You Had a Fracture
Now What?
Your Guide to Bone Health After a Fracture
Adults over age 45 who break a bone with little injury are at greater risk of breaking a bone again.

This guide will help you make the most of your recovery, get you back in action, and improve your bone health to prevent future fractures.

Support was provided by Strong Bones for a Healthy Life™, a collaboration between Amgen and Anthem, Inc.
Fracture Recovery Basics*
Follow the steps in this guide to speed your recovery and to reduce your risk of breaking another bone.

- **Focus on Healing**
  - Control inflammation and pain.
  - Make your home safe and easy to get around.
  - Take enough calcium and vitamin D.
  
  While you heal, it is normal to feel warmth around the fracture and a deep aching pain. Report any signs of infection or excessive pain to your health care team.

- **Schedule Follow-up Appointments**
  - Meet orthopedist for fracture healing check.
  - Make appointments with your health care team.
  - Schedule a bone density test.
  
  Start planning your follow-up visits with the orthopedist, physical therapist, bone density office and your primary care provider. The team will help you get back in action faster.

- **Assess Your Function and Bone Health**
  - Meet physical therapist for your rehab plan.
  - Get your bone density test.
  
  Ask for a written rehabilitation plan that you can understand along with specific instructions. Get a copy of your bone density test results.

- **Create Your Bone Health Plan**
  - Meet with your primary care provider.
  - Talk to your pharmacist about your medications.
  - Include nutrition, physical activity and fall prevention in your plan.
  
  Bring all of your reports and instructions to your appointment. You will review tests, track healing progress and create a bone health plan together.

- **Build Strength and Get Moving Again**
  - Improve mobility, strength and balance.
  - Eat a bone-healthy diet.
  - Join a community exercise program.
  
  Expect that it will take several months to regain your function. Don’t give up. Keep working on strength and mobility.

*Recovery will depend on the bone you fractured and how badly it’s broken. These are general guidelines to give you a road map to discuss with your health care team.*
Make Your Home Safe and Easy to Get Around

When you get home, you will need a secure space to heal.

Ask a friend or family member to help you review this safety checklist. An occupational therapist can visit your home to give you extra tips and advice.

**Throughout the House**
- ✓ Remove items from walkways that you can trip over.
- ✓ Keep items you use often (TV remote, phone, eyeglasses) on a table near you.
- ✓ Add night lights in hallways and in the bathroom.
- ✓ Remove or secure small throw rugs.

**In the Bathroom**
- ✓ Put grab bars next to your toilet and in the tub or shower.
- ✓ Use non-slip mats in the bathtub and on shower floors.
- ✓ Consider a shower seat and a raised toilet seat if you had a leg or hip fracture.

**Bedroom**
- ✓ Keep items you use regularly on a table next to the bed with a lamp.
- ✓ Keep electrical and telephone cords pushed back against the wall.
- ✓ Keep the floors free of clothes, books, shoes and other clutter.

**Outside the house**
- ✓ Keep a safe path from your home to the street.
- ✓ Remove ice from steps and walkways.
- ✓ Install handrails on steps.
Get Enough Calcium and Vitamin D

Your bones need calcium and vitamin D to help them mend.

**Calcium is the principle mineral that makes bones strong.**
Aim to get 1,000–1,200 milligrams of calcium every day, especially during the healing process. Three to four servings of dairy or calcium-fortified foods will meet this requirement. See page 9 for good food sources of calcium.

**Vitamin D is essential for helping your body absorb calcium.**
Few foods provide vitamin D, and the sun is not a reliable source. Vitamin D absorption is not as good as you age. Your provider may test your vitamin D blood level and have you take a supplement to reach your goal.

Do You Need a Calcium Supplement?

**Taking too much calcium, especially from supplements, can cause kidney stones and may increase the risk of heart problems.**

Know how much calcium you get from your diet using this simple rule of thumb.

1. The calcium from all foods you eat every day (except dairy or calcium-fortified foods) is 300 mg.
2. Each portion of dairy or calcium-fortified food (1 cup low fat milk, yogurt or milk alternative, 1½ slices of cheese, 1 cup calcium-fortified juice or cereal) is 300 mg.
3. If you do not eat 3–4 servings of dairy or a calcium-fortified food a day, you will not meet your daily requirement and may need a calcium supplement.

