

## Importance of early diagnosis

IF you have ever fractured a bone, vou would understand how painful and disabling it can be. Recovery would be a patient's number one priority. In addition, patients and their doctors would want to determine whether this is

a first sign of osteoporosis. According to Dr Yeap Swan Sim, a consultant rheumatologist and physician at Subang Jaya Medical Centre, "If patients do have osteoporosis, it puts them at a greater risk for future osteoporotic fractures as once they have had a fracture, the risk of them having another osteoporotic fracture is actually quite high.'

"Many people are unaware of the relationship between a low trauma fracture and osteoporosis. If a patient aged 50 and older has a fracture with low or minimal trauma, there is a good chance that her fracture is related to osteoporosis. An example of a low trauma fracture is one that occurs following a minor fall from a standing height or less," she says. The most common sites of osteoporotic fractures are in the spine (vertebral), hip and wrist.

Sometimes known as the "silent disease", osteoporosis does not present with symptoms initially meaning that people with the disease will not notice when their bones start to thin, until their bones become so brittle that they break or fracture.

According to the International Osteoporosis Foundation (IOF), one in three women and one in five men worldwide will experience osteoporotic fractures once over the age of 50. Dr Yeap shares that the reason this happens is because bone mass and bone density change as people age.

Bone density increases until an individual reaches peak bone mass around the age of 30. Physiologically, the bones are in a constant state of bone

"remodelling", where areas with micro-cracks or micro-damage (which occur as part of daily activities) on the bone surface are removed and replaced with new bone. Up to the age of attainment of peak bone mass, a person would have formed more bone than that removed, i.e. there is a net gain in bone. As people age, the amount of bone removed is more than the amount of bone formed, thus there is a gradual age-related bone loss that occurs in everyone. Due to a loss of production of the oestrogen hormone during menopause, women would experience a period of more rapid bone loss at that time, which would make them more prone to

developing osteoporosis. In a 2018 research article published in Osteoporosis and Sarcopenia titled An updated hip fracture projection in Asia: The Asian Federation of Osteoporosis Societies study, it was estimated that the incidence of hip fracture would rise in Malaysia from 5,880 cases in 2018 to an estimated 20,893 cases in 2050, a 3.55-fold increase.

#### Why prevent it?

To understand why more people should be concerned, picture this scenario: Jane is in her 70s and has always thought of herself as a healthy individual. One night, as she gets up to go to the bathroom, she falls and experiences excruciating pain in her right hip, leaving her unable to move to reach the phone. As a person living alone, hours pass before one of her children comes by and calls an ambulance to take her to the hospital. At the hospital, she finds out that she has a broken right hip. Unfortunately, many seniors can find themselves in a similar situation.

#### Risk factors for osteoporosis and fractures

Besides low trauma fractures, other signs of osteoporosis could be a loss of height or a more prominent hunchback (where the spine in the upper back has an increased curvature), or back pain – all of which could be due to vertebral fractures.

Here is a list of factors that can make someone more susceptible to osteoporosis (adapted from a 2016 Osteoporosis and sarcopenia publication titled A summary of the Malaysian Clinical Guidance on the management of postmenopausal and male osteoporosis, 2015):

#### Non-modifiable risk factors

- Advancing age
- Ethnic group (Asian and Caucasian)
- Female gender
- Premature menopause

(before age 45), including surgical menopause

or fractures in a first-degree relative

• Personal history of fractures as an adult

#### Modifiable risk factors

- Low calcium and/or vitamin
- D intake
  - Sedentary lifestyle
  - Cigarette smoking Alcohol intake of more than
- three units daily • Caffeine intake of more than 330mg (three cups) daily
- Low body weight (body mass index of less than 19kg per sq m)
  - Oestrogen deficiency



Dr Yeap Swan Sim.

"Osteoporotic fractures are associated with morbidity and mortality, and hip fractures are a significant contributor," says Dr Yeap. In the first year after a hip fracture, the mortality rate is approximately 20%. Survivors are left with significant morbidity, with 40% unable to walk independently and 60% requiring assistance a year later. In addition, 33% of hip fracture patients are totally dependent or in a nursing home the following year after their fracture.

