Appendix G: Yoga for Osteoporosis

Osteoporosis is a disease characterized by low bone mass and bone matrix deterioration leading to increased fragility and risk of fracture. The word osteoporosis literally means "porous bones." It occurs when bones lose an excessive amount of their protein and mineral content, particularly calcium. Over time, bone mass, and therefore bone strength, is decreased. As a result, bones become fragile and break easily. Even a sneeze or a sudden movement may be enough to break a bone in someone with severe osteoporosis.

Yoga is a form of physical exercise aimed at gaining good health, in this situations its active life with good bone health to avoid fractures and to recover from slow degeneration process. Yogic postures involve your body in a certain way to stress the muscles in a safe way that in turn stresses the bones. This process helps in generation of new bone cells and maintaining the bones’ health.

Prerequisites

- Commitment and regularity in practice
- Conducive place to practice, with good air circulation
- Yoga mat, wide enough which gives good grip to practice well
- Practice at the same time everyday for the body to recognize the pattern

Following are the various asanas that were performed during the Intervention programme. Photos were taken during the classes and the ladies are those who participated in the EDY and EDDY group. A total of 13 Yoga postures were taught and practised during the programme.
Yoga asanas and postures for osteoporosis

A. Ardha–Uttanasana

1. Stand in Tadasana – legs together, hands by the side.
2. Inhale – hands up, palms facing each other.
3. Exhale – bend forward from the lower back with hands aligned with the trunk at shoulder level.
4. Hold the pose for 30 sec with normal breathing and inhale come up, reverse the actions as in step 1 and 2.

B. Ardha–Chakrasana

1. Stand in Tadasana – legs together, hands by the side.
2. Place the palms at the lower back region with fingers pointing forward.
3. Take the elbows closer to each other.
4. Inhale and bend backward from the lower back and reach the final pose.
5. Hold for 30 sec or more, with normal breathing.
6. Inhale as you come back to standing pose.
C. *Ardha–Kati Chakrasana*

1. Stand in Tadasana – legs together, hands by the side.
2. Inhale - raise one hand (left or right) from the side and stretch it straight up.
3. Exhale – bend the body sideways without leaning forward or back. Keep the hand alongside the head, both hands and legs to be kept straight. Hold for 30 sec or more.
4. Inhale come back to previous position and back to the starting pose – tadasana.
5. Repeat the same for the other hand.

![Ardha–Kati Cakrasana](image1)

![Trikonasana](image2)

D. *Trikonasana*

1. Stand in Tadasana – legs together, hands by the side.
2. Spread the legs 3 to 4 feet wide, feet placed parallel and hand raised by the sides till shoulder level.
3. Turn right foot towards right side and the left foot inside at 45° angle.
4. Exhale bend right side from waist, place the right hand by the side of the right leg.
5. Look up at the left palm and hold the pose for 30 sec or more.
6. Inhale, come up and repeat the same with the other leg.
E. Veerabadrasan1
1. Stand in Tadasana – legs together, hands by the side.
2. Spread the legs 3 to 4 feet wide, feet placed parallel and hand raised by the sides till shoulder level.
3. Turn right foot towards right side and the left foot inside at 45° angle, and turn right side.
4. Inhale, raise the hands and join the palms.
5. Exhale bend the right knee to 90 degree angle and maintain the trunk straight and look straight ahead at one point. Hold for 30 sec or more.
6. Reverse the steps and come to starting pose, repeat for the other side.

F. Veerabadrasan2
1. Stand in Tadasana – legs together, hands by the side.
2. Spread the legs 3 to 4 feet wide, feet placed parallel and hand raised by the sides till shoulder level.
3. Turn right foot towards right side and the left foot inside at 45° angle.
4. Exhale, bend right leg to 90 degree angle, fix your gaze at the right finger tips. Hold for 30 sec or more.
5. Reverse the steps and come to starting pose, repeat the same for the other side.
6. These postures help in removal of stiffness from shoulders, neck and back. Strengthens calf and thigh muscles. Reduces fat around the hip and hip joints are strengthened. Stability and balance increases.
G. Vrikshasan
1. Stand in Tadasana – legs together, hands by the side.
2. Giving balance to right leg, place your left foot on right thigh, toes pointing downward.
3. Inhale take the hands up and perform the final pose by joining the palms.
4. Hold 30 sec or more.
5. Exhale come back. Repeat for the other leg.

H. AdhomukhaShvanasan
1. Stand in Tadasana – legs together, hands by the side.
2. Inhale, lift the hands up, exhale bend forward and place the hands by the side of the feet.
3. Take the feet back by 4 feet from palms, get to the final pose by straightening the legs, heels pressing the ground, take the head down as much as possible.
5. Hold for 30 sec or more, after that, bend the knees and lie down on the abdomen, assume the position for a min before proceeding for the next pose.
I. Bhujangasana
1. From the previous position, lying down on the abdomen, place the palms by the side of the upper ribs and elbows closer to the body.
2. Inhale and raise the trunk and straighten the hands, take the head back.
3. Looking up, hold the pose with normal breathing for 30 sec or more.
4. Exhale and slowly come down and lie down for few sec to relax.

![Bhujangasana](image1)

![Paschimottanasan](image2)

J. Paschimottanasan
1. From the previous pose, come to sitting pose with legs stretched front.
2. Keeping the back straight and hands by the side.
3. Inhale and raise the hands from the side, taking it up, exhale, bend forward from the lower back and catch hold of the toes, straighten the hands, keep the back straight as much as possible, eyes closed, hold the pose for 30 sec or more.
4. Inhale lift the hands up and reverse the steps.
K. Navasana
1. Sit with keeping the back straight and hands by the side.
2. Slowly lean backward with inhalation and lift the legs up to the forehead level.
3. Fix your gaze on the big toes.
4. Balance with the hands either by the side or lift them up to the sides of the knees with palms facing each other and hands parallel to the ground.
5. Hold for 30 sec or more. Breathing normal.
6. Come back slowly and relax for few moments.

L. Maricasana
1. From the sitting pose, fold the right leg and place the right foot against the left knee.
2. Place your right elbow against the inside of right knee and palm flat and wrist straight.
3. Take your left hand back for support and with the help for right hand and left, twist the entire trunk towards left and turn the head back as you exhale.
4. Keep the eyes closed and body active.
5. Hold for 30 sec or more, reverse the steps and repeat for the other side.
M. Vakrasan
1. From the seated pose, Keeping the back straight and hands by the side.
2. Fold the right leg and place the right foot against the left knee.
3. Take your right hand back for the support.
4. Inhale lift the left hand up, exhale and twist the trunk right side and take the left hand around the right leg and catch the right ankle. Adjust the shoulders to be straight and back straight.
5. Eyes closed, hold for 30 sec or more.
6. Reverse the steps and repeat for the other side.

Closing

1. Relax in seated or lying pose – SHAVASAN.
2. After that followed by 2-3 minutes of breath awareness in any seated position like VAJRASAN or SUKHASAN.
3. Bend forward gently for massaging the lower back.
4. Finally conclude by chanting OM mantra several times, more the better.
5. Keeping the eyes closed, offer yourself to mother earth, bend forward as you exhale and inhale come up.
6. Rub the palms and place them over the eyes gently.
7. With few blinks, open the eyes.

Precautions
1. Do not exert yourself.
2. Some postures are contraindicated for few medical situations, hence avoid them or do it with care.
3. At any point of time if any pain stays for a longer duration, please consult a doctor.