**TIP:** You might be able to reach your daily requirement by adding another calcium-rich food serving. See page 9 for some suggestions.

About Calcium Supplements.

**Calcium carbonate and calcium citrate are the most common types.**
Calcium carbonate contains more elemental calcium per tablet than calcium citrate and needs to be taken with a meal. The carbonate form may also cause constipation. Calcium citrate can be absorbed without stomach acid.

- Avoid taking calcium with high fiber meals or bulk forming laxatives.
- If you need more than 1 tablet, take them at different times.
- Avoid taking calcium and iron supplements together.

**TIP:** Read the supplement facts to see the calcium type and amount per serving.

Only take calcium supplements if you eat less than 3 portions of dairy or calcium-fortified food a day. Do not take more than 600 mg at a time or more than 1,200 mg in a day.
An orthopedic surgeon stabilized your fracture to help the bone heal and may have prescribed pain medicine and occupational therapy. In the coming weeks, the surgeon will order X-rays to monitor how your fracture is healing. Once healed and any cast removed, the surgeon will prescribe physical therapy.

- If you had a cast or no surgery, expect a follow-up appointment 6–8 weeks after your fracture occurred.
- If you had surgery to repair the bone, expect a follow-up 1–2 weeks after surgery and periodically until the fracture heals.

Occupational therapist assesses how well you can do typical daily activities, like bathing and dressing. The therapist may visit your home to help you return to your normal routine.

Physical therapist evaluates how much function you lost while the fracture was healing and you weren’t using your muscles. They will create a rehabilitation plan to strengthen muscles, increase flexibility, and improve balance and joint movement.

*Expect 6–8 weeks for the bone to heal before you begin physical therapy.*

Bone density technician performs a bone mineral density test to measure the strength of your bones to see if you are at risk for another fracture.

*Schedule an appointment for 3 months after your fracture.*

Your primary care provider monitors your bone health after your fracture heals. The provider will review the results of your bone density test, evaluate your risk of breaking another bone and work with you on a plan to prevent future fractures.

*See your provider after your bone density test to make a bone health plan.*
Assess Your Function and Bone Health

Physical Therapy
The goal of physical therapy is to safely bring back full movement in your joints around the fracture and build strength while the healing continues.
You may start physical therapy right away after hip fracture or once your cast is removed for other types of fractures.

Bone Mineral Density Test
A bone mineral density test (or DXA) uses a small amount of X-rays to measure the amount of minerals—namely calcium—in your bones.
If you have not had a bone density test in the past few years, you will need one.
The test is painless and takes about 15 minutes.
Schedule your bone mineral density test about 3 months after your fracture. The results are an important part of your bone health plan.
Ask for a copy of the test results and share them with your provider.
Create Your Bone Health Plan

Your primary care provider and health care team will help you prevent bone loss and future fractures.

Once you have your bone density test results, your provider will review your medical information and develop a plan to improve your bone health. The plan may include nutrition, physical activity, fall prevention instructions, and a medication to strengthen your bones.

Speak with your local pharmacist.

The pharmacist is a great resource for answering questions about assistive devices, supplements, and medications. Bring all of your medications to the pharmacy during a quiet time of the day and review these questions with the pharmacist.

- Am I taking my medications the right way?
- Am I taking the right dose at the right time?
- Should any of my medications or supplements not be taken at the same time?

Check with your provider to see if any of your medications might increase your risk of falling.
Bone Healthy Nutrition.

**Calcium and vitamin D** are the most important nutrients for a bone healthy diet. Aim for 1,000–1,200 mg of calcium every day and follow your provider’s recommendation about vitamin D supplements.

