

PROVe: Physiotherapy Rehabilitation for Osteoporotic Vertebral fracture



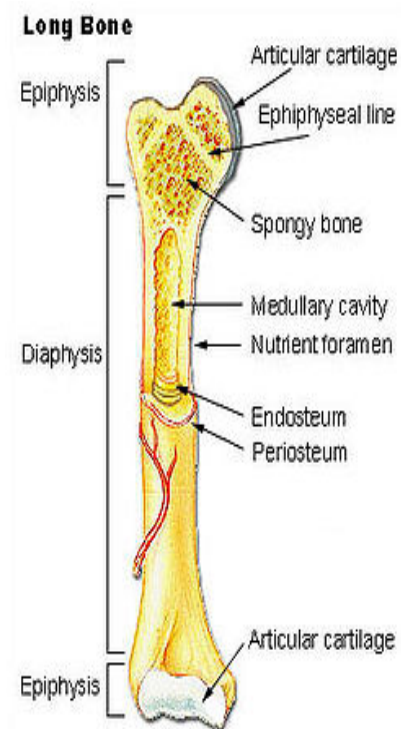
Participant Information Laminates

Use applicable laminates according to participants identified advice need.

Reassure participant that they will be given a leaflet to take home with them.

BONE

- Bone contains protein, calcium salts and other minerals
- Each bone is made up of
 - a thick outer shell - cortical bone
 - a strong inner mesh - trabecular bone (like honeycomb)

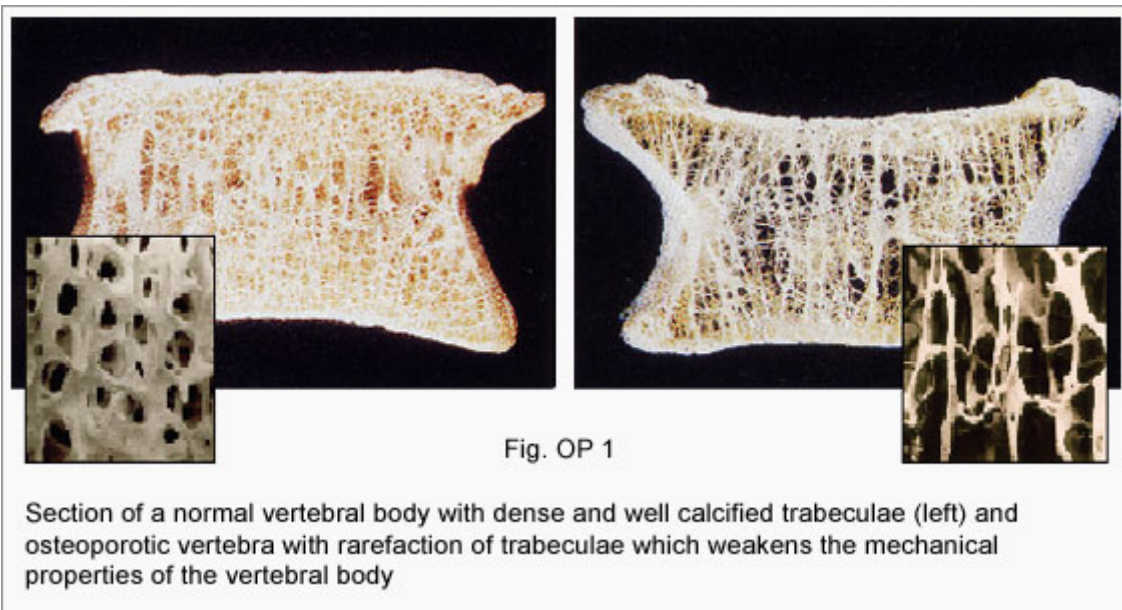


en.wikipedia.org

- Bone is alive and constantly changing throughout life.
- Old, worn out bone is
 - broken down (by osteoclast cells)
 - replaced (by osteoblast cells)
- You can affect this process through your life style.

WHAT IS OSTEOPOROSIS?

- Osteoporosis means “porous bones”.
- Occurs when cells breaking down old bone work harder than cells building new bone.
- Bone loses density and become more fragile.

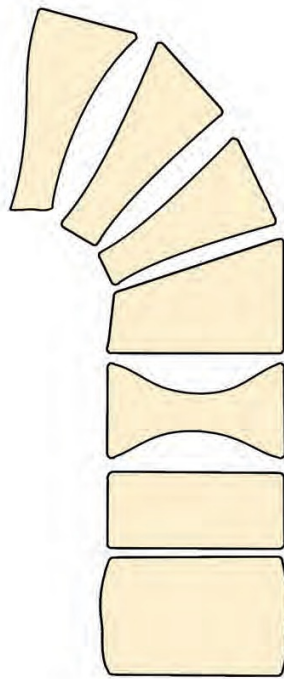


<http://www.eurospine.org/f31000239.html?action=confirmbox> down loaded 6.2.13

- Fragile bone can fracture (break) more easily (minor / no injury).
- Almost 1 in 2 women and 1 in 5 men over 50 will break a bone, mainly due to osteoporosis.

