

Strengthening the back muscles in mature women



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In menopause, weakest part of skeletal system is back bone.

It is important because this is central support system of our body.

If we have weak backbone then who would carry weight of our axial skeletal system?

- So strength of back bone is of utmost importance in our whole life but more so in menopause as our legs and arms are also getting weak because of loss of muscle mass and if we don't have strong central support system consisting of back bone and abdominal muscles, our chances of falling down and sustaining fractures are also increased.

All of you must have seen most of the middle aged women bent at the back, this is called kyphosis or dowager hump .you would be losing height, and you would be feeling fatigued. If there is loss of more than 1.5 inches then it means you already have had micro fractures of spine



This hump is because of weak extensor muscles of the back along with very small fractures of the upper back bone which go unnoticed most of the time and are not diagnosed in more than 1/3 rd of cases. This interferes with quality of life of women.

Along with quality of life issues is issue of medical problems of chronic back ache, decreased chest space so respiratory problems , and decreased abdominal space so problems of digestion.

What you have to do for prevention and treatment is back strengthening exercises along with calcium and Vit.D.

When should these exercises be started ?

In early forties or mid forties ?

No !! perhaps earlier if possible but then definitely thirty five years onwards.

Why? Because this is the age when you start losing your muscle strength and your bone mass.

Till what age you build up your muscle mass and bone mass ? It is about 25 years of age. What happens then, there is almost a plateau till about let us say 35 years of age or so and from that age onwards you lose bone mass and muscle mass at the rate of about 0.5 to 0.75% /year and this loss increases to about 4-5% per year around the age of menopause

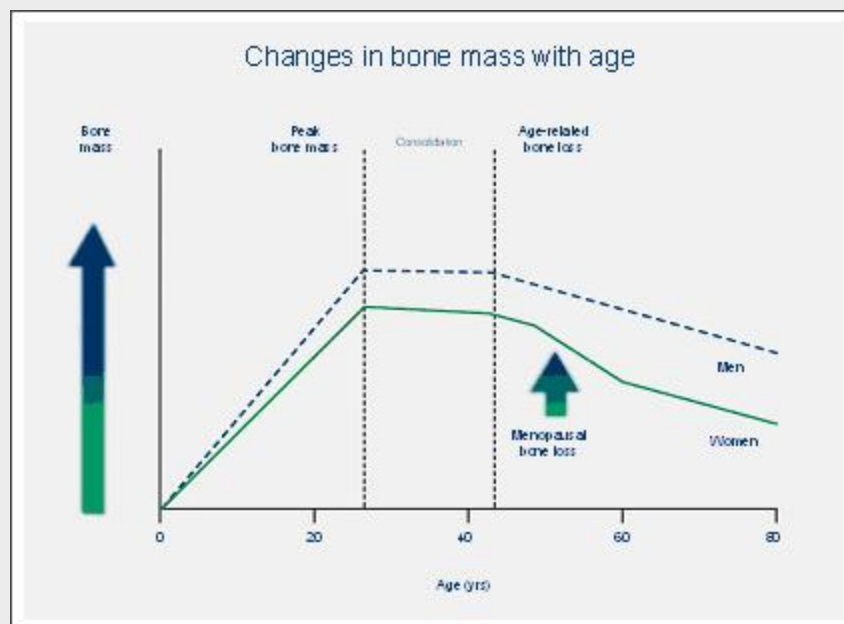


Fig -1 BONE MASS WITH AGE, (max BMD reached till 25 years and then plateau till 35 -40 years and then decrease starts)

So start as early as possible but definitely from just beyond thirty.

You have micro fractures of your spine even while bending to lift up some weights.

Therefore take precaution to prevent these fractures:

- You don't bend yourself at the spine but at the knees when picking up some objects.
- Secondly train your back muscles by doing resistance exercises like seated rows or wide grip pulley press. While doing seated rows don't bent forward at the back,
- You can do back bridges.
- You can do some yoga exercises also like cobra pose or Bhujang asan.
- We should strengthen core muscle together .Core muscles are abdominal and back muscles and as they take the weight of our appendages or limbs, it is very important to strengthen our core muscles.

○ These exercises would increase flexibility and can help to stabilize the back. However, it should

be noted that for most of these exercises, you should not feel the stretch in the back itself. For example, the back of the legs have a group of muscles called the hamstrings. These muscles originate in the lower pelvis and insert into the leg. When the hamstrings are tight, the back itself can be tightened due to the pulling on the pelvis. Therefore, stretching the hamstrings will not only loosen the leg muscles up but they will take the strain off the back.

! As each back condition is different, always consult your doctor before performing any of these exercises to determine what exercises, if any, are right for your particular condition. If you have any discomfort after performing any of these exercises, discontinue and immediately and consult a doctor to properly assess your situation.*

Following are some of these exercises which is a combination of stretching, with strength building and some yoga asanas.