### About 300 mg in each serving

<table>
<thead>
<tr>
<th>Food</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>Low-fat milk</td>
<td>1</td>
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<tr>
<td>Low-fat yogurt</td>
<td>1</td>
</tr>
<tr>
<td>Milk alternative</td>
<td>1</td>
</tr>
<tr>
<td>Calcium-fortified juice</td>
<td>1</td>
</tr>
<tr>
<td>Cheese (1/2 slices)</td>
<td></td>
</tr>
<tr>
<td>Cheese enchilada (1 piece)</td>
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<tr>
<td>Cheese pizza (1 slice)</td>
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**Protein** is essential for keeping muscles and bones strong. Aim to get 4–6 ounces of meat, poultry or fish or other high protein foods a day.

### About 1 ounce

- 1 Tbsp peanut butter
- 12 almonds
- 1 egg
- 1/4 cup cooked beans

### About 3–4 ounces

- Small hamburger or steak
- Small chicken breast
- Salmon steak
- Can of tuna

If you don’t eat all the food groups, you may need a multivitamin.

### Other bone-healthy vitamins and minerals

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</thead>
<tbody>
<tr>
<td>Vitamin A</td>
<td>- Cantaloupe</td>
<td>- Spinach</td>
<td>- Carrots</td>
<td>- Magnesium</td>
<td>- Vitamin A</td>
<td>- Cheese</td>
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<tr>
<td>- Mangoes</td>
<td></td>
<td>- Kale</td>
<td>- Lettuce</td>
<td>- - Quinoa</td>
<td>- - Eggs</td>
<td>- - Butter</td>
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<tr>
<td>Vitamin C</td>
<td>- Oranges</td>
<td>- Broccoli</td>
<td>- Soybeans</td>
<td>- - Salmon</td>
<td>- - Tuna</td>
<td>- - Milk</td>
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<tr>
<td>- Strawberries</td>
<td></td>
<td>- Cabbage</td>
<td>- Kidney Beans</td>
<td>- - Shellfish</td>
<td>- - Tuna</td>
<td>- - Yogurt</td>
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<tr>
<td>Potassium</td>
<td>- Bananas</td>
<td>- Vitamin K</td>
<td>- Vegetable</td>
<td>- Magnesium</td>
<td>- Vitamin B12</td>
<td></td>
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<tr>
<td>- Apricots</td>
<td></td>
<td>- Parsley</td>
<td>- Radishes</td>
<td>- - Tuna</td>
<td>- - Salmon</td>
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<tr>
<td>Magnesium</td>
<td></td>
<td>- Swiss Chard</td>
<td>- Potassium</td>
<td>- - Tuna</td>
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<td></td>
<td>- Lima Beans</td>
<td>- - Mackerel</td>
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<td>- Lentils</td>
<td>- - Tuna</td>
<td>- - Salmon</td>
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</table>

- Vitamin A
- - Eggs
- - Tuna
- - Liver

- Vitamin B12
- - Milk
- - Eggs

- Magnesium
- - Tuna
- - Salmon

- Phosphorus
- - Liver
- - Salmon
Weighing risk is challenging for patients and providers. Having a good conversation with your provider is key to your bone health plan.

Do you need a drug to strengthen your bones?

Understand your risk of having another fracture before you decide on a treatment. Current bone drugs are effective at reducing future fractures.

What is your risk of having another fracture?

Your provider will review the results of your bone mineral density test and medical information to assess your risk of breaking another bone. Many factors increase your risk, including advanced age, gender, use of certain medications and serious chronic conditions. Now that you have had a fracture, the chance of having another fracture is nearly doubled. In fact, of all subsequent fractures, about one out of four will occur in the first 12 months.

Think about your fracture risk and how it feels to you. Listen to your provider’s recommendations, ask questions and decide if a bone drug will lower your fracture risk.

You play a critical role in the decision. You must think about your chances of having another fracture and whether you will benefit from a bone drug.
All FDA-approved treatments go through rigorous testing to determine effectiveness and safety. If your risk of future fracture is high, you will benefit from a bone drug.

Before you begin any bone drug, your provider may ask for lab tests to determine if there is any reason for bone loss. The most common tests measure your vitamin D blood level and calcium absorption.

Finding the treatment that is right for you is based on your fracture risk and your personal preference. There are many options available to reduce your risk.

