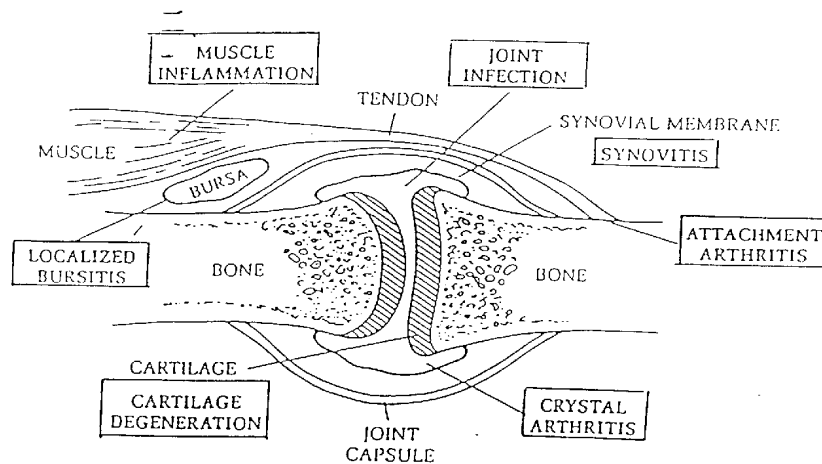


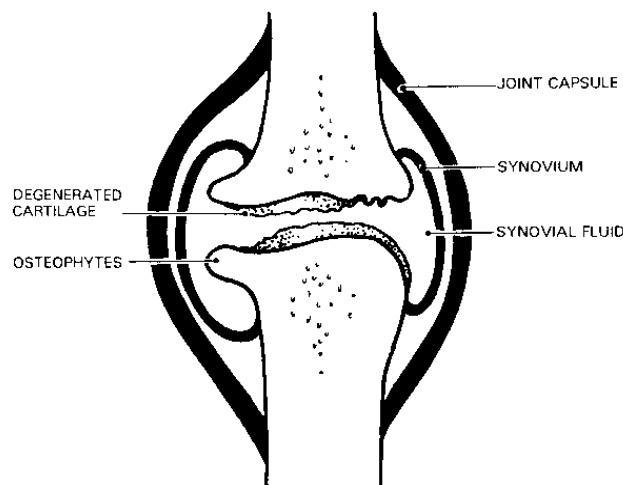
Osteoarthritis

What is Osteoarthritis (OA)?

Osteoarthritis (OA) is 'wear and tear' of joint surfaces leading to breakdown of joint cartilage and eventually pain and stiffness of the joint. As the cartilage wears away, bone becomes exposed and may lose its shape, thicken at the end and develop bony outgrowths. The joint may be puffy or swollen due to fluid in the joint and people may experience joint stiffness, aching pain with overuse and limited joint movement.



The picture above shows the basic structures of a joint. The cartilage cushions and protects the ends of the bones of a joint. In OA the cartilage degenerates and exposes the bone underneath. As our bodies cannot make new cartilage, more bone is produced instead – called osteophytes – which becomes thickened and hardened and leads to the symptoms listed above.



A joint with osteoarthritis.

Hand Therapy for Osteoarthritis

Hand Therapy for Osteoarthritis may involve:

Exercise: Exercise helps you maintain strength and movement in your joints for everyday activities. A gentle exercise program can be adapted to your needs.

Joint Protection and Work Simplification: Your Hand Therapist can help you learn techniques to reduce stress on your joints and the amount of energy you use to perform your daily tasks.

Stress Management & Relaxation Techniques: Your Hand Therapist can help you learn techniques for relaxation and strategies for coping with everyday stressors. These techniques can also assist with management of pain associated with arthritis.

Assessment of Activities of Daily Living: You may be having difficulty with everyday tasks such as dressing, housework, work and/or leisure activities. A Hand Therapist can help look at different ways of doing activities or recommend the use of assistive devices.

Splinting: Splints can be helpful to rest painful joints or assist with support and protection of a joint during activity.

