

## Slowing down bone loss

ACCORDING to consultant orthopaedic surgeon Dr Ruzaimi Md Yusoff at MSU Medical Centre, most people reach their peak bone mass around the age of 30. After that, bone remodelling continues, but you lose slightly more bone mass than you gain because of a decrease in osteoblast activity. That's why it is important to have as much bone mass as possible by the age of 30.

There are multiple modifiable and non-modifiable risk factors which can affect bone health.

**Diet** – A low calcium intake will cause low bone density and will lead to early bone loss causing a higher risk of fractures. Not getting enough vitamin D can also increase the risk of osteoporosis because it is important for calcium absorption.

**Physical activity** – Not being active for long periods can increase the chances of getting osteoporosis. Muscles and bones become stronger with regular exercise and thus delay the onset of osteoporosis.

**Body weight** – Maintaining an ideal body weight is important for bone health. This is because

extremely thin individuals will have lesser bone mass. Therefore, severely restricting food intake and being underweight weaken the bone.

**Smoking** – Many research suggests that tobacco will increase the risk of osteoporosis. Women who smoke go through menopause earlier than those who don't smoke.

**Alcohol** – People who consume a lot of alcohol are more likely to get osteoporosis.

**Medicines** – Usage of corticosteroid medications such as cortisone, prednisolone and dexamethasone can be damaging to the bone.

**Age** – Advanced age causes thinning and weakening of the bone.

**Gender** – Women have a greater risk of osteoporosis as they have less bone tissue than men. Women also lose bone faster than men because of hormonal changes that occur after menopause.

**Ethnicity** – Caucasian and



Dr Ruzaimi Md Yusoff.

Asian women are more prone to osteoporosis.

**Family history** – A strong family history of osteoporosis predisposes an individual to develop osteoporosis at an earlier age.

Maintaining bone health is important to prevent or slow down the process of bone loss. Dietary calcium intake is extremely important. Good sources of calcium include dairy

products, almonds, broccoli, kale, canned salmon with bones, sardines and soy products such as tofu. Calcium supplements may also be prescribed by a doctor if dietary calcium intake is lesser than the requirement.

Adequate vitamin D intake is important for calcium absorption. Good sources of vitamin D include oily fish such as salmon, trout, whitefish and tuna. Additionally, mushrooms, eggs and fortified foods, such as milk and cereals, are good sources of vitamin D. Sunlight also contributes to the body's production of vitamin D. Vitamin D supplement may also be prescribed if indicated.

Physical activities especially weight-bearing exercises can help build strong bones and slow the process of bone loss. Avoiding smoking and limiting alcohol intake will also help delay the occurrence of osteoporosis.

There are some signs of osteoporosis that we should look out for which include

receding gums, chipped or brittle nails, a weakened grip and fractured bones.

It's important to seek medical attention for any type of bone pain, especially if the pain is severe, persistent, worsening over time or associated with swelling, redness, warmth, a fever, unintentional weight loss, or a palpable mass or lump.

Since osteoporosis does not have any symptoms until a bone breaks, it is important to talk to your doctor about your bone health. A bone density test may need to be done if your doctor feels that you are at risk for osteoporosis. A bone density test measures the density of your bones and assesses whether you have osteoporosis. It can also tell you the risks of breaking a bone.

Medications may be prescribed to help prevent and treat osteoporosis. These include bisphosphonates, oestrogen agonists/antagonists, calcitonin, parathyroid hormone, oestrogen therapy and hormone therapy.



## 6-in-1 Nutrition

For stronger muscles, bones & body strength

• Plant Protein • Fiber • Calcium • Magnesium • Vitamin D3 • Vitamin K2 (Menaquinone MK-7)



### PLANT PROTEIN

Soy & pea proteins

- Helps to build and repair body tissues
- Essential for growth and development
- Provides amino acids required for protein synthesis



### FIBER

Wheat resistant dextrin

- Promotes regular bowel movement especially for people with a tendency to constipation



### BONE NUTRIENTS

Calcium (Ca), magnesium (Mg), vitamins D3 & K2

- Builds strong & healthy bones\*
- \*Calcium aids in the development of strong bones<sup>1</sup>
- Magnesium promotes calcium retention & absorption<sup>1</sup>
- Vitamin D3 helps the body absorb calcium<sup>1</sup>

Reference:  
1. FSQD, MOH. Guide to Nutrition Labelling & Claims (as at Dec 2010).

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BESIDES water, protein is the second most abundant organic molecule in the body as the average human body comprises 15% to 18% of protein<sup>(1)</sup>. Protein is found throughout the body including the muscle, skin, hair, antibodies, hormones, enzymes and virtually every other body tissue<sup>(2)</sup>. Protein is made up of amino acids which are the initial materials for protein synthesis and constituent of tissue. As protein can't be stored in the body, it is crucial to replenish the protein supply daily to keep the body functioning normally and maintaining good health.

