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The website for the answer to all your Orthopaedic Questions

- **Orthopaedic Opinion Online** is a website designed to provide information to patients who have orthopaedic and musculoskeletal problems and are undergoing treatment.
- **Patient information** is provided in the form of downloadable information sheets.
- **Orthopaedic advice** and second opinions can be provided by our expert internationally renowned Consultant Orthopaedic Surgeons.
- **Online review** of patients' X rays or MRI scans can also be provided and any proposed treatment plans reviewed.
- **Book a clinical consultation** with one of our internationally renowned consultant orthopaedic surgeons in Bristol or London.
- **Orthopaedic reports** can be provided for Injury or Accident Claims and Medical Negligence claims.

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Repetitive Strain Injury - RSI

Introduction

The term repetitive strain injury (RSI) is used to describe a range of painful conditions of the muscles, tendons and other soft tissues. It is mainly caused by repetitive use of part of the body. Unlike a 'normal' strain following a sudden injury, symptoms of RSI can be persistent.

Repetitive strain injury often occurs in an area of the body such as the wrists, elbows or shoulders, following repetitive tasks over a period of time. It is usually related to a job or occupation, but leisure activities can also be a cause. Treatment includes modifying or stopping the task, analgesics, anti-inflammatory drugs and physiotherapy.

Cause of the condition

The main cause is frequent and repetitive movements of a part of the body. For example, typing, or using a computer mouse a lot, etc. Other factors may contribute such as poor position or posture whilst doing the movement, using excessive force whilst doing the movement, and not having enough breaks and rests from the task.

However, the precise reason why RSI develops is not clear. In many cases there is no swelling, inflammation or other obvious problems which develop in the muscles or tendons, and yet symptoms develop. Also, it is not clear why some people develop RSI and not others who do the same repetitive tasks.

Computer operators RSI

The symptoms experienced depend on what the repetitive actions are. In most cases the symptoms develop in the wrist or hand as these parts of the body most commonly do repetitive tasks. Perhaps the most famous RSI condition is 'writers cramp'. In recent years it is computer operators, typists, musicians and people doing repetitive tasks in factories who most commonly develop RSI. People who do a lot of DIY around the house may develop RSI, or people who do certain sports which involve repetitive movements.

More recently the most common cause is wrist RSI from using a computer mouse. The size and type of the mouse is important. A small ergonomic or optical mouse is less troublesome. Careful adjustment of the seated position, use of a keyboard wrist rest or a mouse mat wrist rest is important. The use of a tracker ball is not usually associated with the same symptoms.

Poor typing position is also associated with symptoms in the forearms or shoulders. Poor positioning relation to the computer screen can lead to neck ache or strain. Therefore accurate positioning and seating is all important. At a place of work an occupational therapy assessment can be requested to ensure the height and position of the seating, desk, keyboard, mouse and screen is appropriate.

Symptoms

The symptoms can include: pain, tightness, dull ache, throbbing, numbness, or tingling in the affected area. The symptoms tend to develop gradually and can be troublesome to varying degrees. At first the symptoms may only occur whilst you do the repetitive task and ease off when you rest. In time the symptoms can be present all the time, but tend to be made worse by doing the repetitive task.

Some people divide RSI into two main categories - Type 1 RSI and Type 2 RSI.

- Type 1 RSI includes well defined syndromes such as carpal tunnel syndrome, wrist and forearm tendonitis (inflammation of a tendon), tenosynovitis (inflammation of a tendon sheath), or rotator cuff tendonitis. These conditions may be due to, or be made worse by, repetitive tasks. However, these syndromes are also common in people who have not done repetitive tasks.
- Type 2 RSI is where symptoms do not fit into a well defined syndrome. Also, there are no 'objective' or 'measurable' signs such as inflammation, swelling or problems with nerve function. It is sometimes called 'diffuse RSI' or 'non-specific pain syndrome'.

Diagnosis

There is no test or objective way that can confirm the diagnosis of RSI. This is where difficulties may arise. Pains in the areas affected by RSI are common and can be due to various causes. Often the diagnosis is made on the basis that the condition developed only following a repetitive task which is related to the anatomical site of the symptoms. The condition may also be relieved or partially relieved by rest from that task.

Treatment

Early assessment and treatment of RSI is important. It is thought that the earlier the problem is recognised and dealt with, the better the outcome. The first source of advice and treatment is usually an occupational physiotherapist or an occupational therapist. Medical treatment may include the following.

- Modify the task associated with the symptoms. Changing the seated height, type of keyboard or mouse. Take regular breaks from typing every 20 minutes or so. If necessary stop doing the task involved.
- A course of anti-inflammatory painkillers.
- Physiotherapy assessment and treatment including stretching, strengthening, massage, electrotherapy and posture training.
- Occupational therapy and an ergonomic assessment of the work place are very important to establish the correct working seating and posture.
- Some people find treatments such as yoga, relaxation techniques, regular general exercise (such as swimming) to be useful in easing the symptoms.
- An injection of steroid may be considered into an area which has definite inflammation such as a tenosynovitis, or occasional surgical treatment of conditions such as carpal tunnel syndrome or rotator cuff tendonitis may be necessary.

Outcome

In many cases the symptoms ease and go if measures are taken to stop or reduce the repetitive task as soon as the symptoms start to develop. However, despite rest and treatment some people develop symptoms that persist long-term which can occasionally be debilitating.

Further help and information

Repetitive Strain Injury Association 380-384 Harrow Road, London, W9 2HU

Helpline: 0800 018 5012

Web: www.rsi.org.uk

RSI-UK - An online support group, whose members meet through the mailing list, rather than face-to-face.

Web: www.rsi.org.uk

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