



## Question & Answer Sheet

Each question has been answered by Presenter Judy Murray (MScPT).

Clip: Enjoy Summer Activity with Confidence 00:04



## Physical Activity with Confidence



### Question #1a)

**Is it safe to use a stationary glider machine with hand bars (designed by Tony Little) in place of walking, e.g. in the winter?**

I was not familiar with this brand so I looked it up on-line...it will provide an aerobic workout but is LOW impact, so will not build or maintain bone density as well as regular walking. Also, this piece of equipment looks less sturdy than other models of ellipticals/glidens and may pose a risk of falling when getting on or off or while working out. A better winter option would be mall walking or walking at an indoor gym track.

**Question #1b) Further to my previous question, I have osteoporosis with a T-score of -3.2**

Then for sure I would stick to walking on the ground in a sheltered environment rather than the glider for safety and some impact. You could add a weight training regime with free weights at home 2-3 days per week. If you have had vertebral fractures and a kyphosis, please consult with a physiotherapist. You can find a physiotherapist on the Ontario Physiotherapy Association website, at [www.opa.on.ca](http://www.opa.on.ca) – click on “find a physio.”

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### Question #2)

**Will the PowerPoint presentation be archived and accessible on your website?**

The PowerPoint will be archived for several months and is accessible through the home page of Osteoporosis Canada’s website, [www.osteoporosis.ca](http://www.osteoporosis.ca).

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### Question #3)

**I really enjoyed the webcast - very informative. Just one question - in the section on the “daily activities requiring caution” you left out the dangers of reading in bed. Could you please explain what would be dangerous about this activity?**

The concern with reading in bed is that some people lie down and place several pillows under their head, forcing it into too much flexion (bending), which encourages a kyphosis and stretches the neck muscles at the back while shortening the neck muscles at the front. If reading in bed, you need to have enough pillows or a chair-shaped cushion (they can likely be purchased in bedding departments) so that you can essentially sit up straight in the bed. It should only be for a short period of time, since the tendency is to slide down and end up in the position mentioned at the beginning. Think of maintaining the most normal “S” shape possible.

**Question #4)**

**How do you convince someone to move items from a high cupboard to lower ones, especially when they do not feel they have any limitations?**

Good question...and a big problem! Most people learn better from "experts" rather than family members or close friends. Getting a physiotherapist's or occupational therapist's opinion could help here. Somehow trying to get the person to hear the idea and think it is theirs can also make it easier...so an information pamphlet may be worthwhile. Some prevention now is worth it to avoid the pain and disability created by a vertebral fracture.

If the person has a kyphosis, tell them it puts a lot of strain on the spine and shoulders to be lifting up over the head, especially heavy plates, etc. There is also a possibility that the plates may fall and break as the strength will not be enough in the arms. Climbing onto ladders or stools is a big risk and may cause a fall and a broken hip, definitely a situation leading to limitations. It's best to make small changes at a time and pick your battles! If the person is elderly, they will likely resist change. Good luck!

**Question #5)**

**Do you have any comments regarding the weighted kypho-orthosis (weighted back support) developed by the Mayo Clinic? Do you know if they are readily available in Canada?**

This is something that requires a personal assessment to determine if the brace is appropriate, to fit the brace properly and to instruct you in its use. Wearing the brace will change your centre of balance, especially if you have a kyphosis already. Just wearing the brace will not work magic. You will need to use your postural muscles and stand as close to a normal "S" shape as possible with the brace on. There are braces available in Canada but I don't know if this particular one is. Perhaps it is available online but it needs to be fitted properly and worn properly so it does not cause harm.

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**Question #6)**

**I take yoga and there are many forward bends, but I keep knees bent and back straight. Is this safe, or should I give up yoga?**

I don't have any information about your specific condition to know if you have a kyphosis or a normal spine. As I mentioned in the webcast, yoga has a lot to offer in the way of good postural awareness and breathing, etc. but many of the positions have to be modified a lot to avoid forward bending...for example, downward dog. I would not recommend head-stands. One-legged poses place you at risk for falls so have a chair nearby.

If you are a "veteran yogi," you may be able to adapt and continue with keeping the head up and bending the knees. If in doubt, consult a physiotherapist to work with you to determine safety.

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**Question #7)**

**When/how can overhead movements be worked into a fitness program? Can participants move hands overhead if they are sitting?**

The main thing is presence of a kyphosis. If a person has normal bone density or is osteopenic with a "normal" spine, they can perform over the head movements and should do so to maintain shoulder range and strength. The same rules apply to exercises while sitting...if there is a kyphosis, no overhead activities.

**Question #8)**

**My doctor recommended carrying a small backpack with small weights for exercise. What is your opinion?**

I don't know your specific details or condition. However, if you are trying to reduce the risk of osteoporosis and have a normal spine, it may be ok. If you have osteoporosis and/or a kyphosis and/or impaired balance, you need to get a physiotherapy consultation.

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**Question #9)**

**For aqua fit classes, do the same precautions apply - i.e. no twisting?**

Depending how deep you are in the water, you will not be as "loaded" as on dry land due to the buoyancy of the water. The most twisting force happens when the feet are planted and the body twists left or right with the feet facing the opposite way or straight forward. You can do gentle turns in the water but not fast, hard twists.