As with any medication, some people can experience side effects. Discuss the risks with your provider and be sure to take the bone drug as prescribed. You will need to get enough calcium and vitamin D for the drugs to work. Your provider will review your progress with you regularly.
Build Strength and Get Moving Again

Physical activity and exercise stimulate bone building, make you stronger and help you feel better.

**Modified squats strengthen lower legs and help you get up.**
- Stand with feet hip width apart.
- Keeping back straight, squat down by hinging forward at the hip and sticking your rear-end out.
- Lower your body as far as comfortable while keeping your knees behind your toes.
- Hold this squat position for 1 second. Return to standing.
  - Repeat 8 times.

**Standing on one leg improves balance.**
- Use a chair or table to steady yourself when you start.
- Stand tall. Lift your knee until your thigh is parallel to the ground.
- Hold for 30 seconds. Slowly lower your leg.
- Repeat with other leg and work up to balancing without holding on.

**Standing “W” enhances posture.**
- Stand with your feet hip width apart.
- Begin with arms at shoulder level, elbows bent and fingers pointing up.
- Squeeze shoulder blades together, pressing your arms back and down.
  - Hold for 3 seconds.
  - Repeat 8 times.

In as little as five minutes a day, you can begin to see improvements in your strength, balance and posture. Don’t give up!
Take time to use good posture and body mechanics in everyday activities.

Avoid forward rounding of the back. Hinge at your hips and keep your knees bent.

Avoid twisting from a slumped position. Keep your back tall and don’t force the movement.

TIP: Consider joining a community exercise program like Tai Chi. Learn exercises to develop strength and improve balance to prevent falls. Use correct body mechanics to prevent fractures in your spine.
Preventing falls is a key to not breaking bones.

Pay attention to where you put your feet.
- Slow down and watch where you walk.
- Avoid carrying items in front of you that keep you from seeing where you are stepping.
- Use handrails.

Stay on the ground.
- Ask for help if you need to use a stool or ladder.

Check your footwear.
- Wear shoes that have good soles and provide support.
- A shoe with a low heel is ideal.
- Avoid slippers and flip flops.
- Don’t wear sandals without a heel strap.

Get your eyes checked every year.
- Good eye sight can reduce your chances of falling.
- Update your eye glasses.
- Have your eye doctor check for glaucoma or cataracts.

Review your medications with your doctor.
- People who take four or more medications are at increased risk of falling.
- Some medications can cause dizziness and sleepiness.
- Know your medication side effects so you can take extra precautions to prevent falls.

TIP:
Improve your balance to prevent falls. Whenever you can, stand on one leg—when you are waiting in line at the grocery store or brushing your teeth. Make sure you have something sturdy to hold if you feel unsteady. Your balance will improve with practice!
My Bone Health Record

The bone(s) I broke: ___________________________ Date: ____________

I received:  ○ an X-ray  ○ a cast  ○ a sling  ○ a walking aid/crutches

My Discharge Instructions  How much  How often  N/A
○ Pain medication: ___________________________  ○
○ Calcium: ___________________________  ○
○ Vitamin D: ___________________________  ○
○ Home safety check: ___________________________  ○

My Health Care Team
○ Orthopedic surgeon: ___________________________
  Phone number: ____________ Visit date: _________
○ Physical therapist: ___________________________
  Phone number: ____________ Visit date: _________
○ Bone density test center: _______________________
  Phone number: ____________ Visit date: _________
○ Primary care provider: _______________________
  Phone number: ____________ Visit date: _________
○ Pharmacist: ___________________________
  Phone number: ____________ Visit date: _________

My Numbers
Bone density test results:  ○ Normal  ○ Low bone density  ○ Osteoporosis
Fracture risk:  ○ Low <10%  ○ Moderate  ○ High >20%

My Bone Health Plan
Bone drug name: ___________________________ Date started: ____________
Nutrition:  ○ Calcium-rich foods  ○ Protein intake  ○ Fruits and vegetables
Physical activity:  ○ Leg strength  ○ Back extensions  ○ Posture correction
Fall prevention:  ○ Balance  ○ Make home safer  ○ Join exercise class (i.e. Tai Chi)