Besides hip fractures, spine or vertebral fractures are associated with an eight-fold increase in ageadjusted mortality and can also lead to morbidity due to back pain, loss of height, deformity or immobility increasing the number of days spent in bed with an impact on patients' quality of life.

#### Fracture begets fracture

What about individuals who had previously experienced an osteoporotic fracture?

According to the IOF, a prior fracture is associated with an 86% increased risk of another fracture. The risk of a subsequent fracture is particularly elevated in the first two years after an initial fracture. About 5%-10% of patients experience a recurrent hip fracture – of these, 23% occurred in the year following their first hip fracture and 70% within the first



The risk of a subsequent fracture is particularly elevated in the first two years after an initial fracture.

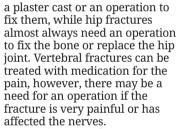
five years. Over 55% of patients with hip fractures have evidence of a prior vertebral fracture.

High-risk patients who have already had a low trauma fracture – as well as all women aged 65 and above and men aged 70 and above – are recommended to have their bone density measured, as stated in the Malaysian Clinical Guidance for the Management of Osteoporosis.

"Because of the high risk of a subsequent osteoporotic fracture, it is important to start antiosteoporosis medication after the first fracture to prevent future fractures," adds Dr Yeap.

If patients feel that they may be at risk, Dr Yeap advises them to consult their doctor as soon as possible. One method of diagnosing osteoporosis earlier instead of merely waiting until a fracture occurs is by measuring bone density. The higher a patient's bone mineral content, the denser her bones are and thus they are less likely to break. Bone density is best assessed at the spine, hip or wrist. Treatment for an osteoporotic

fracture depends on the site of the fracture. Wrist fractures may need



More importantly, Dr Yeap stresses that after the fracture has been treated, patients must be started on medications to treat their osteoporosis – this will then increase the patients' bone density and reduce the risk of future fractures. For the best results, these medications need to be taken regularly over a few years at least, under the supervision of a doctor.

"So, if a patient suspects that she is at risk for this disease, please see a doctor. What patients want to do, especially if they have had previous fractures, is to reduce their risk of future fractures and be able to live healthily," says Dr Yeap.

For more information, call 03-5639 1212.



Treatment for an osteoporotic fracture depends on the site of the fracture.



EVERYONE wants to be able to enjoy a fulfilling, long and healthy life that is full of strength and energy. A healthy life enables people to optimally perform both physically and mentally with a balanced lifestyle that protects them from diseases. It is essential to strive for good health and to make healthier decisions that have positive impacts on an individual's mental, physical and emotional well-being.

Several health problems are preventable and can be kept at bay by maintaining a healthy lifestyle. Good nutrition, exercise and stress management are among the healthy practices that can help to address numerous health issues.

Osteoporosis is among the diseases that are closely related to a healthy lifestyle. It is defined as a systemic skeletal disease characterised by low bone mass and micro-architectural deterioration of bone tissue, with a consequent increase in bone fragility and susceptibility to fractures. This condition where the bone becomes weak, soft and brittle may lead to fractures even after a minor fall or mild trauma.

Usually surfacing in those aged 50 and older – and particularly in post-menopausal women – an osteoporotic fracture commonly affects the bones around the hips, wrists and the spine. Most patients with osteoporosis have no symptoms. Patients with osteoporotic spine fractures, however, may present back pain, are hunched forward in their posture (dowager's hump) or have lost their height.

An osteoporosis diagnosis can be made through conventional radiography and by measuring

## A healthy lifestyle keeps osteoporosis away

bone mineral density. Blood tests can be done to look for any potentially modifiable underlying causes.

According to MSU Medical Centre consultant orthopaedic surgeon Dr Ruzaimi Md Yusoff, osteoporosis management starts with lifestyle modifications. Good nutrition and regular exercises are important for prevention.

