Cumulative Trauma Disorders (CTDPH)

What are Cumulative Trauma Disorders?

This fact sheet describes Cumulative Trauma Disorders (CTDs), provides information about some types of CTDs and their most common symptoms, addresses who is at risk for developing them, and explains how to prevent CTDs.

Cumulative trauma disorders (CTDs) also known as repetitive strain injuries, repetitive motion disorders, overuse syndrome and work-related musculoskeletal disorders. CTDs are the largest cause of occupational disease in the United States and the most frequently reported type of occupational disease in Connecticut. CTDs are injuries of the musculoskeletal system, which includes joints, muscles, tendons, ligaments, nerves, and blood vessels. CTDs are usually caused by a combination of the following risk factors:

- **repetitive motions**
- **forceful exertions** – pulling, pushing, lifting, and gripping
- **awkward postures** – body positions that are not the natural resting position
- **static postures** – body positions held without moving
- **mechanical compression of soft tissues** in the hand against edges or ridges, such as using tools or objects which press against the palm
- **fast movement** of body parts
- **vibration**, especially in the presence of cold conditions
- **mental stress**

- **lack of sufficient recovery time** (rest breaks, days off), which will increase the risk of developing a CTD by any of the above factors.

Cumulative trauma disorders primarily affect the upper extremities and include such disorders as carpal tunnel syndrome, wrist tendonitis, ulnar nerve entrapment, epicondylitis, shoulder tendonitis, and hand-arm vibration syndrome. Common symptoms of CTDs include pain, and swelling of the body parts that are performing the work duties. Although back injuries are excluded from the definition of CTDs, it is important to note that they too, are often the result of similar risk factors. While some occupations have more risk factors than others for the possible development of CTDs, these risk factors can be reduced. It is important to note that CTDs are preventable.