Those who are insufficiently active have income country levels of physical activity, with even sedentary lifestyles increasing at the higher income countries.

Due to our ageing population the number of people living with musculoskeletal conditions is rapidly increasing.

Those who are insufficiently active have 20%-30% increased risk of death.

The Backbone of Mobility: Interconnected Musculoskeletal Health

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IMPROVING MOBILITY DURING AGEING THROUGH EVIDENCE-BASED COMPLEMENTARY APPROACHES

International Expert Groups Recommend Higher Protein Intake for Adults >65 years

Protein levels

- Current Recommendation for Adults
- Expert Recommendations

Optimise vitamins and minerals such as Ca, ViD, Phos, and Mg

Adequate and safe pain management e.g., with oral enzyme combinations

Maximise Protein Synthesis with Even Distribution of Protein Throughout the Day’s Meals

Protein (g)

Breakfast Lunch Dinner

0 10 20 30 40 50 Equal protein distribution

0 10 20 30 40 50 Unequal protein distribution

MUSCLE BONE JOINTS

MUSCLE

High quality protein intake, with 20-35g per meal

Support cartilage through collagen, glucosamine, and chondroitin

Joints

Reduction of muscle function and mass, increase of fat tissue

Articular cartilage degeneration: faster initiation and progression of degenerative joint disease (OA)

Decline of muscle strength and mass, increase of fat tissue

Support cartilage through collagen, glucosamine, and chondroitin

More fat tissue derived inflammation

Reduced physical activity and bone density

Increased risk of falls and fractures

Pain and less mobility

ADDDRESSING ALL ASPECTS OF THE MUSCULOSKELETAL SYSTEM IS NECESSARY TO BREAK THE VICIOUS CYCLE

The impact of ageing can be seen as early as 40Y

20–30 years old

Peak muscle and bone mass

Articular cartilage degeneration: faster initiation and progression of degenerative joint disease (OA)

Reduced physical activity and bone density

Increased risk of falls and fractures

Pain and less mobility

40–50 years old

Approximately 1%/year average loss of muscle mass begins

2–5 times faster loss of muscle strength

30% of postmenopausal women have osteoporosis, and over 40% of them will have fragile fractures in their lifetime

Bone loss with a decline in mineral density, prevalent in females due to menopause

Ligaments and tendons become less elastic and weaken

Significant muscle and joint loss, declining by >60% in the 60s compared with peak

Percentage of body fat increases, along with risk of health problems such as diabetes

Food intake often declines, increasing risk of calorie protein malnourishment

A poor diet, sedentary lifestyle, comorbidities, or injuries will hasten this progression

TOP RISKS TO SCREEN FOR:

- Measuring functional capacity (hand grip strength, walking speed, chair rise test, balance)
- Access to dietary intake (ensure higher protein across the day and nutritional adequacy including meal plans for bone health)
- Discuss joint pain management (recommend safe natural options)

ACRONYMS

- OA: Osteoarthritis
- NSAI D: Non-steroidal anti-inflammatory drug
- LAFI: Lequesne Alg of functional Index
- LAI: Self-assessment of OA-related joint pain and functional disability in daily life
- CI: Confidence interval
- V it D: Vitamin D
- M g: Magnesium
- P h os: Phosphorus
- C a: Calcium
- P h o s: Phosphate
- B r o m e l a i n: Bromelain
- T r y p si n: Trypsin
- R uti n: Rutin
- C o n f i d e n c e i n t e r v a l: Confidence interval
- E n z y m e C o m b i n at i o n: Enzyme combination

Please click here for references.