Back Bridge :



Fig: 1 Back Bridge.

Back bridge:

Lie straight on a mat. Bend your knees and raise your torso in a straight line as shown in figure. Don't arch hold for 10 sec and repeat it again 10 times and 3 sets of these 10 repetitions.

Sit-ups

FIRST STEP



SECOND STEP



Sit-up exercises should be done very precisely to avoid any traction to the spine. Place your knees up on a chair, with your legs and hips at a 90 degree angle. **First breathe out then breath in and pull your abdominal muscles or your belly button towards floor** this would tighten your internal abdominis muscle, this is your first step. Support your neck but don't pull on it as you raise your upper chest, no more than 30 degrees. Look straight up with your eyes to keep from pulling forward on the head. Do 3 sets of 12 reps, or to your individual tolerance. It is important to concentrate on feeling the strain in your abdominal muscles and not your neck or back. Any pain you feel with this exercise should only be a local muscle exercising sensation to the abdominal area, without aggravating your condition.

Hamstring Stretch



Sitting on the ground, with one leg straight and the other one comfortably bent in front of your body, bend at the waist and lean forward, keeping your back as straight as possible. **Don't curve your back.** Reach with your arms towards the foot until a stretch is felt under your thigh. Hold each stretch for a minimum of 30 seconds, any less than 15 seconds and the muscle will not conform to the new increase in length. Do 3 reps, 3-6 times a day. Any pain you feel with this exercise should only be a local stretching sensation to the back of your thigh area, without aggravating your condition.

Back Flexion Stretch



While lying on your back, pull both knees to your chest while simultaneously flexing your head forward until you reach a comfortable stretch in a balled-up position. Do 8-12 repetitions this way holding each one for 8-10 seconds at a time. You should feel no pain with this exercise, as the stretch is designed to relieve tension on the back.

Strength Training Exercises :(Instruction for the patients on steps of exercises)

Upper Body

Dumbbell Row



- Place the opposite hand on the bench for support. Place one foot slightly behind hips on the ground with knee slightly bent; place the other knee on the bench below hips. Back should remain flat and head should stay focused straight ahead.
- Grasp the dumbbell in one hand. Begin the exercise with the weight arm-length away. Slowly pull the weight to the chest while squeezing shoulder blades together.
- Think of the hand as a hook and pull the weight using upper back muscles. Pause the weight at the chest and slowly lower the weight to the starting position.
- Do not swing arm to achieve the movement. Remain under control throughout the full range of motion.

Perform desired repetitions on one arm then perform the same number on the opposite arm.

WIDE GRIP PULLEY PRESS :



Fig.2 Wide grip pulley press

Wide grip pulley press:

This is a resistance exercise for building strength and muscle mass of upper back and shoulders.

Sit on a stool with back straight and hold bar of pulley with more than twice width of shoulders. Breathe in and bring the bar down to your nipple level and breathe out and let it go up again. Do 10 repetitions and three sets of 10 repetitions. Same exercise can be done with a pair of dumbbells also.

Bhujangasana (Cobra Pose)



This posture promotes flexibility in the spine and encourages the chest to open.

This asana helps to:

- Strengthens the spine
- Stretches chest and lungs, shoulders, and abdomen
- Firms the buttocks
- Stimulates abdominal organs
- Helps relieve stress and fatigue
- Opens the heart and lungs

Don't do this asana if you have any of the following:

- Back injury
- Carpal tunnel syndrome
- Headache
- Pregnancy

STEPS:

1. Lie prone on the floor. Stretch your legs back, tops of the feet on the floor. Spread your hands on the floor under your shoulders. Hug the elbows back into your body.
2. Press the tops of the feet and thighs and the pubis firmly into the floor.
3. On an inhalation, begin to straighten the arms to lift the chest off the floor, going only to the height at which you can maintain a connection through your pubis to your legs. **Better not to rise above the navel level.** Press the tailbone toward the pubis and lift the pubis toward the navel. Narrow the hip points. Firm but don't harden the buttocks.
4. Firm the shoulder blades against the back, puffing the side ribs forward. Lift through the top of the sternum but avoid pushing the front ribs forward, which only hardens the lower back. Distribute the backbend evenly throughout the entire spine.

5. Hold the pose anywhere from 15 to 30 seconds, breathing easily. Release back to the floor with an exhalation

If you do abdominal crunches and pull your belly button in even then your back muscles would be strengthened.

Again remember it is very important to strengthen our central supports that means our back muscles and our abdominal muscles as they support our body and our limbs. So please ,don't neglect the.

Keep on exercising till I send you some more tips to stay fit and young !