Tips for Better Care...

A comprehensive guideline to care for osteoporosis patients









Dear Caregiver,

As your doctor rightly prescribed the medicines for your dear one, it is very important to follow his instruction and schedule. Along with medication, it is also very important to give your dear one special care and attention. This will help him to cope up with the situation faster and for overall wellbeing.

We are proudly presenting a very unique and comprehensive guidelines for the care of osteoporosis patients. This book will help you to understand the disease and various steps for special care.

If you need, any further information please contact your doctor, as he is your best guide.

With Best Compliments From



Makers Of



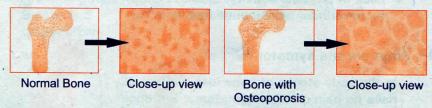


Q- What is osteoporosis?

Ans— Osteoporosis is a common bone disease that affects both men and women, usually as they grow older. In fact, translated from the Greek,osteoporosis literally means 'porous bones'. It is a silent disease of the bones that makes them weaken and prone to fracture. The total affected population in India could be around 25 million.

Q- Why does it happen?

Ans— Bone is a living tissue that is in a constant state of regeneration, as old bone is removed (bone resorption) and replaced by new bone (bone formation). By their mid-30s, most people begin to gradually lose bone strength as the balance between bone resorption and bone formation shifts, so that more bone is lost than can be replaced. As a result, bones become thinner and structurally weaker.



Q- What are the risk factors for osteoporosis?

- Advanced age Bone loss occurs in adulthood, beginning in middle age and accelerating during menopause.
- Female gender Women have less bone mass than men, so any
 decline over time will affect women more strongly. The
 younger a woman experiences menopause, the more rapidly
 she loses the benefits of estrogen.
- Early menopause Estrogen helps keeps bones strong. The younger a woman experiences menopause, the more rapidly she loses the benefits of estrogen.



- Corticosteroid use People who need to take medications such as prednisone, prednisolone or dexamethasone regularly are prone to accelerated bone loss.
- Smoking Tobacco use accelerates loss of bone, especially in women.
- Alcohol Overuse of alcohol increases the chance of developing osteoporosis.
- Low body weight Underweight women often have lower bone mass than heavier women at similar ages.
- Inadequate intake of calcium and vitamin D Both are necessary to allow bones to remodel properly.
- Lack of physical activity Exercise is now recognized as a key factor in maintaining bone health.

Q- What are the symptoms?

In the early stages of bone loss, you usually have no pain or other symptoms. But once bones have been weakened by osteoporosis, you may have osteoporosis symptoms that include:

- Back pain, which can be severe if you have a fractured or collapsed vertebra
- Loss of height over time, with an accompanying stooped posture
- Fracture of the vertebrae, wrists, hips or other bones



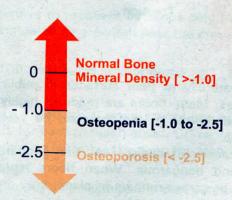


Normally, x-rays are the easiest and cheapest way to diagnose fractures and other diseases of bones. However, osteoporosis doesn't show up in x-rays until it is quite advanced; bones have to lose about 40% of their calcium before it's noticeable on an x-ray film. So x-rays aren't of much use in early detection.

A more sensitive and accurate test is bone densitometry. This is a test that measures bone density that is, how much bone mineral there is packed into a given area of bone. The most accurate of these is called the dual energy x-ray absorptiometry (DXA) test.

The results of your bone density test will give you a T-score. The T-score compares your bone density with that of an average healthy young adult of your sex. Below you will see how to interpret your T-score:

- Above -1 = Your bone density is considered normal
- Between -1 and -2.5 = Your score is a sign of osteopenia, a condition in which bone density is below normal and may lead to osteoporosis
- Below -2.5 = Your bone density indicates you have osteoporosis



Once diagnosed, can osteoporosis be treated?

Once the bone has been lost, it can't be replaced. But the rate at which bone is lost can often be slowed by calcium and vitamin supplements, or by taking drugs that slows the resorption of bone.

Living with osteoporosis

Living with osteoporosis

If you have osteoporosis, it is important not only to help prevent further bone loss, but also to prevent a fracture. Preventing falls is especially important for people with osteoporosis.

Falls may be the result of:

- Balance problems
- Poor vision
- · Use of medications that affect equilibrium
- Chronic illness
- · Reduced muscle strength
- Hazards in the home and workplace

Steps you can take to avoid falls

Outdoor safety tips

Use a walker or cane for added stability





- Wear warm boots with rubber soles for added Traction
- Look carefully at floor surfaces in public buildings. Many floors are made of highly polished marble or tile that can be very slippery.

