Managing Chronic Pain Post Stroke

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Regional Stroke Symposium - Workshop
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Stroke Network of SEO
www.strokenetworkseo.ca

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Nora: a LTC Resident

(could also be living in community)

- 85yo, retired schoolteacher, a year post-stroke
- Newly admitted to LTC over the past month; has a rental wheelchair
- Weakness in right side of body
- Experiencing discomfort including right shoulder/arm pain
- Difficulties with positioning - just can’t get comfortable in chair or bed
- Communication difficulties due to aphasia
- Incontinence, dependent for ADLs
- Able to walk short distances (5 metres) with help of 2 people and a walker
- Decreased interest in food, weight loss
- Withdrawn, irritable, responsive behaviors
- Family overwhelmed

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Nora: Some statistics

Stroke survivors in CCC and LTC settings*:

- >50% in complex care and >40% in LTC experienced some pain unrelieved by treatment
- daily pain 25% in CCC and 13% in LTC

In LTC:

- 24% were at risk of, or had a diagnosis of depression
- Less than half (35-45%) were socially engaged
- Over 25% had experienced a fall
- Quality of life scores were low at 0.37 out of 1- rated as “poor”
- Close to 60% had limitations in the ability to communicate

*Source: 2018 Ontario Stroke Report on Stroke Care and Outcomes in Complex Continuing Care and LTC - from RAI-MDS assessments

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Dr Ritsma
Post-stroke pain - 'stroke specific'

- Etiology/Sources (multi-factorial & beyond…)
  - Hemiplegic shoulder pain
  - Spasticity
  - CRPS (complex regional pain syndrome)
  - Central post stroke pain

- Key messages:
  - all patients can have goals in terms of symptom management and function (passive/active/both)…regardless of stage post-stroke or location of care
  - small gains/'wins' can have meaningful impact
  - input: **patient**, family/caregivers, healthcare providers

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Hemiplegic Shoulder Pain

- Causes/Contributors: (MSK + neuro)
  - glenohumeral **subluxation**; mechanical stress
  - **impingement** syndrome/**subacromial bursitis/ rotator cuff** pathology
  - **frozen shoulder** (**adhesive capsulitis**)
  - **spasticity** (e.g. shoulder adductors/internal rotators)
  - complex regional pain syndrome (**CRPS**) / 'shoulder-hand syndrome'
- Management
  - tailored to the **underlying cause(s)**
  - general principles (joint protection/positioning/bracing…)

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Spasticity

- Definition:
  - increased tone (velocity dependent)
  - descriptors (e.g., patients/caregivers):
    - ‘stiffness’, ‘spasm’, ‘rigid’, ‘tight’, ‘contracted’…
- Impact:
  - symptoms (e.g. **pain**/spasms/sleep)
  - complications (e.g. skin breakdown/hygiene)
  - function (ADLs & IADLs; active/passive/both)

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Spasticity

- Management:
  - ID & treat **triggers** (e.g. pain or complications)
  - **Therapies** (e.g., positioning, bracing, ROM, electrical stimulation…)
  - **Pharmacotherapy – Oral** *(MOA, S/E)*
    - *e.g. baclofen, t*izanidine, dantrolene, benzodiazepines, gabapentinoids, cannabinoids
  - **Pharmacotherapy – Chemodenervation / Injection-intramuscular**
    - **Botulinum toxin**

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Spasticity - Management

IMAGES

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CRPS (Complex Regional Pain Syndrome)

- Definition: a disorder of a body region, characterized by **severe pain**, **swelling**, limited **range** of motion, other **autonomic/skin** changes (e.g. colour, temperature)
  - aka: Shoulder-hand syndrome (**SHS**), Reflex sympathetic dystrophy (**RSD**)…
  - Type 1 (no peripheral nerve injury) - e.g. post-stroke
- Mechanism: not fully clear
  - peripheral/neuro inflammation, autonomic dysfunction, central/CNS
- Impact:
  - associated with significant disability & impaired QoL

IMAGES

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CRPS (Complex Regional Pain Syndrome)

- Diagnosis: diagnostic criteria…principles of Definition
  - pain/sensory/tenderness, swelling, colour/temperature, motor
- Management:
  - limitations; early ~ better
  - Therapy: graded motor imagery (GMI) program (mirror therapy)
    - Other: desensitization/thermal/ROM
  - Meds: limitations
    - Oral steroids
    - Interventional?: e.g. nerve blocks

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Central Post-Stroke Pain

- Definition: disorder in which body becomes hypersensitive to pain given damage of central sensory pathways (e.g. thalamus, brainstem)
- Epidemiology: ~uncommon; 2–5% post-stroke prevalence
- Presentation: **pain (neuropathic) & loss of sensation** on contralateral (stroke affected) side
    - Examination: sensory loss, **hyperalgesia**, **allodynia**
- Impact: can alter **function/ADLs**, **sleep,** & **QoL**

