OSTEOARTHRITIS

WORLD PHYSIOTHERAPY DAY

SINGAPORE INSTITUTE OF TECHNOLOGY

SINGAPORE PHYSIOTHERAPY association STUDENT COUNCIL

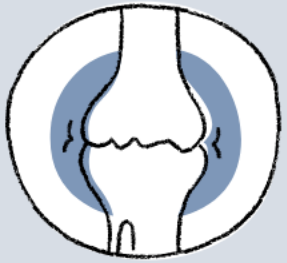
SIGNS AND SYMPTOMS

No two people will have the same signs or symptoms, but common features include:

Pain or aching

Tenderness

Stiffness



Loss of flexibility

Bone spurs

Swelling

RISK

What are the risk factors for OA?

NON-MODIFIABLE

(i.e. things you can't change)

Age

Race

Gender

Genetics

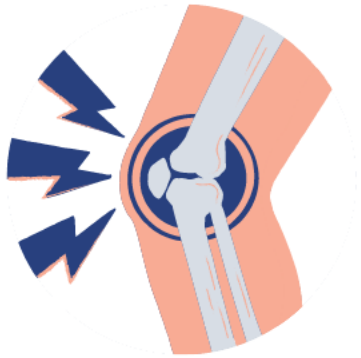
RISK

What are the risk factors for OA?

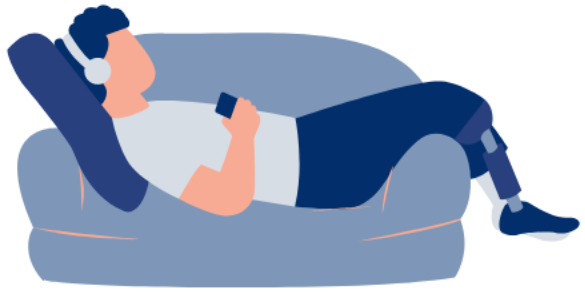
MODIFIABLE

(i.e. the things you CAN do something about!)

Obesity



Joint injury or overuse



Inactivity

STATISTICS OF OSTEOARTHRITIS
SINGAPORE

Osteoarthritis is the fifth reason for years of life lost to disability, ill health or early death

Given to the rise of the aged population osteoarthritis will continue to rise and be a growing problem for the country

Prevalence of osteoarthritis is common in females and Indian ethnic groups

Osteoarthritis affects up to 10% of the adults and 20% of the elderly population in Singapore

Mean cost per patients for osteoarthritis in Singapore ranges from 1,320 - 12,140 SGD

MANAGEMENT

Goal of osteoarthritis management

- Reduce pain
- Improve muscle strength and control
- Improve or maintain function and quality of life

MANAGEMENT

What can you do

- Increase physical activity
- Muscle strengthening
- Weight management

If needed:

- Medication
- Crutches/ Canes
- Surgery (If all other treatment options have not been effective)

ROLE OF PHYSIOTHERAPY

EDUCATION

- Understanding what osteoarthritis is
- Understanding pain is not a sign of damage
- Educate regarding activity modification
- Role of weight loss
- Promote active, healthy lifestyle
- Discuss treatment options

ROLE OF PHYSIOTHERAPY

EXERCISE

- Reduces knee pain and inflammation
- Normalises knee joint range of motion
- Lower body muscle strengthening and control
- Reduces risk of other co-morbidities (e.g. cardiovascular disease, obesity etc)
- Improves agility and balance
- Reduce fall risk
- Promotes physical function (i.e. going up and down stairs, walking further etc)