Exercise

Exercise is not harmful for people with arthritis; in fact appropriate exercise is extremely beneficial as it helps to:

- Maintain a joints range of movement
- Maintain muscle strength and general fitness
- May distract from pain and alleviate depression which can reduce pain tolerance

Guidelines for exercise

To gain maximal benefits from an exercise program, injury and setbacks can be avoided by working within the following guidelines:

- Never exercise a swollen or painful joint, this joint needs rest, try to exercise other joints instead
- Use pain as a guide for how much exercise to do. If an exercise is painful – stop, exercise a different joint or rest
- Work into an exercise program gradually, slowly increasing the amount you do
- Incorporating exercise into your daily routine is helpful
- Muscles and joints are exercised more effectively when they're warm. Gentle exercise and stretching may help, or try exercising after a warm shower.

- Be aware of maintaining good posture when exercising
- Never force a joint and avoid jerky movements as this can lead to damage
- Choose the best time of day for you to exercise - when you are least tired and stiff and in least pain

Active Range of Motion Exercises for People with Osteoarthritis

These are simple exercises designed to help maintain movement at a joint. Your Hand Therapist will be able to guide you as to how often you should complete these exercises.

FINGERS:

1. Palm flat on table, raise and lower the fingers one by one.
2. Make an “O” by touching the thumb to each fingertip one at a time.
3. “Hand Star Jumps” rest hand on the table, spread fingers wide then bring them back together.
4. Palm flat on the table with thumb out to the side to make an “L” shape, move the first (pointer) finger towards the thumb and then follow with each finger one by one.
5. Palm flat on the table, lift all fingers and thumb off the table, keeping the palm down.
6. Hold a small rubber ball (tennis ball) in the palm of the hand and squeeze gently – then relax and open fingers gently.

WRISTS:

1. Palm flat on the table, lift hand off the table while keeping the forearm down on the table.
2. Forearm resting on the table, with thumb facing upwards, move hands forwards and backwards, keeping forearm still.
3. Forearm and hand flat on table – keep your forearm still – move hand from wrist to thumbside, lift hand and relax it while you return to original position and repeat. **DO NOT MOVE HAND TO LITTLE FINGER SIDE.**



ELBOWS:

1. With palms up, touch hand to shoulder of the same side, return with palm down.
2. Touch elbows into sides – turn palm up and down.

SHOULDERS:

1. Shrug shoulders in an upward, downward and circular motion.
2. Stand facing a wall and walk your fingers up the wall.
3. Place hands behind your neck and hold for a few seconds.

4. Place hands behind your back and try to move your hands up towards your neck.
5. Raise arm sideward and upward, clapping your hands together above your head.
6. Repeat exercise 5 this time bringing the backs of your hands together above your head.

OTHER EXERCISE:

Walking, swimming and aquarobics are good exercises for people with arthritis or inflammatory joint disorders as they are low impact (less damaging to joints) but still provide aerobic exercise with some resistance.

Hydrotherapy is also beneficial as it helps muscles relax, reduces pain and provides exercise.

High impact activities such as distance running and high impact aerobics should be avoided by people with arthritis as continual high impact can increase joint swelling and wear and tear. Contact sports such as football should also be avoided.

Work Simplification and Joint Protection Principles

There are some basic principles which can help you to control symptoms of arthritis. These principles are most effective if used consistently so try to make them daily habits.

RESPECT PAIN

Pain is your body's way of telling you to rest.

It is important to carry out activities and exercise only to the point of fatigue, try to stop before pain occurs.

BALANCE REST & WORK

Learn to rest before you become exhausted! Short rests during activities can improve your ability to complete the activity. Rest breaks between activities can give you more energy for the next task. Make regular rest breaks a habit. Rheumatologists agree on 10 to 12 hours rest per 24 hour period including a 1 to 2 hour nap in the afternoon.

REDUCE EFFORT BY WORKING EFFECTIVELY

Work simplification strategies can help you to:

- Achieve more with less effort
- Avoid over-fatigue
- Avoid muscle strain, protect joints and reduce pain
- Allow more time to do the things you really enjoy doing

The main things to remember are:

- Avoid heavy loads and equipment
- Learn to use assistive equipment
- Prioritise so that the most important tasks are done first
- Plan/Organise activities to maximize efficiency for example gather all ingredients needed before cooking to reduce walking back and forth
- Don't be afraid to ask for assistance
- Alternate heavier and lighter loads for a balanced work day

USE STRONGER/LARGER JOINTS

Stress is better tolerated by your body if larger and stronger joints such as shoulders and hips are used. Small bones in the fingers and wrists are more susceptible to injury.