When these surfaces are wet, they become slick and dangerous. When floors have plastic or carpet runners in place, stay on them whenever possible



Indoor Safety Tips

- Keep all rooms free from clutter, especially on the floors
- · Keep floor surfaces smooth but not slippery. When entering
- · rooms, be aware of differences in floor levels
- Wear supportive, low-heeled shoes even at home.
 Avoid walking around in socks
- Be sure that all stairwells are well lit and that stairs have handrails on both sides.
 Consider placing fluorescent tape on edges of top and bottom steps

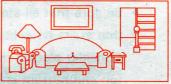


- For optimal safety, install grab bars on bathroom walls beside showers, and toilets. If you are unstable on your feet, consider using a plastic chair with a back and nonskid leg tips in the shower
- · Use a rubber bath mat in the shower
- Keep a flashlight with fresh batteries beside your bed
- Add ceiling fixtures to rooms lit by lamps only; or hook up a lamp that is activated by a switch near the entry point into the room.
- Use at least 100-watt bulbs in your home
- If you must use a step stool, use a sturdy one with a handrail and wide steps for hard to reach areas. Or, reorganize work areas and storage to minimize the need for stooping or excessive reaching
- Consider purchasing a portable phone that you can take with you from room to room. It provides security because not only can you answer the phone without rushing for it, but you can also call for help should an accident occur

Make your home fall safe

1) Living Room

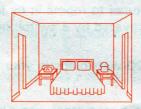
- Keep your home free of clutter to avoid tripping over stray objects
 For example, keep electrical cords and telephone wires out of walkways.
- Arrange furniture such as a low coffee table or stools so it doesn't create abstracts
- Buy chairs and couches that are sturdy



FLOORS & RUGS

- Check all floor surfaces to make sure they are in good repair and free of clutter.
- Cover slippery surface with carpet or rugs that are in good repair and anchor these firmly to the floor. Back area rugs with nonskid rubber
- Cover linoleum floors with a nonskid floor wax

2) Bed Room



- Check that the night time temperature in your home is not lower than 65° F. Prolonged exposure to cold temperature may cause a drop in body temperatures, leading to drowsiness and falling
- Get up slowly from sitting, lying or squatting since low blood pressure may cause dizziness at these times
- Place light switches within reach of bed(s) and a night light between the bedroom and bathroom

3) Bathroom



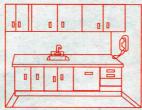
- Install grab bars on walls along the tub and shower and beside toilets
- Use nonskid matts, adhesive strips, or carpet on all surface that may get wet
- Install a padded shower seat and a portable, hand held shower head to allow you to sit while bathing

4) Dressing



- Choose proper footwear. Look for shoes that support the arch and have a firm nonskid sole with good treads
- Avoid wearing only socks loose fitting slippers, shoes with worn or slippery, soles, or high heels on stairs or waxed floors.
 And beware that sneakers may give too much traction and cause you to trip
- Sit down while putting on socks and shoes or trousers; reach by bending forward from the hips
- Keep the length of nightgowns and dresses short enough to avoid tripping when standing or climbing stair

5)Kitchen



- Item used every day should be placed in easy reach to avoid unnecessary bending or stooping. For example, pans and utensils can be hung from a board on the wall and revolving shelves set inside cabinets
- Store frequently used item in accessible cupboard to avoid the need to climb ladders or stools.
- Use a long handled grasping device to pick up objects without reaching
- Use a pushcart to help transfer hot or heavy objects from the stove to the table

6) Stair



- Falls occur most frequently on stair so be sure to install sturdy handrails on both side of stairways to help break a fall
- · Mark the first and last step with bright tape
- · Install light switches at the top and bottom of stairways

PROPER LIGHTING

 Provide ample lighting throughout the house, especially on bedside cables, in halls and along stairs. Make sure light switches are easy to reach

7)Telephone



Install a telephone in as many rooms as possible to be accessible in the event of an accident

If you fall, here are some things to remember

- Drop whatever you are carrying. Free your hands so that you can break your fall (it is better to risk fracturing a wrist than to break a shoulder or hip)
- If you think something is broken, don't move and don't let others move you until you get medical assistance.
- If you think you are only bruised and not seriously injured, try
 to get up on a chair rather than trying to get up from the floor.
 Avoid putting weight on the injured area.
- For minor bruises apply ice Identify what you can do to avoid a similar fall next time