Osteoporosis of the Spine

- Spinal osteoporosis occurs in the thoracic or lumbar regions.
- Fragile vertebrae become 'squashed' - compression fracture.



www.NOSallaboutosteoporosis.com

*Therapist: Indicate wedge, bi concave and normal bone

- Wedge fractures can cause the spine to tip forward causing an outward curve (kyphosis).
- Compression fractures can cause loss of height.
- Vertebrae will heal after a fracture but do not return to their previous shape.

- (Osteoporotic spinal fractures rarely interfere with spinal cord).

Healthy Eating and Osteoporosis.

The food you eat can help keep your bones strong

- Incorporate a wide variety of foods from four main groups:
 - fruit and vegetables
 - carbohydrates - bread, potatoes, pasta, cereals
 - dairy products - milk, cheese, yoghurt
 - protein - meat, fish, eggs, pulses, nuts, seeds.



www.parentingwithouttears.com

- Aim for a healthy body weight to protect bones

Calcium and Vitamin D

Calcium:

- Vital for strong bones and teeth
- You need more than 700mg of calcium per day.

Some foods containing calcium	Calcium per serving milligrams (mg)
1 cup (250 mL) milk (any type)	315
6 sardines or ½ can (213 gm) salmon with bones	250
½ cup (125 mL) almonds	200
1 cup (250 mL) chili con carne	150
1 cup (250 mL) cooked dried beans	120
½ cup (125 mL) cooked kale or bok choy	65
1 orange, fresh, whole	50
½ cup (125 mL) cooked broccoli	40

www.schoolmilk.nl.ca

Vitamin D:

- Helps your body absorb calcium.
- Sunlight is best source.
- **10 minutes** sun exposure to bare skin, **once or twice a day**.
- Get outside May – September to see you through the winter months.
- You need more than 10 microgrames of Vitamin D per day.

Common Food Sources of Vitamin D			
Food	Serving Size	Amount	%DV*
Trout, rainbow, cooked	3 ounces	16.2 mcg	162%
Salmon, cooked	3 ounces	14.5 mcg	145%
Halibut, cooked	½ fillet	9.2 mcg	92%
Milk, vitamin D fortified	1 cup	2.9 to 3.2 mcg	29-32%
Cereal, ready-to-eat, fortified	1 cup	2.6 mcg	26%
Pork, spareribs, cooked	3 ounces	2.2 mcg	22%
Egg, whole, cooked	1 large	1.1 mcg	11%
Mushrooms, shitake, cooked	1 cup	1.0 mcg	10%
Cereal, ready-to-eat, corn flakes	1 cup	1.0 mcg	10%
Frankfurter, beef	1 each	0.4 mcg	4%
Butter	1 tablespoon	0.2 mcg	2%
Cheese, cheddar	1 ounce	0.2 mcg	2%

Source: USDA Nutrient Database.
* Daily Value (DV) is the daily reference amount for food and supplement labels.



www.revobiolabs.com

www.26.org.uk

Smoking and Drinking













Smoking

- Slows down bone building.
- Fracture risk is higher for current smokers than those who have given up.



Excess alcohol

- Significant risk factor for osteoporosis.
- Alcohol intoxication - risk of fall and fracture.
- Government's recommended daily alcohol limit:
 - men 3-4 units.
 - women 2-3 units.

1 unit	1.5 units	2 units	3 units	9 units	30 units
 Normal beer half pint (284ml) 4%	 Small glass of wine (125ml) 12.5%	 Strong beer half pint (284ml) 6.5%	 Strong beer large bottle/can (440ml) 6.5%	 Bottle of wine (750ml) 12.5%	 Bottle of spirits (750ml) 40%
 Single spirit shot (25ml) 40%	 Alcopops bottle (275ml) 5%	 Normal beer large bottle/can (440ml) 4.5%	 Large glass of wine (250ml) 12.5%	<p>Government advises alcohol consumption should not regularly exceed:</p>  <p>Men 3-4 units daily</p> <p>Women: 2-3 units daily</p>	
		 Medium glass of wine (175ml) 12.5%			

SOURCE: Office for National Statistics

www.bbc.co.uk

Exercise

Weight bearing exercise:

- Activities supporting the weight of your body, e.g. brisk walking, tai chi.
- Can make your skeleton grow stronger.



www.healthcommunities.com

Muscle strength, balance and co-ordination:

- Can be maintained with exercise like swimming, gardening, golf.
- Regular exercise reduces risk of falls.



[www. news.discovery.com](http://www.news.discovery.com) –

Recommended: 30 minutes exercise 5 times per week.
Protect your spine

Activities which overload the spine: (and increase risk of fracture)

- Forward bending
- Twisting
- Heavy/overhead lifting

Avoid overloading spine:

- Bend from hips & knees
- Step feet round
- Use long handled aids
- Support back when coughing/sneezing



Reduce risk of falling:



- Remove hazards –rugs, wires, poor lighting
- Supportive shoes
- Eyesight & hearing checks
- Consider use of walking aids/stair rails