"Being underweight increases the chance of bone loss and fractures, but overweightness increases the risk of fractures in the arms and wrists. Therefore, maintaining the ideal body weight is important to prevent complications," he says.

An adequate calcium intake is also important. The average individual needs around 1,000mg to 1,300mg of calcium a day. Good sources of calcium include low-fat dairy products, dark-green leafy vegetables, canned salmon or sardines with bones, soy products such as tofu, calcium-fortified cereals and orange juice. Calcium supplements should be considered by those with a low calcium intake in their daily diet.

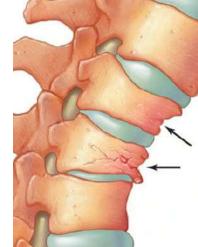
In addition, calcium absorption is aided by vitamin D and exposure to sunlight can be a good source. Active individuals exposed to enough sunlight (more than 15 minutes a day) should have adequate vitamin D levels. Elderly



Dr Ruzaimi Md Yusoff.

folk who are institutionalised, immobile, lacking in outdoor activities or having a poor dietary intake will benefit from daily vitamin D supplements.

Meanwhile, some recommended exercises to prevent osteoporosis include combined strength training with weight-bearing and balancing. Strength training helps to strengthen muscles and bones in the arms and upper spine. Weightbearing exercises such as walking, jogging, running, staircase climbing, rope skipping, skiing and impact-producing sports will benefit bones in the legs, hips and lower spine. Moreover, balancing



The difference between a healthy bone (top arrow) and a bone affected by osteoporosis (bottom arrow).

exercises such as tai chi reduce fall risks – especially in the elderly.

As for when osteoporosis should be treated with medication, bone density test T-scores of -2.5 or lower – such as -3.3 or -3.8 – in women are a sign for them to begin therapy to reduce their risk of fractures. People who have had a typical osteoporosis fracture of the wrist, spine or hip should also be treated even if the bone density Several health problems are preventable and can be kept at bay by maintaining a healthy lifestyle. Good nutrition, exercise and stress management are among the healthy practices that can help to address numerous health issues.

results are normal. Medications from the bisphosphonates group, for example, are often used to reduce the fracture risk in osteoporotic bones. Evidence shows the fracture risk reduction to be between 25% and 70%, depending on the bone involved. Hormone replacement therapy, selective oestrogen receptor modulators, and calcitonin injections or nasal sprays have also been found to be effective in preventing and treating postmenopausal osteoporosis, thus reducing fracture risks.







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

Wheat resistant

Wheat resistant dextrin
Promote regular

Promote regular bowel movement especially for people with a tendency to constipation

#### BONE NUTRIENTS Calcium (Ca), magnesium (Mo

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

- Build 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> Vitamin K2 helps deposit calcium to the bones<sup>2</sup>

FSQD, MOH. Guide to Nutrition Labelling & Claims (as at Dec 2010).
Katarzyna M., 2015. Proper Calcium Use: Vitamin K2 as a Promoter of Bone and Cardiovascular Health. 14(1): 34-39.





Available in all leading pharmacies nationwide or shop online at:

Legosan (Malaysia) Sdn. Bhd. Company No.: 199301029457 (284196-H) Lot 6, Jalan 19/1, 46300 Petaling Jaya, Selangor. Call Infolme: 03-7956 2220 (Mon-Fri: 9am - 5pm) Website: www.biogrow.com.my



THE STAR, TUESDAY 20 OCTOBER 2020

Subang Jaya **Medical** Centre

1 IN 3 WOMEN OVER 50 WILL EXPERIENCE OSTEOPOROTIC FRACTURES...AS WILL **1 IN 5** *MEN*...

Taking Osteoporosis screening to a new level with the advanced Bone Mineral Density (BMD) test.

Consult a Rheumatologist or contact Health Screening Centre at 03 - 5639 1212 or 03 - 5639 1389 for information on screening package.

