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WEBINAR AT
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EXERCISE, VEGAN NUTRITION & BONE HEALTH

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Webinar key messages
summarised for you.



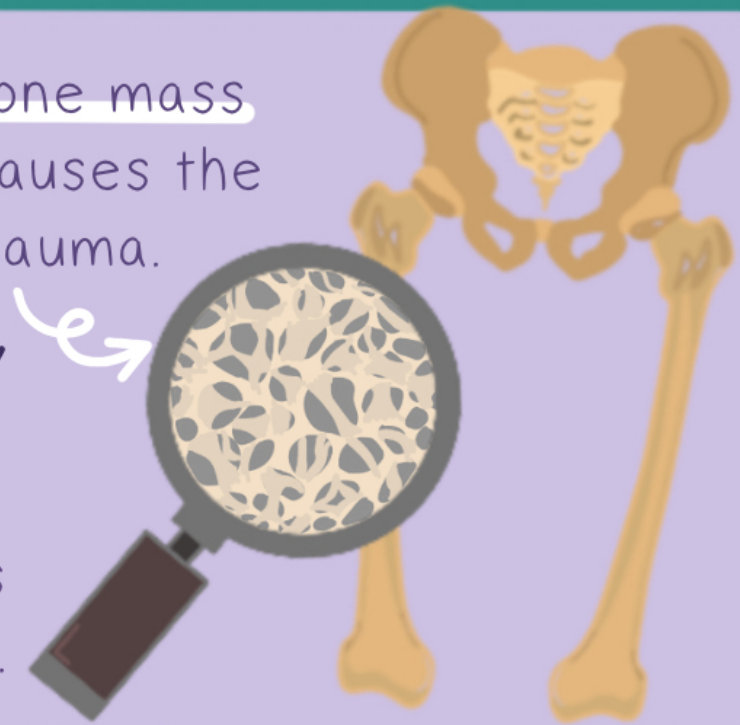
WHAT IS OSTEOPOROSIS?



Osteoporosis is a medical condition characterised by low bone mass and microarchitectural deterioration of bone tissue. This causes the bones to lose strength and break easily with minimal trauma.

IT AFFECTS 3.5 MILLION PEOPLE IN THE UK, MAINLY AFFECTING PEOPLE IN LATER LIFE.

520,000 osteoporotic fractures occur each year, and it's these broken bones that cause pain and other symptoms.



THE IMPACT OF OSTEOPOROSIS



42% of those with fragility fractures have pain that never goes away

LESS THAN 50% of people affected by hip fracture go back to their own home



FRAGILITY FRACTURES CAN ALSO LEAD TO:

- ✓ BREATHING DIFFICULTIES
- ✓ LONG-TERM PAIN
- ✓ LOSS OF MOBILITY
- ✓ LOSS OF INDEPENDENCE
- ✓ SUSCEPTIBILITY TO INFECTION
- ✓ REDUCED LIFE EXPECTANCY
- ✓ INCREASED FRAILTY



FACTORS AFFECTING BONE HEALTH & FRACTURE RISK



MODIFIABLE	NON-MODIFIABLE
Low BMI	Old age
Immobility	Genetics
Smoking	Race
Alcohol	Gender
Falling over	Previous fractures
Medical conditions: rheumatoid arthritis, anorexia, menopause, coeliac disease	Medications: Steroids, breast and prostate cancer treatments

HOW IS IT DIAGNOSED?

Diagnosis of osteoporosis is usually through a bone density (DXA) scan or via clinical judgment after a fragility fracture.

WHY IS EXERCISE & PHYSICAL ACTIVITY SO IMPORTANT? →



Exercise is very important for bone health and for the prevention and management of osteoporosis. We know that using our bones helps to maintain normal bone turnover. When we stop using our bones during inactivity e.g. bed rest, we rapidly lose bone strength.

STRONG

Strength or resistance exercise is important for maintaining bone strength.



PROMOTE BONE STRENGTH & REDUCE FRACTURE RISK



- ✓ Weight bearing with 'moderate' impact e.g. jogging, low-level jumping. Add 50 impacts to your 30 min of moderate exercise.
- ✓ Muscle resistance using weights or bands (max 8-12 reps)
- ✓ Get advice and build gradually



STEADY

There is good evidence that improving balance and muscle strength reduces the risk of falls.

REDUCE FALLS & FRACTURE RISK

- ✓ Integrate balance and muscle strengthening into daily activities e.g. stand on one leg
- ✓ Try Yoga or Pilates
- ✓ People who are prone to falling need support so should be referred to a specialist service



STRAIGHT

There are specific targeted exercises to build muscle strength in the back, but it's also important to pay attention to bending and lifting.

SUPPORT & CARE FOR THE BACK

- ✓ Learn the 'hip hinge' for lifting
- ✓ Modify the 'roll down' or sit-ups
- ✓ Increase muscle strength in the back for pain management and posture for people affected by spinal fractures



KEY NUTRIENTS TO SUPPORT BONE HEALTH



EPIC-Oxford research suggests that supporting bone health should be a key area of focus in vegan health in the UK.

THE ROYAL OSTEOPOROSIS SOCIETY AND THE VEGAN SOCIETY WANT TO SUPPORT THOSE CHOOSING TO FOLLOW A VEGAN DIET TO GET ENOUGH NUTRIENTS TO SUPPORT BONE HEALTH.

PROTEIN

NEEDED FOR MUSCLE AND BONE MAINTENANCE.

Over 65s recommended to consume more protein in combination with regular exercise to protect muscle health and reduce the risk of falls.