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**Question #10)**

**Is there any evidence that shows an increase in bone density when using "poles" - urban poling?**

I have not seen evidence of poles increasing bone density and have not tried the poles myself, but I have done cross country skiing. Using the arms as well as the legs increases the speed and intensity of the exercise – good for increasing aerobic capacity and arm strength (hence improving good bone building stresses). Using the poles may also afford some protection from falling.

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**Question #11)**

**I have read that side bending movements should be avoided. What is your opinion about doing this movement if you have osteoporosis or osteopenia?**

Side bending and rotation do increase the compressive forces on the spine, which is made of cancellous bone and is therefore more susceptible to osteoporosis and fracture. So it is best to avoid side bending; this is fairly easy to do since it is not a very functional, useful movement.

Forward flexion is the most dangerous since it is such a repeated movement for humans because it is so functional. It causes direct stress on the vertebrae right where they are vulnerable; thus, this movement needs to be radically reduced.

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**Question #12)**

**My bone density is in the osteopenia range but I have had two compression fractures (thoracic) from shovelling snow. Is unweighted forward bending dangerous in this case?**

Yes! Recall that the vertebrae are made of cancellous or trabecular bone, which is more prone to osteoporosis. Any forward flexion increases the moments of force on the spine where it is vulnerable and can compress the vertebral body. Adding weight just makes it "more worse"! Time to delegate the snow shovelling out to the neighbourhood kids!

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**Question #13)**

**I am a 65-year-old male with osteoporosis. My hip T-score is -3.2 and lower lumbar is -2.4. I have been on a bisphosphonate for almost a year. I know that cycling does not improve bone mass but I like it. My question is this: given my T-scores, how much of a concern is there regarding bone fractures should I have a fall from the bike?**

Bicycling is a good exercise and does provide resistance for the leg muscles and an aerobic workout. However, the risk is fairly high for falling off the bike and the hip may be your landing place: the place your bone density is lowest.

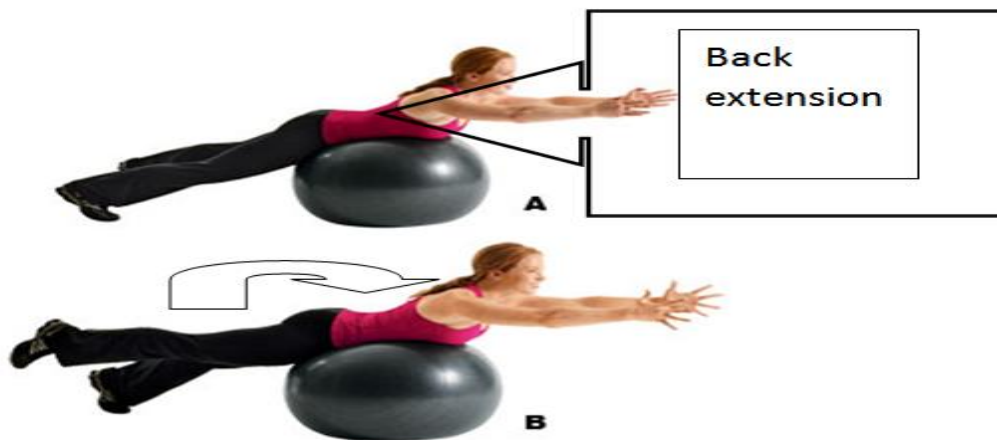
If you are a veteran cyclist you may be ok to continue. Perhaps you can investigate hip protectors (sort of like wrist and knee pads for roller blading) to wear under your biking shorts....and make sure you have them on correctly, over the most prominent part of the upper leg bone (greater trochanter area of femur). And watch the type of roads you cycle on: few pot holes, drain covers, tracks, etc.

Otherwise, it may be wise to switch to a stationary bike or spinning class.

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**Question #14)**

**What do you mean by back extension?**



Back extension is arching the back...the opposite movement to flexion. Back extension exercises can actually strengthen the spine if done properly and if there is no kyphosis. Flexion exercises place compressive forces on the vertebral bodies and can lead to collapse.

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**Question #15)**

**I am 67 years old. What is the preferred exercise for someone with low bone density: T-score -5.3 in the spine?**

Be very careful with forward flexion and avoid it at all costs...use a reacher, do not pick up items off the floor, put shoes on in a sitting position (bring feet up to hands rather than the other way around). Get a physiotherapist to prescribe safe balance exercises to do, a progressive strengthening program with weights or exercise bands, as well as a progressive walking program.

You may want to investigate bone health programs in your community to learn more about safe exercise techniques and precautions.

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**Question #16)**

**How would you rate Curves as an exercise program for those with osteoporosis?**

I have not done the program but I know it is relatively unsupervised and uses some equipment it depends on the severity of your condition. If you have osteoporosis and a kyphosis, I would not recommend this program, rather a consultation with a physiotherapist first to assess your needs. If you are trying to reduce the risk of bone loss and are otherwise healthy, Curves may be a good way to get into exercise, but so is walking and the YMCA. And whatever you choose to do, watch your positioning on the equipment so that you keep the spine in its proper "curve" (no pun intended!).

*Thank you for all of your great questions!*