WORLD

OSTEOPOROSIS



MOST people may be familiar with the usage of collagen for skin improvements as many beauty products tend to emphasise the importance of collagen for the skin. However, did you know that the joint cartilages need collagen too?

Collagen is the main building block for healthy blood vessels, flesh, cartilages, bones, tendons and connective tissues. After reaching the age of 25, the rate of collagen production in a person starts to fall. When this happens, an individual would experience cartilage degeneration – which may lead to joint deformities and osteoarthritis.

Bear in mind that cartilage degeneration does not only occur as a person ages. Being active in sports, as well as spending long hours sitting or standing, also contribute to early degeneration of the cartilages.

#### Why BCP?

Bioactive collagen peptides (BCP) are a type of collagen of short-chain protein peptides with 18 proteinogenic amino acids. These amino acids help in nourishing body tissues, cartilages, bones, tendons, ligaments, hair, nails and skin. BCP is obtained by enzymatic hydrolysis from clean and safe bovine sources, commonly known as hydrolysed gelatine. Some may point out that ther

Some may point out that there are many glucosamine products in the market already, so why should they choose BCP instead?

Firstly, the extremely low molecular weight (approximately 3,000 daltons) of BCP gives it excellent solubility. It is easily digested and absorbed into the body to effectively reach the targeted joint and bone areas to aid in the regeneration of cartilage and collagen-containing tissues. This will then support and maintain healthy joint functions and improve joint flexibility. Another important fact is that BCP is recognised by the World Health Organization in improving a person's overall bone and joint health.

Moreover, BCP contains higher glycine, proline and hydroxyproline content which enable these amino acids to aid in improved muscle strength and overall bone health.

#### Rose hip and joint inflammation

On a related note, rose hip extract is a natural ingredient known for its natural antiinflammation properties. It contains polyphenols and anthocyanins, which are believed to ease joint inflammation and prevent joint damage.

Rose hip extract also significantly decreases cartilage-degrading enzymes, thus ensuring good cartilage health. Its rich vitamin C content with antioxidant properties further inhibits damage to the joint tissues.

High levels of antioxidants present in rose hip extract provide nourishment to the joint areas while BCP spurs cartilage growth, cushioning affected joints and helping individuals regain their mobility so that they will be as active as before in their daily activities.

■ This article is presented to you by Roots Basic Sdn Bhd. For more information, call 017-869 6610.

### Challenges of a 'silent disease'

THE Malaysian Osteoporosis Society refers to osteoporosis as a "silent disease" because people will not know that they have it until they break a bone or two. In such a scenario, their bones have become brittle enough to fracture without much force due to bone loss.

There are signs of the bones weakening such as back pain, loss of height, a stooped posture, as well as the ease and frequency of the bones in sustaining damage. Osteoporosis can be caused by a lack of vitamin D, calcium and exercise. Those in their old age are more likely to be affected by this malady. Osteoporosis patients with fractures would also require a longer time for the bones to heal completely.

One study found the level of awareness about osteoporosis among the general population in Malaysia to be fairly good. However, many osteoporosis cases remain undertreated and underdiagnosed in Malaysia.

#### Extra caution necessary

Living with osteoporosis isn't an easy task because the disease will affect an individual's life in many ways.

For severe osteoporosis patients with notably brittle bones, a strong sneeze or cough could even lead to breakage. This is why patients must be careful and not do anything that would put excessive pressure on their bones. If a patient's walk is unsteady, she should be using a walking aid – such as a cane or walker – to relieve some of the body weight off her bones.

Any likely hazards at home that could cause the patient to trip and fall would also need to be

#### > TURN TO PAGE 6





THE musculoskeletal system includes all bones, joints and muscles in the body, providing form, support and movement to the body. In addition to supporting the body weight, bones work together with muscles to support body movement and to maintain body position. However, as people age, the body composition changes with a decrease in bone mass and muscle mass. This results in a higher risk of mobility limitations, falling and sustaining fractures. Therefore, keeping the bones and muscles strong from an early age is crucial to protect an individual's mobility and independence.