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Central Post-Stroke Pain

- Management:
  - *can be refractory*
  - individualized patient-centered approach
    - interdisciplinary team: including mental health expertise
  - should offer **trial** of **low-dose, centrally acting analgesics**
    - 1st line: **pregabalin** or **gabapentin**
    - 2nd line: **TCA** (e.g. amitriptyline) or **SNRI** (e.g. duloxetine)

(Canadian Stroke-Best Practice Recommendations)

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Shannon Mulholland
Physiotherapy perspective

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PAIN CYCLE

- We all can play a part in helping to stop or interrupt the pain cycle.
- Stroke survivors are no different from all of us in that pain can lead to decrease in ability to function.
- Pain reduces the ability to move around, talk to other people and to participate in recreational activities.
- Pain also interferes with adequate rest/sleep.

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Identifying Pain in Stroke Survivors

Verbally: pain words, making sounds, exclamations/cursing

Physically: rubbing area; bracing area when moving; frequent shifting, restlessness, rocking; impairment of bowel and bladder function

Through facial expressions: frowning, grimacing, wincing

Through behaviour changes: restless survivor is quiet, quiet survivor is restless, change in appetite

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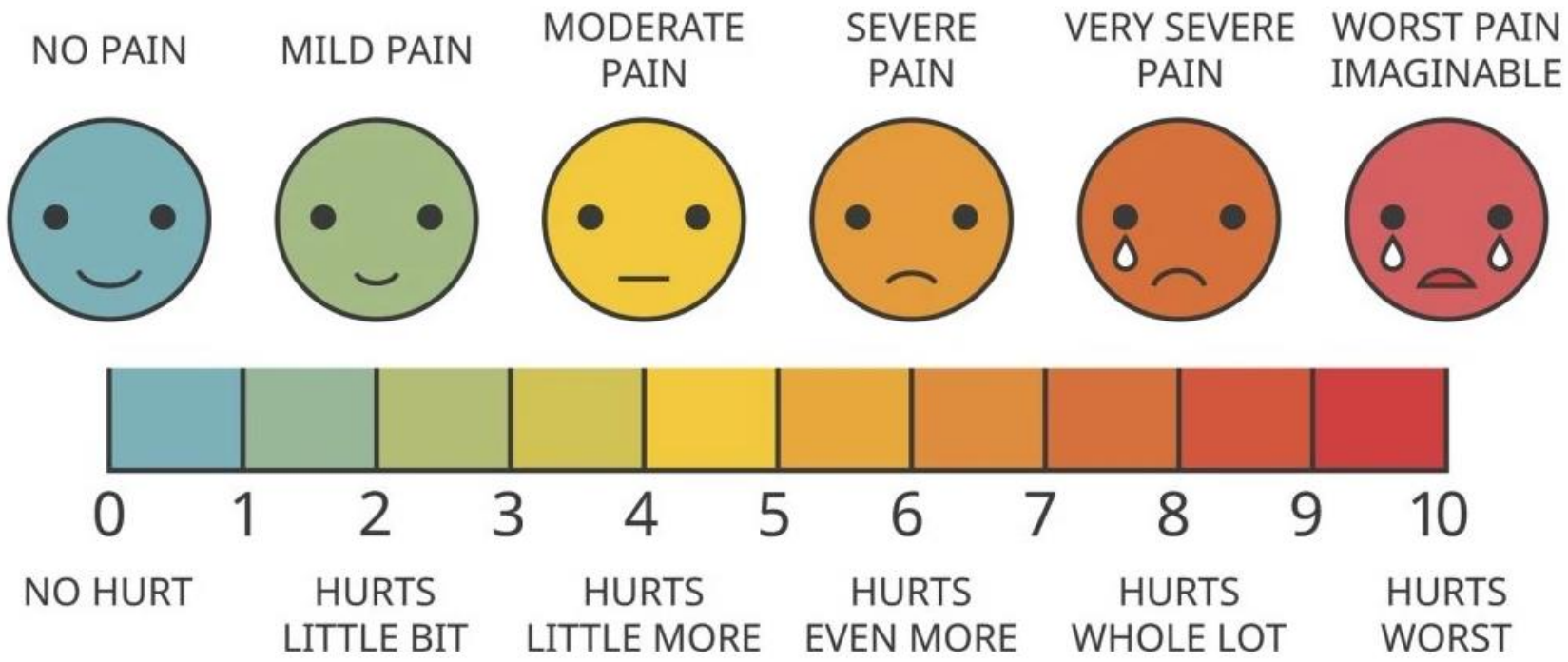
Pain Measurement Scale



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Or sometimes you just know something doesn't look right!