VEGAN SOURCES:

LEGUMES



TOFU, TEMPEH, SOYA MINCE, SEITAN, VEGAN QUORN

NUTS & SEEDS



FORTIFIED MILK & YOGURT ALTERNATIVES (SOYA & PEA)

WHOLEGRAINS (AMARANTH, BUCKWHEAT, QUINOA, POPCORN, WILD RICE)



CALCIUM

NEEDED FOR MUSCLE AND BONE MAINTENANCE

It's recommended to include at least **TWO PORTIONS** of calcium-rich foods daily.

VEGAN SOURCES:

- ✓ 400ML FORTIFIED MILK ALTERNATIVE
- ✓ 30G FORTIFIED OAT CEREAL & 100G CALCIUM-SET TOFU
- ✓ 150G FORTIFIED YOGURT ALTERNATIVE & 200ML FORTIFIED MILK ALTERNATIVE

VITAMIN D

HELPS WITH THE ABSORPTION OF CALCIUM & IMPORTANT FOR MUSCLE HEALTH.

Recommended supplement of 10mcg/d from October to March as a minimum, but some should consider a year-round supplement.

People with a high fracture risk are often prescribed 20mcg/d to ensure they are getting enough.

VEGAN SUPPLEMENTS ARE AVAILABLE THAT CONTAIN D3 FROM LICHEN OR D2.



KEY NUTRIENTS TO SUPPORT BONE HEALTH



B VITAMINS

Vitamin B6, folate and B12 all appear to be beneficial to bone health.

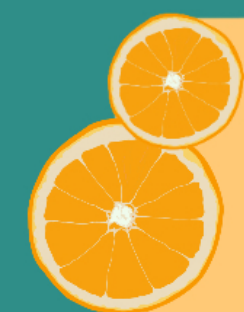
EPIC-Oxford research found that vegans typically have good intakes of B6 and folate but fall short on B12.

Fortified foods and supplements are the only reliable vegan source of B12.



VITAMIN C NEEDED FOR FORMATION OF COLLAGEN

Vitamin C is abundant in vegan diets and not a concern.



VITAMIN K

SWITCHES ON A PROTEIN CALLED OSTEOCALCIN, NEEDED FOR BUILDING & HEALING BONES

Daily consumption of leafy greens should provide enough vitamin K.



ZINC

HELPS CALCIUM & OTHER MINERALS ATTACH TO BONES

Zinc is a nutrient that requires attention when planning a vegan diet.



VEGAN SOURCES:

- ✓ PROTEIN RICH PLANT FOODS
- ✓ WHOLEMEAL BREAD
- ✓ FORTIFIED YEAST FLAKES

IODINE & SELENIUM

It is important to ensure those following a vegan diet have a reliable source of iodine and selenium in the diet, so supplementation may be needed.



VEGAN SOURCES:

- ✓ 500ML/D IODINE FORTIFIED MILK ALTERNATIVE
- ✓ DAILY SUPPLEMENT



VITAMIN A

Unlike pre-formed vitamin A, foods rich in carotenoids such as fruit and vegetables are not harmful to bones.

Those following a vegan diet should aim to consume carotenoid-rich vegetables daily to ensure they are getting enough.



VEGAN SOURCES:

- ✓ SWEET POTATO
- ✓ SPINACH
- ✓ CARROTS
- ✓ BUTTERNUT SQUASH



MAGNESIUM

Magnesium is abundant in typical vegan diets, so not a nutrient of concern.

IT HELPS WITH...

- ✓ CALCIUM & VITAMIN D METABOLISM
- ✓ MINERALISATION OF BONES
- ✓ REDUCING BONE LOSS
- ✓ NERVE & MUSCLE FUNCTION



OTHER IMPORTANT DIETARY FACTORS



WHAT ABOUT BODY MASS INDEX?

Low Body Mass Index (BMI) is a risk factor for fractures in those who are post-menopausal and older adults.

Severe weight loss and anorexia nervosa is also a risk factor for osteoporosis due to poor nutrition, low levels of oestrogen in women and in some cases over exercise.

Research has also found a higher fracture rate among vegans with a lower-than-average BMI.

WATCH OUT FOR CAFFEINE!

Caffeine inhibits the absorption of calcium, so it's important to consider this if a patient or client is at risk of osteoporosis or calcium intake is low.

Recommendation is to have no more than 400mg/d, which equates to about 4 cups of instant coffee.



Try to limit intake and avoid drinking caffeinated beverages with calcium rich meals.

THE IMPORTANCE OF PERSON-CENTRED PRACTICE



Health and nutrition professionals are in a great position to help vegans thrive by providing person-centred care and sharing practical tips to help them look after their bone health!

- 1 ASK YOUR CLIENT TO TELL YOU A BIT ABOUT WHY THEY EAT A VEGAN DIET AND HOW THEIR BELIEFS AFFECT OTHER CHOICES.
- 2 USE VEGAN-SPECIFIC RESOURCES WHERE POSSIBLE.
- 3 DISCUSS ALTERNATIVES WITH SENSITIVITY IF VEGAN OPTIONS AREN'T POSSIBLE OR PRACTICABLE. COMPROMISING BELIEFS CAN BE UPSETTING.

SALT MATTERS!

The effect of salt on bone health is unclear, but excess salt in the diet can increase the amount of calcium lost in urine.

STICK TO THE RECOMMENDATION OF LESS THAN 6G SALT PER DAY.



DOWNLOAD THE VEGAN EATWELL GUIDE ON THE VEGAN SOCIETY WEBSITE!

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