Protein is an essential nutrient which helps to preserve bone and muscle strength by stimulating muscle protein synthesis and calcium metabolism, according to studies published in the National Library of Medicine titled Dietary protein: an essential nutrient for bone health and Amount and type of protein influences bone health. Apart from protein, calcium also serves a vital role in maintaining bone structure, providing integrity and density to the skeleton.

Along with other nutrients such as magnesium, vitamins D3 and K2 can significantly improve bone health as magnesium and vitamin D3 facilitate the absorption and utilisation of calcium while vitamin K2 helps improve bone density by effectively depositing calcium to bones and teeth for proper storage and preventing accumulation of calcium in arteries, according to a 2010 study titled Vitamins D and K as Pleiotropic Nutrients: Clinical Importance to the Skeletal and Cardiovascular Systems and Preliminary Evidence for Synergy. Hence, they work in synergy for effective calcium utilisation and metabolism.

The Scientific Opinion on the substantiation of health claims related to vitamin K and maintenance of bone, blood coagulation, and function of the heart and blood vessels pursuant to Article 13(1) of Regulation (EC) No 1924/20061 in the EFSA Journal states that vitamin K2

## **Combating bone** and muscle mass loss



Biogrow HPF-5 PLUS is a new, improved formula with a unique blend of plant protein and digestive fibre.

(Menaquinone, MK-7) is a highly bioavailable form of vitamin K that helps maintain healthy bones.

Biogrow HPF-5 PLUS is a new, improved formula with a unique blend of plant protein and digestive fibre – enhanced with bone health nutrients such as calcium, magnesium, and vitamins D3 and K2. One

scoop of Biogrow HPF-5 PLUS (16g) daily can provide:

• Approximately 61% of plant protein (non-genetically modified organism or non-GMO soy and pea proteins), complete with all nine essential amino acids for protein synthesis

• A synergistic effect with magnesium,

Bones work together with muscles to support body movement and to maintain body position. However, as people age, the body composition changes with a decrease in bone mass and muscle mass. This results in a higher risk of mobility limitations, falling and sustaining fractures.

and vitamins D3 and K2 for better absorption, retention, utilisation and deposition of calcium

- More than 18% of digestive fibre to regulate bowel movement
- No added sugar, no cholesterol and lactose-free
- Suitable for all ages, including diabetic patients and lactose-intolerant individuals

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







MSU Medical Centre (MSUMC) is a private specialist hospital located in the heart of Shah Alam, a cosmopolitan city located on the outskirts of Kuala Lumpur. An extension of Management and Science University (MSU) in a combined effort providing transformative medical education and services, it stays true to a motto of Caring, Healing, Educating. Catering to local, international, individual, and corporate healthcare needs, the 250-bed hospital offers both general and comprehensive medical and clinical services.

MSUMC facilities include 6 operation theatres, 6 ICUs, 6 labour rooms, 24 specialist clinics, and 900 parking bays. Complementing the services are expert consultants and professional staff ensuring the best healthcare experience for all our patients.

## We Specialize in Specialists Specialities : Son Iternal Medicine Plastic & Reconstru-eurosures

- •
- **Obstetric & Gynaecology** Orthopaedic
- Paediatric
- **Colorectal Surgery**
- Ear, Nose and Throat (ENT)
- Anaesthesiology
- Dentistry

- Outpatient & Specialist Clinic
- **Emergency Department**
- Health Screening Centre Dental Clinic
- MRI & CT Scan Mammogram & Ultrasound
- **Special Services :**
- Traditional & Chinese Medicine (TCM) Clinic



msumedicalcentre



 $(\bigcirc)$ 

Call Us:







www.msumedicalcentre.com

Caring, Healing, Educating

KKLIU: 1699/2020

# Move with better flexibility and strength today

ANLENE is furthering its efforts to educate Malaysians about the importance of good mobility to continue enjoying life's important moments.