Eg: - Use your palms rather than fingers to lift or push

- Lift packages with forearm and trunk
- Use hips to push open doors
- Use feet to close low drawers

AVOID STAYING IN ONE POSITION

Avoid staying in one position for a prolonged period of time. It is recommended to change position or have a stretch approximately every twenty minutes. Some people may be able to tolerate longer than this while other people may be able to tolerate less.

THINK AHEAD - AVOID ACTIVITIES THAT DON'T ALLOW YOU TO REST

Stop immediately if an activity becomes too stressful as continuing a task in the presence of sudden or severe pain is likely to cause joint damage. Only attempt tasks such as walking or carrying a package long distances, if there is a way to take a rest breaks as they are needed.

AVOID TIGHT GRIPPING

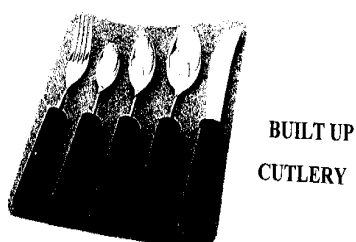
When lifting objects - avoid gripping handles tightly or holding the sides of large objects. It is better to use flat hands underneath the object.

MAINTAIN MUSCLE STRENGTH AND FULL RANGE OF JOINT MOVEMENT

This will maintain the health of your joints. Exercises such as those mentioned earlier will keep muscles strong and maintain full joint range. It is important not to exercise when joints are painful.

USE ASSISTIVE EQUIPMENT/DEVICES AND SPLINTS TO PROTECT JOINTS

- Working splints provide support for your joints during activity. Your Hand Therapist is able to fabricate a working splint if necessary.
- Resting splints keep your joints in a good position while resting. Your Hand Therapist is able to fabricate an appropriate resting splint for you. Below is one example of a resting splint.
- Assistive devices are used to conserve energy or protect joints. Most assistive devices are designed for making tasks easier and protecting the joint from being placed in a vulnerable position. Below are just a few examples of assistive devices available. Ask your Hand Therapist for more options that would help you.



Osteoarthritis and Pain Management

Pain is one of the most commonly reported symptoms associated with arthritis. Pain in arthritis may be caused by the inflammation of joints and associated joint structures, muscle tension or a prolonged stress response. Each person experiences pain differently, talk with your therapist about ways of managing your pain.

Pain Management Techniques

Stress management techniques

The best way to handle stress is to prevent it! As this is not always possible here some basic principles for managing stress.

Prevent it: Learn to identify a potentially stressful situation so you can apply strategies before the situation gets out of control.

Set Goals and Establish Priorities: Choose the most important things to be done and focus on these, drop tasks that will only waste your energy.

Take Time Out: Take a few minutes a day to rest, relax or exercise.

Communicate: Talk over your concerns with family, friends or health professionals.

Make Decisions: Resisting change or hoping a situation will go back to the way it was can create stress. When the time comes to change an old habit and move forward make the decision.

Get Support: There are always people who are able and willing to help.

Learn to relax: Find relaxation strategies that work for you.

Relaxation Techniques

Relaxation can be helpful in relieving pain and physical discomforts as well as helping you feel calmer, happier and more energetic. Here are some strategies that may be useful:

Progressive muscle relaxation: Start at the top of your head and gradually relax all the different parts of your body until you are completely relaxed.

Breathing Techniques: Let all your muscles feel relaxed and floppy. Breathe in using your lower chest in a natural rhythm, and then lengthen your breath out. Repeat until you feel relaxed.

Visual Imagery: imagine yourself in a relaxing and pleasant place; include sights, smells, sounds and feelings.

Listen to Relaxation Tapes

Find relaxing activities: examples include reading, watching TV, listening to music, going for a walk.

Ice Packs

Ice is useful for reducing inflammation in recent (within first 48 hours) soft tissue injury, such as a muscle strain or sprain or jarring of a joint. It may also relieve the pain of the injury. Always ensure you have a moistened towel between your skin and the ice pack to prevent damage to the skin. Ice is not appropriate in some conditions so check with your therapist if ice is appropriate for you.

Heat Packs

Heat may be useful in relieving some forms of pain. A hot water bottle wrapped in a towel or a warm cloth can be applied to a painful area for 10 to 15 minutes. Care must be taken so that the heat pack NEVER feels hot on the skin as it may cause a burn. As with ice heat must be used cautiously so check with your therapist about appropriate use of heat.