



# COMMON CLINICAL CONCERNS OF THE NEUROLOGICALLY IMPAIRED UPPER LIMB

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## ATROPHY:

**WEAKNESS** is the main contributor to **ACTIVITY LIMITATIONS** and the **ABILITY** to use the arm.



(Ada Disabil Rehabil 2006; Harris Phys Ther 2007)

## CONTRACTURES

Research states that **CHANGES AND SHORTENING OF MUSCLES** and connective tissue can start occurring *within hours/days*.

(Gracies Muscle Nerve 2005).

**SOFT TISSUE SHORTENING** has been observed to begin in *as little as 4 weeks* in a non-functional joint.

(Pandyan Clin Rehabil 2001)

**APPROXIMATELY 50%** of all stroke patients develop at least 1 contracture within 6 months. *Shoulders and hips most commonly affected.*

(Kwah J of Physiotherapy 2012)



## SPASTICITY

### POST STROKE SPASTICITY

is found in chronic patients (> 3 months) with a **FREQUENCY RANGING FROM 17%-42%**.

**SIGNIFICANT IMPACT ON ADL'S IS THE RESULT.**



(Wissel Amer Acad of Neurology 2013)

## PAIN

**24%** OF FIRST TIME STROKE PATIENTS experience shoulder pain by month 16.

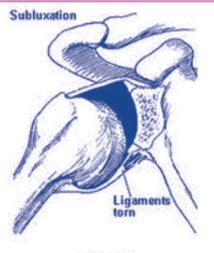
(Lindgren Stroke 2007)



Shoulder **SUBLUXATION**, soft tissue **SHORTENING**, and **SPASTICITY** are most **FREQUENTLY ASSOCIATED WITH SHOULDER PAIN.**

(Teasell Evidenced Based Review of Stroke Rehab 2013)

## SUBLUXATION



**Shoulder subluxation affects up to 81% OF STROKE PATIENTS.**

81%

(Vuagnat J Rehabil Med 2003)

## HAND FUNCTION

**45%** of patients had limited hand use at **18 MONTHS** post stroke.

(Welmer J Rehabil Med 2008)

**AT 6 MONTHS**, 11.6% of stroke patients had achieved complete functional recovery, while 38% had some dexterity function. (Kwakkel Stroke 2003)

**FOUR YEARS POST STROKE**, only 50% of stroke survivors had fair to good hand function. (Broeks Disabil and Rehabil 1999)