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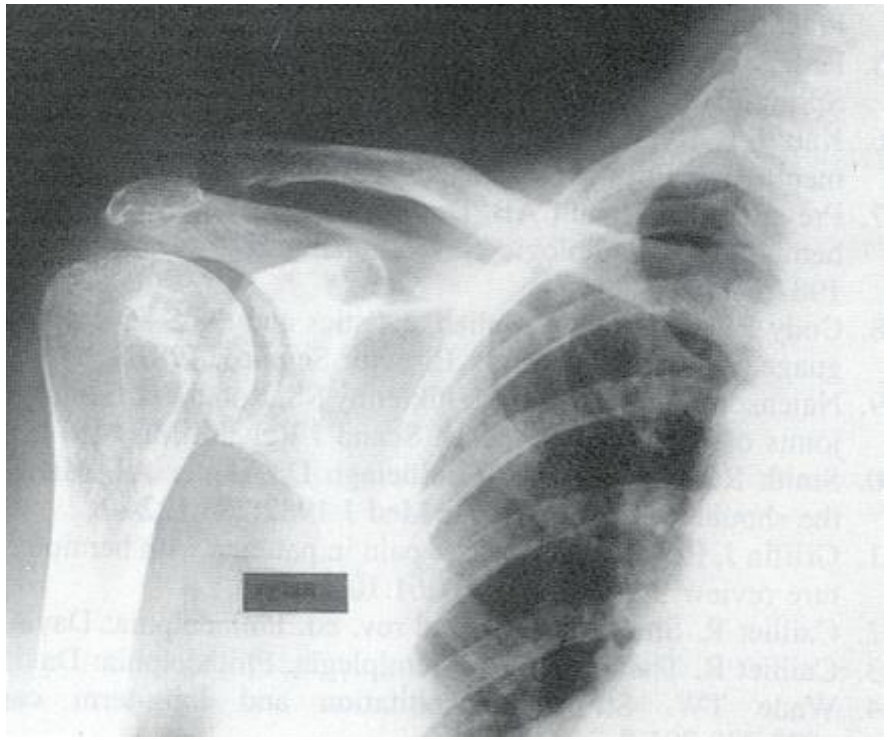
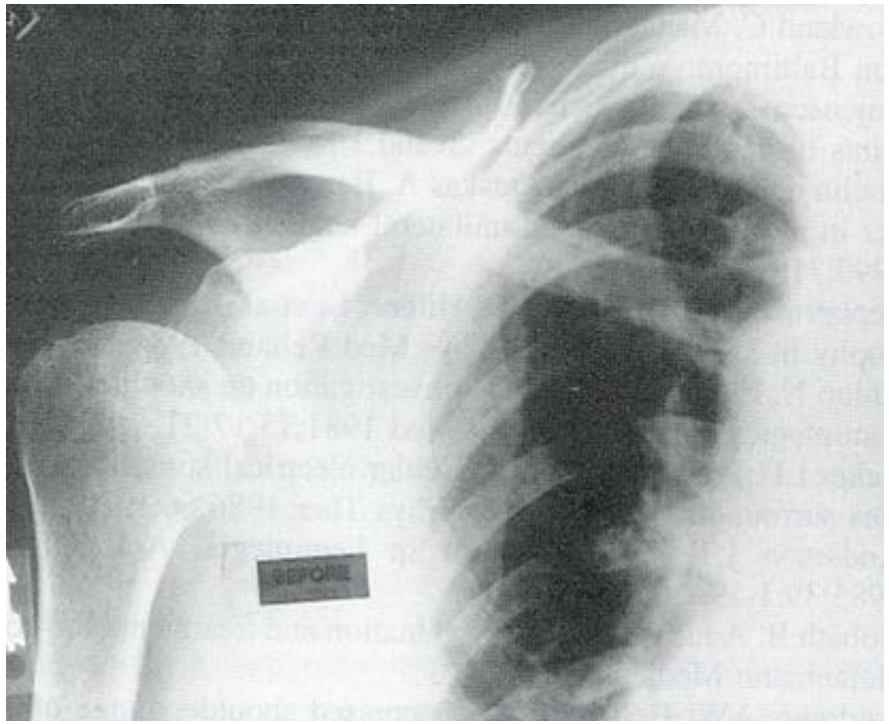
Hemiplegic Shoulder Pain





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Hemiplegic spastic hand pain

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Where to start?

