of osteoporosis, and it is a popular nonprescription supplement.”

<https://www.sciencedirect.com/topics/pharmacology-toxicology-and-pharmaceutical-science/ipriflavone>

**Connie:** We are using our **vibration platform** from LifePro and it seems to vibrate our joints back into place. It's also good for osteoporosis:

[https://www.amazon.com/Lifepro-vibration-platform-exercise-machine-lymphatic-drainage/dp/B084KZ4J6N/ref=sr\\_1\\_6?keywords=lifepro%2Bvibrating%2Bplatform&qid=1696873659&sr=8-6&th=1](https://www.amazon.com/Lifepro-vibration-platform-exercise-machine-lymphatic-drainage/dp/B084KZ4J6N/ref=sr_1_6?keywords=lifepro%2Bvibrating%2Bplatform&qid=1696873659&sr=8-6&th=1)

**Connie also uses a strong red/infrared light** that penetrates up to 1 ½” and promotes healing. This is the one I have:

[https://www.amazon.com/LifePro-Infrared-Light-Therapy-Device/dp/B09TWLZM9P/ref=sr\\_1\\_7?crid=1U0ZC0FFMWRLI&keywords=lifepro+infrared&qid=1696873805&srefix=lifepro+infrared%2Caps%2C194&sr=8-7&ufe=app\\_do%3Aamzn1.fos.f5122f16-c3e8-4386-bf32-63e904010ad0](https://www.amazon.com/LifePro-Infrared-Light-Therapy-Device/dp/B09TWLZM9P/ref=sr_1_7?crid=1U0ZC0FFMWRLI&keywords=lifepro+infrared&qid=1696873805&srefix=lifepro+infrared%2Caps%2C194&sr=8-7&ufe=app_do%3Aamzn1.fos.f5122f16-c3e8-4386-bf32-63e904010ad0)

**Study on 50 elderly patients with degenerative osteoarthritis of both knees.** They were randomly assigned to three treatment groups: red (15 patients), infrared (18 patients), and placebo (17 patients). Infrared and placebo emitters were double-blinded. Pain reduction in the red and infrared groups after the treatment was more than 50% in all scoring methods. There was also significant functional improvement in red- and infrared-treated groups.

<https://agsjournals.onlinelibrary.wiley.com/doi/abs/10.1111/j.1532-5415.1992.tb01824.x>

**Connie** - My new thing. I inherited some supplements and my new favorite thing are these chocolates infused with Ashwaganda: Brand is FX and it comes in different herbal combos:

[https://www.amazon.com/Chocolate-Focus-Concentration-Ashwagandha-Gluten-Free/dp/B08JHG5634/ref=pd\\_ci\\_mcx\\_mh\\_mcx\\_views\\_1?pd\\_rd\\_w=nTd4W&content-id=amzn1.sym.225b4624-972d-4629-9040-f1bf9923dd95%3Aamzn1.symc.40e6a10e-cbc4-4fa5-81e3-4435ff64d03b&pf\\_rd\\_p=225b4624-972d-4629-9040-f1bf9923dd95&pf\\_rd\\_r=ZGZQQVGPW9EBW31BHAIJ0&pd\\_rd\\_wg=XQFCu&pd\\_rd\\_r=da2dd258-ee54-459f-bcbb-15b8972dc243&pd\\_rd\\_i=B08JHG5634](https://www.amazon.com/Chocolate-Focus-Concentration-Ashwagandha-Gluten-Free/dp/B08JHG5634/ref=pd_ci_mcx_mh_mcx_views_1?pd_rd_w=nTd4W&content-id=amzn1.sym.225b4624-972d-4629-9040-f1bf9923dd95%3Aamzn1.symc.40e6a10e-cbc4-4fa5-81e3-4435ff64d03b&pf_rd_p=225b4624-972d-4629-9040-f1bf9923dd95&pf_rd_r=ZGZQQVGPW9EBW31BHAIJ0&pd_rd_wg=XQFCu&pd_rd_r=da2dd258-ee54-459f-bcbb-15b8972dc243&pd_rd_i=B08JHG5634)