Standing

Keep your head high, chin in, shoulder blades slightly "pinched." Maintain the natural arch of your lower back as you flatten your stomach. Your feet should point straight ahead with your knees lined up over your second toe. If you are standing in one place for any length of time, put one foot up on a stool or in an open cupboard. Switch feet periodically



Sitting

When sitting, use a rolled towel or pillow to support your lower back. The support should be thick enough to cushion your lower back and maintain the normal arch. Keep your head, back and hips in alignment, and keep your hips and knees at the same level. If your feet do not rest flat on the floor, use a small footstool. When reading, do not lean over your work, but maintain the natural curve of your back. At a desk, prop up a clipboard so it slants towards you like a drafting table. Use a footstool or foot rest when seated for long periods of time. To stand up from the chair, move your hips forward to the front of the chair and use your leg muscles to lift yourself





Walking

Walk with your chin in, head held high and shoulder blades slightly "pinched." Your feet should point straight ahead, not out to one side. Your knees should be lined up over where your 2nd toe is in your shoe. You may need to turn the knee outward consciously in order to line your foot up properly. Do not let your knees lock back as you bring your weight over your foot, but keep them slightly bent. Keep hips, knees and toes properly lined up when climbing stairs as well.





Bending and Lifting

To pick up an item, stand with your feet flat and about shoulder-width apart from one another. Both arms should touch your ribs or thighs unless you are using one hand for support. Maintaining your lower back curve, squat, kneel or sit in a chair. Keep one foot flat on the floor to keep equal force at the hip, knee and ankle. Bring the item close to your body at waist level. Gently breathe in while using your leg and thigh muscles to lift the object and straighten up. When you reach an upright position, exhale. Never lift objects, packages or babies weighing more than ten pounds.





To tie your shoes or dry your feet, sit in a chair, place your foot on a footstool or box, maintain proper back alignment and lean forward from the hips to tie or dry. When carrying groceries, request that the bags be packed light. Divide heavy items into separate bags and hold bags close to your body. You may also use a cart with wheels to transport bags from the store to home or from the car into the house. When unpacking, place packages on a chair or counter top instead of the floor.

Consider using a fanny pack instead of a heavy pocketbook.





Pushing or Pulling

Housework can involve strenuous physical exertion. For the person with osteoporosis, proper body mechanics when doing chores is essential. To protect your back from injury, consider these movements for vacuuming, mopping or sweeping floors, cleaning the bathtub, or gardening. For vacuuming type activities, maintain proper alignment by imagining your upper arms strapped to your chest from shoulders to elbows so they cannot move. Always face your work directly to keep from twisting your back. Keep your feet apart with one foot in front of the other. Shift your weight from one leg to the other to move the vacuum, broom, mop or rake back and forth. Lean forward from the hips and bend at the knees instead of the waist. Avoid polishing floors to a high gloss, which makes them slippery. If you wish to scrub a spot on the floor on your hands and knees that's fine as long as you can move up and down from the floor easily and safely. Putting yourself in an "all fours" position is a way to protect your back when gardening as well. In the bathroom, use a scrub brush or sponge on a long handle so you can scrub in an upright or kneeling position to keep your back straight.





Lying Down in Bed or Getting Out of Bed

Sit on the edge of the bed. Lean toward the head of the bed supporting your body with both hands. As you lower yourself toward the mattress, bring your legs and feet onto the bed. Whey lying in bed on your side, use pillows between your knees and under your head to keep your spine aligned or roll onto your back keeping your knees bent and



moving your head, shoulders and hips together. To get out of bed reverse these steps. Keep both arms in front of you. Breathe in and roll onto your side. Use your hands to raise your upper body as you move your legs over the side of the bed in one motion. Sit on the edge of the bed for a moment before standing up.



Safe Reaching

Use both arms together to avoid twisting your spine. Don't reach for a shelf higher than you can easily reach with both arms. Stand on a safety step stool with high handrails or use a reaching device, but only lift lightweight objects. Reorganize work areas so items that are used regularly are stored at waist or eye level.

