

OSTEOPOROSIS AND JOINT PAIN

OSTEOPOROSIS

Osteoporosis related fractures have been recognised as a major health problem in the elderly. Similar to trends in many countries with increasing life expectancy, Malaysia is expected to have a growing number of elderly individuals.

The common sites of fracture are the spine, wrist and hip. Hip fractures are associated with high morbidity and a mortality rate of up to 20% in the first year. Majority of those who survive are disabled and only 25% will resume normal activities.¹

Causes and risk¹

- Advancing age
- Female
- **Low calcium and / or vitamin D intake**
- Sedentary lifestyle
- Cigarette smoking
- Excessive caffeine intake (>3 drinks/day)

Guide To Choosing Your Calcium Supplement

Know your labels. Identify the source of calcium

There are many calcium sources such as calcium carbonate and calcium lactate. Calcium carbonate has a higher percentage of elemental calcium (the amount of calcium). Choose the calcium source that provides the highest percentage of elemental calcium for best results .

Form of dosage / formulation

Liquid capsules are easier to swallow compared to tablets, and are more suitable for older aged persons. Special formulations are available for lactose-intolerant and non-milk drinkers.

Is vitamin D present?

Vitamin D ensures that calcium is efficiently absorbed into the body. Taking calcium formulation with Vitamin D is essential as it reduces risk of total fractures by 15% and reduces risk of hip fracture by 30%.²

The recommended daily intake for Calcium¹ & Vitamin D¹ (both dietary and supplements):

1000mg
Calcium

800IU
Vitamin D

References:

1. Malaysian Osteoporosis Society. 2015. *Clinical Guidance on Management of Osteoporosis 2012, Second Edition*. Malaysia: Malaysian Osteoporosis Society.
2. Weaver C, et al. Calcium plus vitamin D supplementation and risk of fractures: an updated meta-analysis from the National Osteoporosis Foundation. *Osteoporosis International* 2015; 27(1): 367-376.
3. Veerapen K, et al. Musculoskeletal Pain in Malaysia. *The Journal of Rheumatology*. 2007; 34(1): 207-213.
4. National Institute of Arthritis and Musculoskeletal and Skin Disease (NIAMS). 2014. *What is Osteoarthritis?* United States: U.S Department of Health and Human Services.
5. Chen A, et al. The Global Economic Cost of Osteoarthritis: How the UK Compares. *Arthritis*. 2012; 698709:1-7.
6. Aker BioMarine Antarctic US. 2012. *Superba Krill: The Superior Source of Omega 3*. Norway: Aker BioMarine Antarctic US
7. Deutsch L. Evaluation of the Effects of Neptune Krill Oil on Chronic Inflammation and Arthritic Syndrome. *Journal of American College of Nutrition*. 2007; 26(1): 39-48.

JOINT PAIN

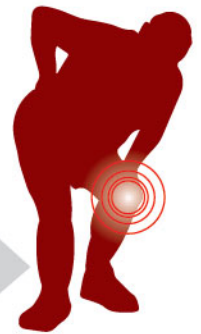
1 in 4 Malaysians suffer from joint pain.³
65% of them complain knee pain.³

This is followed by shoulder and hip pain, but joint pain can affect any part of your body, from your ankles and feet to your shoulders and hands. Many different conditions can lead to painful joints, including osteoarthritis, rheumatoid arthritis, bursitis, gout, strains, sprains, and other injuries. As you get OLDER, painful joints become increasingly more common.³

Causes and risk⁴

- Age
- Joint injury
- Joint malformation
- Genetic defect
- Overweight
- Jobs that stress particular joints

An obese person is 14x more likely to develop knee pain than someone of normal weight.⁵



How unique is Krill Oil?⁶

Omega-3s in Krill oil are unique, because they contain phospholipids, choline and astaxanthin, which makes them bio-efficient, stable and contribute to an adequate intake of choline. Studies have shown that phospholipid Omega-3s are better recognized and utilized the body. Krill oil omega-3s are **anti-inflammatory nutrients** that can help balance the body's level of inflammation and promote health and wellness.

- Phospholipid Omega-3 fatty acids:
 - EPA
 - DHA
- Choline
- Natural antioxidant astaxanthin



Krill Oil reduces joint inflammation:⁷



↓ **38.3%** Pain Score

↓ **39.1%** Joint Stiffness

↓ **35.9%** Functional Impairment

