

'RSI' and Upper Limb Disorders

Musculoskeletal disorders of the upper and lower limbs, often known as repetitive strain injuries (RSIs) are a major problem in the workplace and a significant cause of lost production, with an estimated cost to Industry of up to £20bn annually. Because RSI conditions are invisible the general public tends to be unaware of the pain and distress suffered by those affected. Due to a lack of relevant research and information, many people are unclear as to the origin and treatment of these conditions.

Terminology

RSI is not a recognised medical condition and the term does not lend itself readily to use as a medical diagnosis. It is a term similar to 'sports injury' in that it describes how the injury was sustained, but says nothing about the injury itself.

Originally coined by the media, 'RSI' is a generic term used among support groups, trade unions and members of the public to cover a range of specific disorders of the musculoskeletal system (Type 1 RSI). It is also used to describe the more difficult to define non-specific pain syndrome (NSPS), occasionally called 'diffuse-RSI', which recent research attributes to nerve damage (Type 2 RSI). These are almost always occupational in origin, although other factors may also be involved.

RSI conditions occur in both upper and lower limbs as well affecting the spine in various areas, which in turn can cause referred pain into the limbs, making diagnosis difficult. Symptoms of numbness, tingling, sharp pain, dull ache, weakness, loss of grip and restricted movement of limbs can render people incapable of carrying out the simplest of tasks, at home or at work. Lack of accurate diagnosis and access to appropriate treatment further exacerbate the condition, frequently resulting in job loss and economic deprivation.

Type 1 RSI: Specific Pathological Conditions

Some specific conditions which are often grouped under the RSI umbrella can be diagnosed using standard clinical techniques of examination. In 1991 an article in *The Lancet* listed 22 conditions under that heading. These included:

- Adhesive Capsulitis (Frozen Shoulder)
- Bursitis
- Carpal Tunnel Syndrome
- Cervical Spondylosis
- Cramp of the Hand (Writers' Cramp)
- Cubital Tunnel Syndrome
- De Quervain's Syndrome
- Dupuytren's Contracture
- Epicondylitis (tennis / golfer's elbow)
- Ganglion Cyst
- Peritendinitis
- Rotator Cuff Syndrome
- Tendinitis
- Tenosynovitis
- Trigger Finger / Thumb
- Vibration-induced White Finger

Five of these conditions (Carpal Tunnel Syndrome, Tenosynovitis, Bursitis, Cramp of the Hand and Vibration White Finger) may, under certain circumstances, be accepted by the Industrial Injuries Advisory Council (IIAC) as "prescribed industrial diseases" and may attract Industrial Injuries Benefits. However, welfare reforms recently introduced by the Government have made access to benefits much more difficult for many people with disabilities, leaving a number of people with RSI unable to work and ineligible for State support.

Type 2 RSI: Non-Specific Pain Syndrome (NSPS)

A significant proportion of those with upper limb pain and dysfunction do not show signs which are easily recognised and can be observed or easily reproduced on examination. These people may have pain which is not focussed on one area and their pain may move from one site to another. For example, while there may be tenderness of the ligaments around joints, there will be no visible joint swelling. Examination often identifies very little, if anything, in the way of objective abnormalities, yet patients may complain of ever-worsening symptoms. This condition, also known as neuropathic arm pain (NAP) or "diffuse-RSI", is not recognised as an industrial disease.

The cause of NSPS has been at the centre of much medical and legal discussion. Until recently some medical practitioners, unable to ascertain its origin, have considered it to be 'psychogenic' in nature, and it has even been said to be 'all in the mind'. This presumption has led to a great deal of distress among those afflicted with the condition who (nevertheless) have been dismissed as being 'hysterical'.

The results of recent research conducted at University College London by Dr. Bruce Lynn and Dr. Jane Greening found that, in the non-specific cases of RSI, there are nerve changes occurring which are not identified by any examination technique or test, but which can be measured as changes in vibration sensitivity in nerves in the arm and wrist. The research concludes that this nerve damage is physical in origin.

At the High Court in May 1998, and upheld at the Court of Appeal in July 1999, the Court found in favour of five bank workers suffering from diffuse-RSI (Alexander and Others -v- Midland Bank plc). People in the UK with neuropathic arm pain may also take heart from the judgement of Judge Tyzak QC, Plymouth County Court, February 9, 2001 in the case of Gallagher v Bond Pearce that a claimant did suffer from injury, described in Court as 'Type 2', "**albeit there were no physical signs of it**". An award of £87,000 was made.

Prevalence

Upper limb pain and dysfunction caused by work (usually of a repetitive nature) is not a new phenomenon and has been well documented for 300 years in jobs such as clerical work and telegraphy. However, from the late 1970s countries as diverse as Australia, Russia, Japan, Finland, the US and the UK reported dramatic increases in musculoskeletal conditions; this period of time was significant as it saw the widespread replacement of typewriters with computers and a consequent increase in the automation of work. Many workers spend long periods in a fixed position, performing a range of tasks without moving from their workstations and using only a limited range of movement to operate their keyboards. This trend has continued over the last 20 years with rapid technological advance and the rise of the service industries. Large numbers of workers spend their entire working day inputting data onto computers. Many others have to work in painful and tiring positions.

There is clear evidence that RSI conditions are strongly work-related and the causes have been found to be related to the design of work systems. Major research projects conducted by the European Agency for Safety and Health at Work, and the Agency's Europe-wide campaign to lift the burden of work-related musculoskeletal disorders in October 2000, are a clear indication of the serious nature of the problem and the importance of identifying future needs and priorities. According to a recent European survey, 30% of workers complain of backache; 17% complain of muscular pains in their arms and legs and 45% report working in painful or tiring positions. The figure of 17% who reported muscular pain amounts to 25 million workers.

There is no doubt that, while RSI has been reported for a long time, exact prevalence is unclear for a number of reasons including under-reporting and misdiagnosis. However, the regular Labour Force Survey on work-related ill-health, conducted by the Health and Safety Executive (HSE), found that 506,000 workers in Great Britain have a work-related neck or upper limb disorder. For example, an estimated 36,000 workers were reported to have Vibration-induced White Finger, a cumulative condition related to the use of hand-held power tools.

Findings now suggest that these may be significant underestimates. A report from the first systematic survey of occupational exposure to hand-transmitted vibration, conducted by Southampton University's Medical Research Council Environmental Epidemiology Unit for the HSE and published in 1998, revealed that over a million people in Britain have symptoms of tingling and numbness in their hands associated with the use of vibrating tools. Of those, 515,000 have disturbed sleep and 355,000 find it difficult to "do up buttons".