Exercise Prescription for Arthritis and Rheumatological Problems

Dr. Christopher Tong
Christopher Tong – different roles

orthopaedic surgery / sports medicine

Proud father of two

Triathlete
Current Appointments

• Orthopaedic Surgeon in Private Practice

• Hong Kong Sports Institute
  – Honorary Sports Medicine Consultant

• CUHK
  – Honorary Clinical Assistant Professor
  – Orthopaedic Department
  – Family Medicine Department
What exercises should I prescribe to patient’s with joint pain?
Arthritis / joint conditions

- Neck pain
- Back pain
- Osteoarthritis of knees
- Osteoarthritis of hips (more common in caucasian population)
What problems do patients with joint pain experience?

- Stiffness of joints
- Weakness of muscles
- Psychological problems, depression etc.
  - Dependent
  - Can’t exercise
Why is exercise beneficial?

- Improve range of motion of joints
- Increase muscle strength
- Psychological well being
- Cardiorespiratory benefits
- Lower blood pressure
- Weight control
- Avoid unnecessary medication
Traditional exercises prescribed

- Swimming
- Cycling
- Walking
- Hydroexercise
- Principle of gradual progression
American Geriatric Society on Exercise and Osteoarthritis
American Geriatric Society Panel on Exercise and Osteoarthritis

- Initial evaluation
- Assessment
- Exercise prescription
- Re-evaluation
- Monitoring in 4-6 months
- Progressive increase in exercise dose
Sequence of events when doing exercise

• Warm up
• Conditioning
  – Aerobic activity
  – Strength training
  – Stretching
• Cool down
Stretching
Resistance / strength training
Exercise Prescription

• Aerobic exercise
  – 20-30 minutes per day, 3-4 times per week

• Flexibility
  – Initial: hold 5-15 seconds
  – Subsequent: 3-5 stretches, hold 20-30s

• Strength-training exercise
  – Isometric
    • Hold < 6 s, 20 s rest period daily
  – Isotonic
    • 6-15 repetitions, 2-3 / week
Precautions in exercise prescription

• Osteoporosis
  – Engage in low-impact weight bearing activities and resistance training

• Lumbar spondylosis
  – Avoid extreme twisting motions of back

• Knee / Hip arthritis
  – Avoid exercise during periods of acute exacerbation of arthritis
Frozen Shoulder
(she had no previous shoulder trauma)
Frozen Shoulder
Frozen shoulder - pathology

Shoulder arthrogram

Intra-articular view
Frozen Shoulder - Treatment

• What can you do?
  – Educate the patient
  – Analgesics / Anti-inflammatory drug
  – Refer x physiotherapy
  – Intra-articular steroid

• What can I do?
  – Manipulation under anaesthesia (MUA)
  – Arthroscopic release
Shoulder Injection Technique
Shoulder Injection Technique
Conclusions

• Individualized plan
• Stretching, resistance training, aerobic training
• Gradual progression
• Exercise is good for you!