As people age, moving might feel harder. According to studies – among which are the Invited review: Aging and sarcopenia, Bone Health and Osteoporosis: A Report of the Surgeon General and Aging: Its Effects on Strength, Power, Flexibility, and Bone Density – the bones, joints and muscles will deteriorate and affect the strength and

flexibility needed to perform daily activities. Statistics by the National Osteoporosis Foundation show that people may lose up to 20% of bone density and 29% of muscle strength as they age.

To raise awareness on the matter, Anlene Move Check is one of the initiatives to help Malaysians understand their mobility status – how simple changes to their diet and lifestyle can go a long way towards maintaining good health and good mobility.

#### Did you know?

• MFGM Active contains components that are similar to those found in joint fluids

• Joint fluid is important in supporting smooth movement

Move Check is one of the initiatives to help Malaysians understand their mobility status – how simple changes to their diet and lifestyle can go a long way towards maintaining good health and good mobility.

To raise awareness, Anlene

evaluate the important aspects of movement such as flexibility, strength and body balance which require healthy bone, muscle and joint support. Some simple move check activities include grip strength, a balance test and a stretch test for flexibility. Curious if your body movements are fitter than your real age? Now you can take an online quiz at Anlene's website to see how well your body is keeping up. Anlene Gold is scientifically formulated with MFGM (Milk Fat Globule Membrane) Active, high protein, collagen, as well as 10 vitamins and minerals with no added sugars. Good nutrition and exercise help





Anlene Gold is scientifically formulated with MFGM Active, high protein, collagen, as well as 10 vitamins and minerals with no added sugars.

support flexibility, strength and mobility. Moreover, 96% feel better flexibility and strength after four weeks, according to a survey conducted by the Home Tester Club between October last year and January this year where 100 members tested Anlene Gold.

Anlene is specially formulated for adults' needs with MoveMax, a unique bundle of important nutrients including collagen, calcium, protein, magnesium, zinc, and vitamins B6, B12, C, D and E. Drink two glasses and care for your bones, joints, muscles and mobility today. Anlene is available in milk powder, UHT liquid milk and yogurt form in all leading supermarkets nationwide.

■ For more information about Anlene, visit Anlene Malaysia's Facebook at *www. facebook.com/AnleneMalaysia* or its website at *www.anlene.com.my* 

### **Coping with osteoporosis**

#### > FROM PAGE 4

removed. Possible hazards such as loose wires or cables should be secured neatly, and slippery rugs would have to be replaced as well. It is recommended to install grab bars and non-skid mats in the bathroom, especially since the floor tends to be wet. These items will enable the patient to have better stability and security in the bathroom.

#### A whole different lifestyle

Patients living with osteoporosis have to be mindful of their activities on a daily basis. This would mean deciding against certain physical activities that would put excessive pressure on the bones. It is also not unusual for a patient to require another person's assistance when conducting daily tasks.

A patient's working ability may also be affected in more serious cases, and she would then have to find another position that matches her physical capabilities.

#### **Emotional health**

Due to osteoporosis limiting a patient's mobility, this can lead to feelings of depression or isolation. The patient would likely feel depressed because she cannot do the normal things that she used to be able to do. Bedridden patients stuck in the house all day may also feel isolated from the world.

Osteoporosis can lead to feelings of anxiety as well, due to a fear of falling or fractures. The patient would always feel scared and anxious that something could happen and that she might break a bone.

According to a 2014 study published in BMC Psychiatry titled Excess risk of chronic physical conditions associated with depression and anxiety, it has been shown that anxiety and depression are co-morbidities of osteoporosis, and that osteoporotic fractures can reduce a person's self-esteem and self-image – likely due to feelings of helplessness and a loss of independence. Factors such as loneliness, a loss of social roles, depression and anxiety can contribute to disease exacerbation.

Osteoporosis is a disease that can have serious effects on a person's mental and physical health. However, consulting a specialist early would equate to more effective treatment and a much easier time in managing the disease.

> Osteoporosis can lead to feelings of anxiety as well, due to a fear of falling or fractures.