Coughing or Sneezing

Develop the habit of supporting your back with one hand whenever you cough or sneeze. Place your hand behind your back or on your knee. This protects the spine and intervertebral discs (the tough cushions of cartilage between the vertebrae that act as shock absorbers) from damage caused by a sudden bend forward

Don'ts for Safe Movement

- · Don't walk or exercise on slippery surfaces.
- Don't wear "scuffs" or "mules" (backless bedroom slippers) or shoes with slippery soles.
- Don't slouch when standing, walking or sitting at a desk.
- Don't sit in a deep, cushioned chair or couch that causes you to sink into it. Use upright chairs with arms. Place your feet on a footstool if they don't rest flat on the floor.







Guidelines for safe movement

- · Don't move too quickly.
- Don't engage in sports or activities that require twisting the spine or bending forward from the waist, such as conventional sit-ups, toe touches or swinging a golf club.
- Don't force yourself to complete a task or exercise if you feel short of breath, are in pain or are fatigued.
- Don't take to your chair or bed for extended periods of time.
 Inactivity is one of the worst things for osteoporosis.



Do's for Safe Movement

Always pay attention to proper posture.

- Lift your breastbone.
- · Keep your head erect and look forward.
- Keep your shoulders back, lightly "pinch" shoulderblades.
- Tighten you abdominal muscles and buttocks.

Whenever possible, walk or climb the stairs.

When walking stairs, always use the handrail.

Always bend from the hips and knees, not from the waist.

If you have osteoporosis, you might mistakenly think exercise will lead to fracture. In fact, though, using your muscles helps protect your bones.

Exercise will increase your muscle strength, improve your balance and help you avoid falls and it may keep your bones from getting weaker.

Other possible benefits include:

- · Increasing your ability to carry out daily tasks and activities
- Maintaining or improving your posture
- · Relieving or lessening pain
- Increasing your sense of well-being

Choosing the right form of exercise

Three types of activities are often recommended for people with osteoporosis: strength training exercises especially those for the back weight-bearing aerobic activities and flexibility exercises.

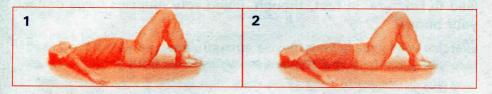
Because of the varying degrees of osteoporosis and the risk of fracture, certain strength-training, aerobic and flexibility exercises may be unsuitable. Consult your doctor before starting any exercise program for osteoporosis. You may need a bone density test and a fitness assessment first.

Strength training

Strength training includes the use of free weights, weight machines, resistance bands or exercises to strengthen the muscles and bones in your arms and upper spine. Strength training can also work directly on your bones to slow mineral loss.

Compression fractures resulting from osteoporosis often lead to a stooped posture and increase pressure along your spine, resulting in even more compression fractures. Exercises that gently stretch your upper back, improve your posture and focus on strengthening the muscles between your shoulder blades can all help to reduce harmful stress on your bones and maintain bone density.

To strengthen your lower back and abdominal muscles:



- Lie on your back with your knees bent and your feet flat on the floor (1).
- Maintain a normal curve in your back; don't arch your back.
 Tighten your abdominal muscles.
- Roll your pelvis down to flatten your back against the floor (2).
- · Avoid using your leg and buttock muscles.

Hold the position for five seconds while breathing normally, and then relax. Repeat this exercise 10 times.

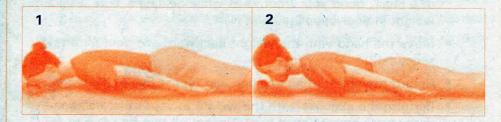
To strengthen your thigh muscles:



- Sit with your back straight and your hands on your thighs.
 Tighten your abdominal muscles and look straight ahead.
- Slowly straighten one knee while lifting your heel a few inches from the floor. Don't slouch or round your back

Hold this position for a few seconds while breathing normally. Relax and return to the starting position. Repeat five to 10 times with each leg, depending on your ability.

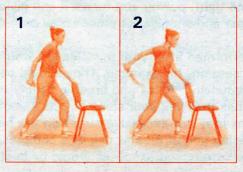
To strengthen your back muscles:



- Lie facedown on the floor with a pillow under your abdomen and hips (1). Use a rolled towel to cushion your forehead, if you wish.
- Keep your arms at your sides as you tighten your abdominal muscles.
- Keep your head in line with your neck and torso. Focus on keeping your shoulders down don't let them shrug up toward your ears.
- Inhale and raise your head and chest a few inches from the Floor
 (2).

Hold for five seconds, breathing normally, before returning to your starting position. Rest for a few seconds. Repeat five to 10 times, depending on your ability.