### Why protein is important for all ages

**Children** – Promotes growth and development of muscles, height and brain cells.

**Adults** – Builds body strength and resistance against physical and mental health<sup>(3)(4)</sup>.

**Elderly** – Maintains muscle mass for optimal body strength and mobility<sup>(5)(6)</sup>.

Did you know that arterial calcification is a gradual and progressive process of hardening of arteries due to calcium deposits over time. This will result in a reduction of arterial elasticity and an increased risk of developing cardiovascular disease. According to several studies, people who meet daily protein requirements maintain better bone health than those who do not achieve the recommended daily protein intake as protein stimulates muscle protein synthesis and enhances calcium metabolism. A combination of protein with calcium and other bone nutrients, such as magnesium, vitamin D3 and vitamin K2 helps provide higher integrity and density of your muscles and bones if compared with taking protein or calcium supplementation alone<sup>(7)</sup>. Magnesium, vitamins D3 and K2 can significantly improve bone health as magnesium and vitamin D3 enhance the absorption and

# Source of quality protein and bone nutrients

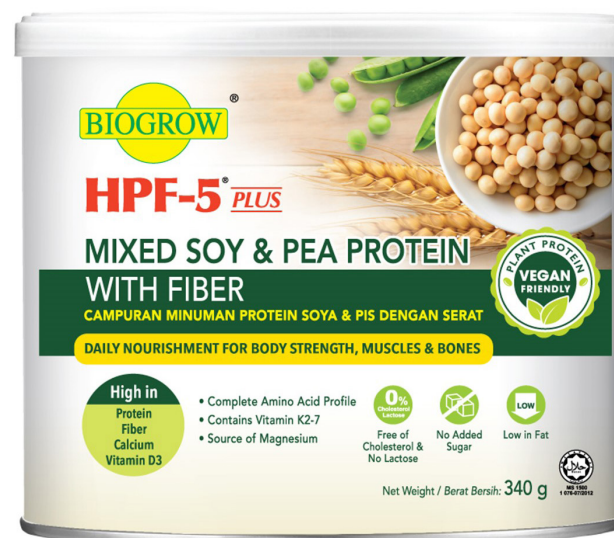
utilisation of calcium while vitamin K2 helps to improve bone density, prevent heart disease and arterial calcification by directing calcium to the bones and teeth and keeping the calcium away from the arteries<sup>(8)(9)</sup>.

Biogrow HPF-5 Plus is a unique blend of plant protein and digestive fibre, fortified with bone health nutrients such as calcium, magnesium and vitamins D3 and K2. It contains no added sugar and is low in fat, cholesterol-free and lactose-free. It is suitable for all ages as well as vegans as the ingredients in Biogrow HPF-5 Plus are not derived from animal sources. A daily serving of one scoop of Biogrow HPF-5 Plus (≈16g) provides:

- Up to 61% of plant protein (non-genetically modified organism (non-GMO) soy and pea proteins) complete with all nine essential amino acids for protein synthesis.
- Synergistic effect with magnesium and vitamins D3 and K2 for better absorption, retention, utilisation and deposition of calcium.
- Up to 18% of digestive fibre (wheat-resistant dextrin) to regulate bowel movement, especially for people with a tendency of constipation.

This article is brought to you by Legosan (Malaysia) Sdn Bhd.

■ For more information, call 03-7956 2220 (Mondays to Fridays, 9am to 5pm) or email [info@biogrow.com.my](mailto:info@biogrow.com.my).



Biogrow HPF-5 Plus helps provide protein and bone nutrients with its plant protein blend and digestive fibre.

### References

- <sup>(1)</sup>Di Pasquale M.G., 2008. *Amino Acids and Proteins for the Athlete: The Anabolic Edge*. p.3
- <sup>(2)</sup>Havard T.H.Chan, 2018. *The Nutrition Source – Protein*.
- <sup>(3)</sup>Anne et. al., 2017. *Amount, Distribution, and Quality of Protein Intake Are Not Associated with Muscle Mass, Strength, Powder in Healthy Old Adults without Functional Limitations – An enable Study*.
- <sup>(4)</sup>Agnieszka et al., 2016. *Inappropriate nutrients intake is associated with lower functional status and inferior quality of life*

in older adults with depression. 11: 1505-1517.

<sup>(5)</sup>J Am Coll Nutr. *Dietary protein: an essential nutrient for bone health*. 2005 Dec; 24(6 Suppl): 526S-36S

<sup>(6)</sup>Am J Clin Nutr. *Amount and type of protein influences bone health*. 2008 May; 87(5): 1567S-1570S

<sup>(7)</sup>Lister et al., 2007. *Current topics in nutraceutical research*, 5, 67-82.

<sup>(8)</sup>Ballegooijen AJV, et al. *Int J Endocrinol*. 2017. Volume 2017. 1-12. doi: 10.1155/2017/7454376

<sup>(9)</sup>*Alternative Medicine Review*, 2010; Volume 15, (3): 199-222



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## BRAIN HEALTH SCREENING PACKAGE

### Package

#### ✓ Consultation by Specialist

##### Physical & Clinical Assessment

- Medical History
- Physical Examination
- Vital Sign Assessment
- Anthropometry (BMI, WH Ratio)

#### ✓ Neurology & Brain Health Assessment

- MRI Brain with MRA (without contrast)

#### ✓ Cardiac & Respiratory Health Assessment

- Resting ECG
- Chest X-ray
- Echocardiogram
- Lipid Profile

#### ✓ General Health Assessment

- Fasting Blood Glucose
- Blood Grouping & Rhesus Typing
- Full Blood Count
- Liver Profile
- Renal Profile
- Thyroid Function Screen
- Hepatitis Disease Research Laboratory (VDRL)
- Urine Analysis / FEME

**RM1,699**

#### CLINIC HOUR

Monday - Friday 8:30am - 5:30pm

Saturday 8:30am - 12:30pm



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