1. Look/feel at base of support in sitting position
2. Identify main alignment issues
3. Address starting centrally at pelvis/hips, scapulae/shoulders

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Pain Management Opportunities

- Adequate seating and frequent alignment checks required.
- Joint protection strategies (positioning/support both at rest and during activities) are key.
- Gentle ROM and mobilization techniques especially for upper limb joints. No Passive ROM > 90 degrees unless PT/OT have assessed.
- Do not pull on the hand, wrist or arm.
- During movement, support the affected arm and treat it gently
- During transfers do not lift from underneath the arm

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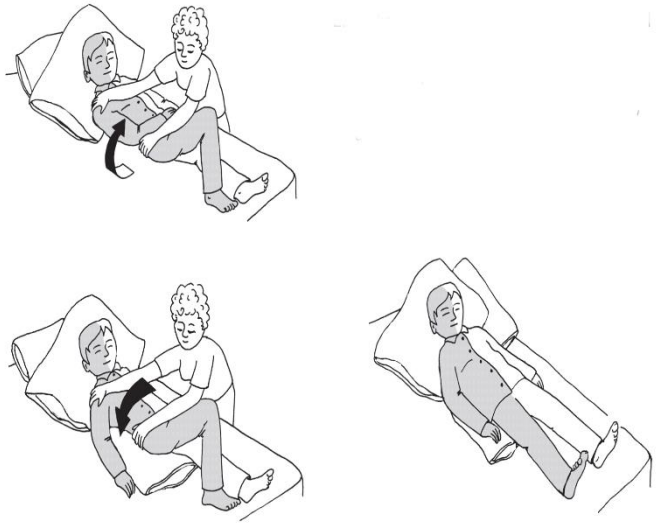
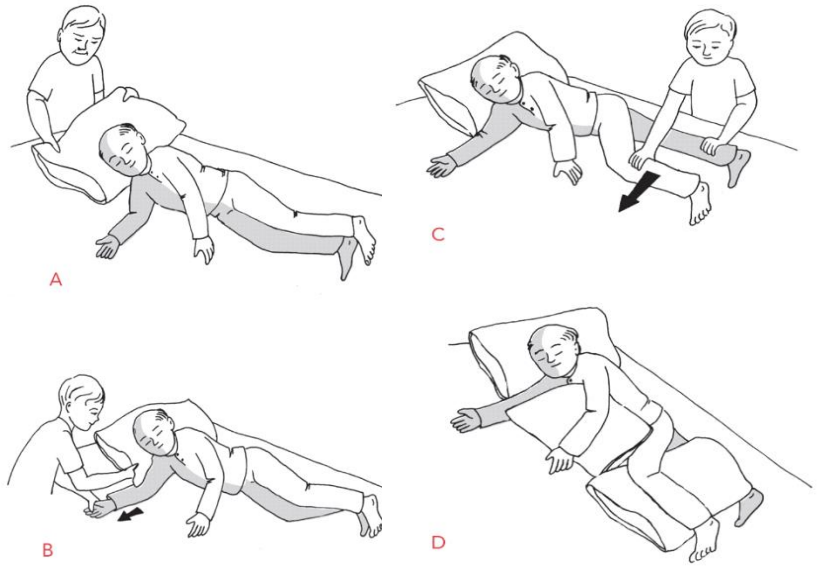
Bed Positioning

Supine



Side lying – Affected side



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Shoulder Supports

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Hand Splints

Routine use of splints is not recommended however, splinting may be useful in individual circumstances.

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Having Difficulties with Stroke Arm/Hand Pain Management?

- Never perform exercises unless approved by the mobility expert on your team.
- If you have any concerns, talk to your team PT about the right techniques and strategies.
- A physiotherapist or occupational therapist can teach you safe exercises and ways to position and move the affected shoulder.
- Managing pain can be complicated – asking for help in solving problems shows how much you care about your patient.

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Suzann DeMille
Nurse Practitioner perspective

- Don’t ignore pain – requires an individualized approach
- Pain is under-recognized therefore under-reported
- Pain requires a team approach – speak with Families, PSWs, & Housekeeping not just Registered Staff

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Suzann DeMille cont'd

- Game of margins – small wins make a difference to the person
- Ensure you look at whole person – consider every aspect of the person so pain can be treated well – Physical, emotional, spiritual, social and 'suffering'
- Goals of care - quality of life is important

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Suzann DeMille cont'd

- **Untreated pain can cause:**
  - Anxiety, irritability, sleep disturbances, memory problems, reduced appetite, poor posture, depression, reduced socialization, resistance to daily care.
  - Prevention, Assessment, Management is **key**

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Questions and Interactive Discussion
How do we best support Nora?

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Kayla Purdon: Resources Available

- Team resources in the care setting- LTC or community
  - Pain requires a team approach
- Written resources such as *SMART TIPS for Stroke Care*
- *Brain Body and YOU* education workshops
- Shared Workdays/Field Experience
- www.strokenetworkseo.ca

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