To strengthen the muscle along the back of your shoulder, the muscle on the back of your upper arm (triceps) and your upper back muscles:



Exercise in Osteoporosis

- Stand with one leg in front of the other, your hand on the back of a chair. Bend your front knee while holding a 1- to 2-pound weight in your opposite hand (1).
- Move the hand with the weight backward and hold for a few seconds(2).
- Return to your starting position and repeat five to 10 times.
- Perform the exercise with the weight in your other hand and with your opposite knee bent. Repeat on this side five to 10 times.

If your doctor approves, you can gradually increase the weight, but don't exceed 5 pounds

Weight-bearing aerobic activities

Weight-bearing aerobic activities involve doing aerobic exercise on your feet, with your bones supporting your weight. Examples include walking, dancing, low-impact aerobics and gardening. These types of exercise work directly on the bones in your legs, hips and lower spine to slow mineral loss. They can also provide aerobic benefits, such as reducing your risk of cardiovascular disease.

Flexibility exercises

These exercises help increase the mobility of your joints, another key component of overall fitness. Being able to bend, extend and rotate your joints helps you prevent muscle injury. Increased flexibility can also help improve your posture. When your joints are stiff, your abdominal and chest muscles become tight, pulling you forward and giving you a stooped posture. Chest and shoulder stretches may be helpful, as may prone push-ups.

Stretches are best performed after your muscles are warmed up at the end of your exercise session, for example. They should be done gently and slowly, without bouncing. Relax and breathe deeply while you stretch. Avoid stretches that flex your spine or cause you to bend at the waist. These positions may put excessive stress on the bones in your spine (vertebrae), placing you at greater risk of a compression fracture. Ask your doctor which stretching exercises would be best for you.

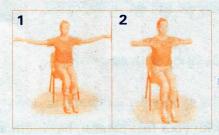
To stretch your shoulders and calves and tone your back and abdomen:



- Stand facing the wall, arms at your sides, feet 6 inches apart and 6 inches from the wall.
- While inhaling, flatten your stomach and stretch both arms up to touch the wall (1).
- Exhale and lower both of your arms to the starting position.
 While inhaling, reach up with your right arm and stretch down with your left arm (2).
- · Exhale and lower your right arm to the starting position.
- Switch arms. While inhaling, reach up with your left arm and stretch down with your right arm (3).

Repeat each movement five times.

To stretch your chest and straighten your back:



 Sit with your feet flat on the floor. Keep your back erect and look ahead.

Exercise in Osteoporosis

- Stretch your arms out to the side, keeping them level with your shoulders (1).
- Bend your arms at the elbows and bring your hands toward your chest (2).

Repeat five to 10 times, depending on your ability

To stretch your chest and strengthen your upper back muscles:



- With your feet flat on the floor, sit slightly forward in a sturdy chair, keeping your back and neck straight.
- Look straight ahead, bending your arms at the elbows (1).
- Gently move your elbows and shoulder blades back as far as you can and still be comfortable (2).

To stretch your calf muscle, your heel cord and the back of your thigh:



- Stand with your feet parallel, hip-width apart. Place your Hands on the back of a chair for balance.
- Bend your knees, flatten your stomach and straighten your back and shoulders.

Exercise in Osteoporosis / Yoga for Osteoporosis

- Slide one foot backward, keeping it flat on the floor, until your back leg is straight.
- · Lean your weight forward onto your bent front knee.

Hold this position for a few seconds while breathing normally. Repeat five times with each leg.

Don't do the following types of exercises:

High-impact exercises, such as jumping, running or jogging. These activities increase compression in your spine and lower extremities and can lead to fractures in weakened bones. Avoid jerky, rapid movements in general. Try to move in a slow and controlled manner.

Exercises in which you bend forward and twist your waist, such as touching your toes, doing sit-ups or using a rowing machine. These movements also compress the bones in your spine. Other activities that may require you to bend or twist forcefully at the waist are golf, tennis, bowling and some yoga poses.

Yoga for osteoporosis

Although yoga can build bone density, great caution is recommended once osteoporosis is suspected or diagnosed. Osteoporosis dramatically increases the risk of bone fracture, even from seemingly simple movements. For this reason, women with osteoporosis should approach the practice of yoga slowly and mindfully.