PHYSIOTHERAPY

AEROBIC ACTIVITIES

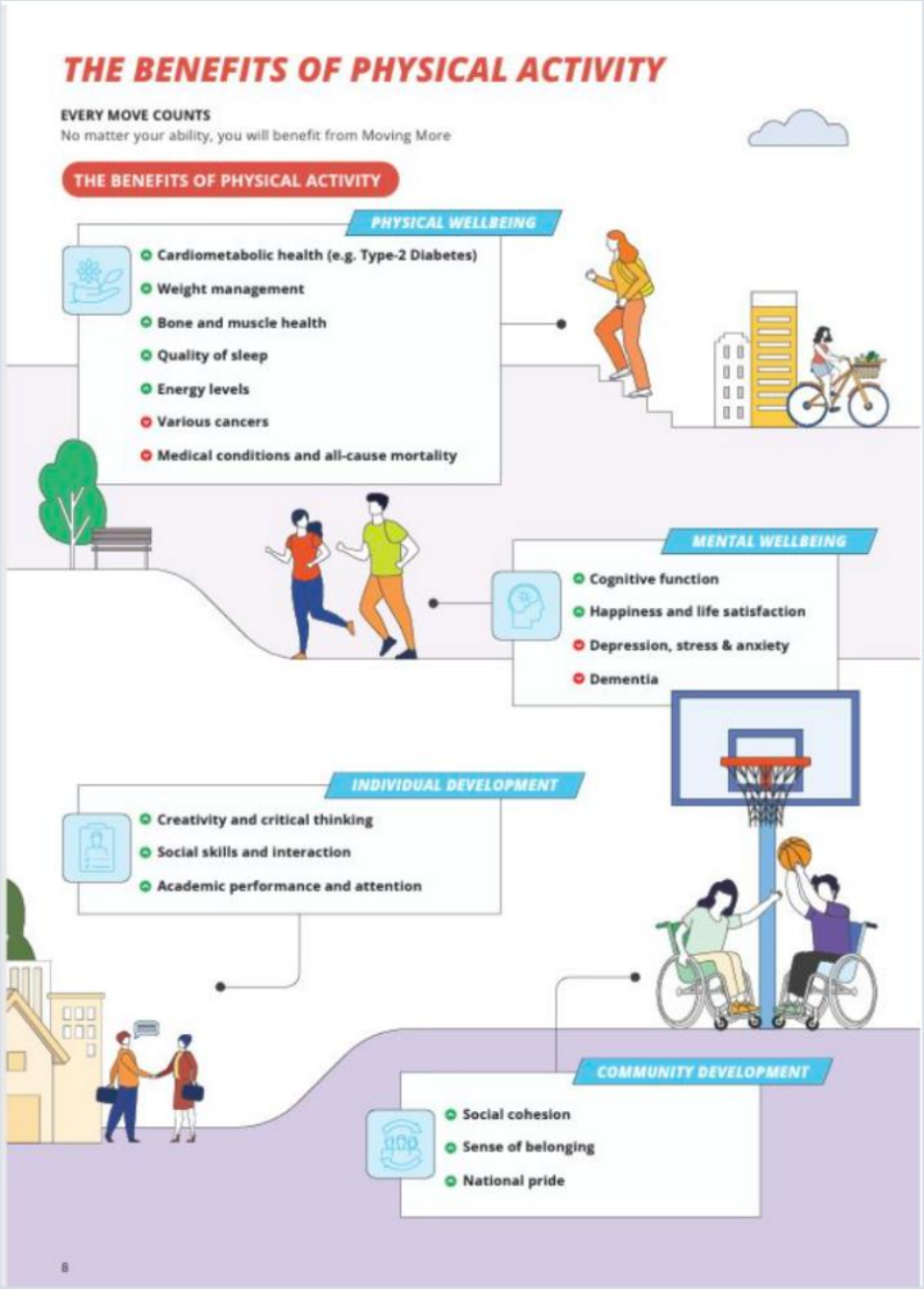
Such as cycling, treadmill walking, yoga, taichi etc.

AQUATIC PHYSIOTHERAPY

Can be useful for some - but not as good as land-based

MUSCLE STRENGTHENING RESISTANCE EXERCISE

Such as wall squats, straight leg raises, bent over rows etc.



BENEFITS OF PHYSICAL ACTIVITY

SINGAPORE PHYSICAL ACTIVITY GUIDELINES - ADULTS

Knee Osteoarthritis

FACT & FICTION

ACTIVITY RELATED KNEE PAIN

Usually in people 45 years or older with either no morning stiffness or stiffness that lasts no longer than 30 minutes.

EVERYONE GETS WORSE

It is not an inevitable part of ageing and not everyone gets worse. In fact many people can improve their pain and function

PAIN CAN CHANGE

Across a day, one day to the next and week to week. This is normal and rarely a sign that anything serious has happened to your knee.

X-RAY'S TELL US LOTS

Actually, medical imaging can't predict someone's pain or function and they are no longer needed to diagnose or manage knee osteoarthritis.