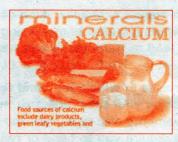


Ask your physician whether yoga is safe for your specific pattern of bone density. Women diagnosed with osteoporosis should consider private instruction with a qualified teacher before attempting to modify the movements in group yoga classes

Osteoporosis Diet

The best source of all the nutrients you need is in a sensible balanced diet with plenty of fruit, vegetables, beans, yogurt, rotis and potatoes, plus smaller amounts of very lean meat, low-fat cheese and oily fish, plus at least 1/2 a pint or about 250ml of low-fat milk per day. Best calcium sources are dairy products (milk, cheese and yogurt), green leafy vegetables, baked beans, bony fish and dried fruit.

Reduce consumption of red meat, chocolate and caffeine, and be aware that *excessive* Vitamin A intake as retinol (in fish and Dairy products) *may* be a factor in increased risk of broken bones (not yet proven), however Vitamin A as carotene in vegetables is not a problem.



It is a common conception that vegetarians lack calcium in their diet and as a result they suffer from bone demineralisation leading to osteoporosis and osteomalacia. This is not true in the case of a lactovegetarian because milk and its products are a very rich source of calcium which is easily available to man. Cottage cheese (also known as paneer) and whey (the water obtained during the preparation of cottage cheese) are excellent calcium sources for a vegetarian and are much less toxic than the nonvegetarian sources of protein.

Analysis of the available data shows that vegetarian diets by virtue of their:

- · High fibre content,
- · Low acid content,
- · High vitamin and mineral content,

are helpful in preventing and, to a certain extent, relieving the pain and progression of arthritis and bone demineralisation. Owing to the high fibre content vegetarians are rarely constipated and this helps a lot in healthy bone and joint metabolism. Furthermore the reduced acid load and increased vitamin and mineral content of vegetarian food makes it the preferred food for preventing joint and bone complications.

In perspective, a vegetarian diet, which is rich in fibre and, in the uncooked form, contains a lot of vitamins and minerals proves very beneficial as it prevents constipation, removes toxic matter from the gastrointestinal tract, thereby preventing increased acidity of the blood. The increased amounts of minerals and vitamins in vegetarian foods contribute richly to the smooth functioning of bone metabolism. The acidity (sulphur related) of a non-vegetarian diet initiates and perpetuates bone demineralisation as seen by serial bone mineral density studies done by direct photon absorptiometry. In contrast the vegetarian diet which contains predominantly uncooked food doesn't have this disadvantage. However, fried foods, spicy foods and excessively sour foodswhether vegetarian or non-vegetarian are detrimental to bone and joint integrity.

Vegetarian Sources of Calcium

1.Milk: in order of preference

i.Goat's

ii.Cow 's

iii.Buffalo 's

- 2. Cottage cheese (paneer)
- 3. Almonds
- 4. Pulses (though bound to phytate)
- 5. Seeds especially Sesame (Til), Sunflower
- 6. Cheese
- Soya beans and their products like TOFU







Fashion Tips for Women With Osteoporosis

"I haven't a thing to wear!" How often a day do women say this to themselves and to others? We go to our closets and finger hanger after hanger. Nothing to wear! But to women with osteoporosis this becomes a daily nightmare.

Because of compression fractures of the spine, irreversible changes in one's body occur, such as loss of height, curvature of the shoulders and back, and a waistline that seemingly increases in size each day. Often, an entire new wardrobe is needed to fit one's evolving new figure. Finding new, attractive, and well-fitting clothes often become exceedingly difficult.

In general, there are suggestions for a better dressed "you" with osteoporosis.

Fashion Tips for Women With Osteoporosis / Do's and Don'ts

- · Wear clothing that is loose
- · Try rounded, and V-necklines
- · Full and dropped sleeves
- Use accessories such as scarves and shawls which divert attention from one's shoulders
- Use shoulder pads to aid rounded or drooped shoulders
- · Wear flat shoes or low-heeled pumps with rubber soles

Adhering to treatment

Osteoporosis requires treatment over the long term. Hence it's very important not to discontinue drugs without your doctor's advice. Inadequate treatment of osteoporosis result in a higher risk of fractures than is necessary. Patients who are diagnosed and begin treatment often do not persist with their osteoporosis medication because they perceive their fracture risk to be low and, given the asymptomatic nature of osteoporosis, do not experience the benefit of symptom reduction after taking the drugs. Hence its very important to continue medications over the long term to keep your fracture risk low.

Do's and Don'ts for patients with osteoporosis

Don'ts
 Get up too quickly after eating, lying down or resting. Low blood pressure may cause dizziness at such times Reduce room temperature too much. Prolonged exposure to cold temperatures may cause body temperatures to drop leading to dizziness and falling Discontinue treatment without your doctor's advice