MANY THINGS INFLUENCE SYMPTOMS

Including; anxiety, stress, fatigue, quality of sleep, fears and past experiences.

"BONE ON BONE" OR "WEAR & TEAR"

Are common phrases that are incorrectly used to explain the condition and its symptoms. The condition is far more complex than we once thought

KNEES LIKE AND NEED MOVEMENT

Regular exercise keeps your joint healthy and can decrease pain and stiffness. Plus exercise has a whole lot of other benefits to improve your overall physical and psychological health

AVOID EXERCISE

Exercise is suitable for all people with knee osteoarthritis regardless of age, severity of condition or comorbidities

SELF-MANAGEMENT IS FIRST-LINE CARE

Educating yourself about how to best self-manage the condition along with exercise and weight loss (if appropriate) is the best thing everyone can do to help their condition

SURGERY WILL FIX IT

Surgery is not a magic cure. Keyhole surgery is no more effective than fake surgery and up to 1 in 5 people who have a knee replacement are unsatisfied with outcomes.

For more information about knee osteoarthritis visit myknee.trekeducation.org.

LA TROBE UNIVERSITY

Sport and Exercise Medicine Research Centre

TREK

WHAT SHOULD YOU KNOW ABOUT KNEE OSTEOARTHRITIS?

MYTHS

- ✗ Degree of arthritis on a scan predicts your pain and disability levels
- ✗ Rest is helpful
- ✗ Only surgery will fix it
- ✗ Exercise is dangerous
- ✗ Pain = damage

FACTS

- ✓ Scans are poorly related to pain and disability
- ✓ Rest and avoidance makes pain worse
- ✓ Graded exercise is safe and helps
- ✓ 20% of people do not get any pain relief from knee joint replacement
- ✓ Pain ≠ damage

FACTORS RELATED TO: KNEE HEALTH

- Osteoarthritis + Bone edema
- Stress/ isolation Depression Fatigue Anxiety
- Obesity
- Lifestyle: Lack of sleep Lack of physical activity
- Genetics Injury
- Unaccustomed load: Recreation Occupation Sport
- Muscle weakness Protective guarding
- Negative beliefs Catastrophising ↓Confidence Pain-related fear Coping

WHAT IS LOW VALUE CARE (passive treatments)

- ✗ Massage
- ✗ Needles
- ✗ Rollers
- ✗ Tens
- ✗ Ultrasound
- ✗ Laser
- ✗ Interferential
- ✗ Opioids
- ✗ Imaging
- ✗ Arthroscopy
- ✗ Injections
- ✗ Relying on common supplements
- ✗ Knee replacement for inappropriate candidates
- ✗ Low dose poorly targeted exercise

WHAT IS HIGH VALUE CARE (active treatments)

- ✓ Evidence based education
- ✓ Exercise (movement control, fitness, weight bearing/strength)
- ✓ Referral when indicated
- ✓ Lifestyle change physical activity, weight loss

*Knee replacement for appropriate candidates, after high value nonsurgical approaches have been trialled

BJSM APPROVED · GLA:D · TREK · PAIN-ED · Designed by @Fisioterapianet #fisioterapia

MYTHS
ABOUT KNEE OSTEOARTHRITIS

1 IT'S JUST WEAR AND TEAR

Besides cartilage damage and biomechanical overload, metabolic changes, genetics and inflammatory processes contribute to osteoarthritis (OA). "Joint wear and failed repair" may be a better way to describe OA.

2 THE WORSE THE IMAGING LOOKS, THE WORSE THE KNEE IS

Many people have visible changes in their knee X-rays, but do not experience pain or stiffness. It is often more useful to assess someone's signs and symptoms to derive an accurate diagnosis.

3 EXERCISE IS DANGEROUS

Strengthening and stretching can protect the knee by distributing the load across the joint. Exercise does not harm the cartilage and there is strong evidence that it reduces pain and improves function.

4 JOINT REPLACEMENTS ARE THE BEST CURE

Many patients do not reach the point where joint replacements are appropriate or necessary. Some patients also continue to experience long-term pain even after surgery.

BEST VALUE CARE INCLUDES

EXERCISE

EDUCATION

WEIGHT LOSS

SINGAPORE PHYSIOTHERAPY association

O'Brien et al. 2019, NZJP; Bricca et al. 2018, BJSM

Infographic contributed by John Tan, SPA Education committee