

# Is a Lycra sleeve an Acceptable Treatment for Glenohumeral Subluxation in People with Stroke: Patients, Clinicians and Family Members Perspectives

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## Background

- Glenohumeral subluxation (GHS) is reported in up to 81% of patients with stroke
- Our previous study found that a Lycra sleeve can reduce GHS (Ultrasound measurements of Acromion-greater tuberosity Distance) in people with chronic stroke (n=5).
- Our recent study on healthy participants (n=31) found reduction in AGT, changes in scapula measurements and in muscle activity after the application of Lycra sleeve.
- Similar findings were reported from another study on people with chronic stroke (n=6) suggesting that Lycra sleeve has potential to alter shoulder biomechanics in people with stroke.

## Aims

- 1) Explore patients', carers and staff perception, regarding acceptability of Lycra sleeves as a treatment.
- 2) Test the feasibility of measurements of GHS, pain, spasticity and arm function in people with recently diagnosed stroke before and after using the sleeve.
- 3) Obtain an estimate of the potential rate of recruitment in a centre to plan for the future trial.

## Methods

**Design:** A prospective cohort study

**Time Frames for data collection:** Immediately after enrolment into the study and at 3 months following first set of measurements for both groups.

**Sample size:** We aim to recruit up to 50 patients over a period of 9 months.

**Randomisation:** Patients are randomised to either receive Lycra sleeve (Figure 1) immediately or after 3 months.

INCLUSION CRITERIA	EXCLUSION CRITERIA
<ul style="list-style-type: none"> <li>• Age <math>\geq 18</math> years</li> <li>• First time stroke</li> <li>• Unilateral weakness/hemiplegia</li> <li>• Strength - <math>\leq 2</math> on MRC scale</li> <li>• Anyone who can consent including people with aphasia</li> </ul>	<ul style="list-style-type: none"> <li>• People who lack capacity</li> <li>• Other neurological conditions</li> <li>• Long standing shoulder pathology</li> <li>• Recent surgery to neck, arm or shoulder (If unsure, ask CI/PI)</li> </ul>

### Clinical measures:

- Ultrasound measurement of GHS (Figure 2)
- Passive Range of movement
- Muscle strength – muscles in the upper limb
- Modified Ashworth Scale
- Motor Assessment Scale sections 6,7,8 for the upper limb
- 'ShoulderQ' – A Shoulder pain questionnaire
- 'Health SF12' Quality of Life questionnaire
- A questionnaire to gain feedback from patients, carers, nursing staff and therapists regarding the use of the sleeve.
- An 'Aphasia friendly' questionnaire to be used to gain feedback from patients with communication disorders.

## Ethical Approval

Ethical approval gained from the South West - Frenchay Research Ethics Committee. REC reference: 17/SW/0173

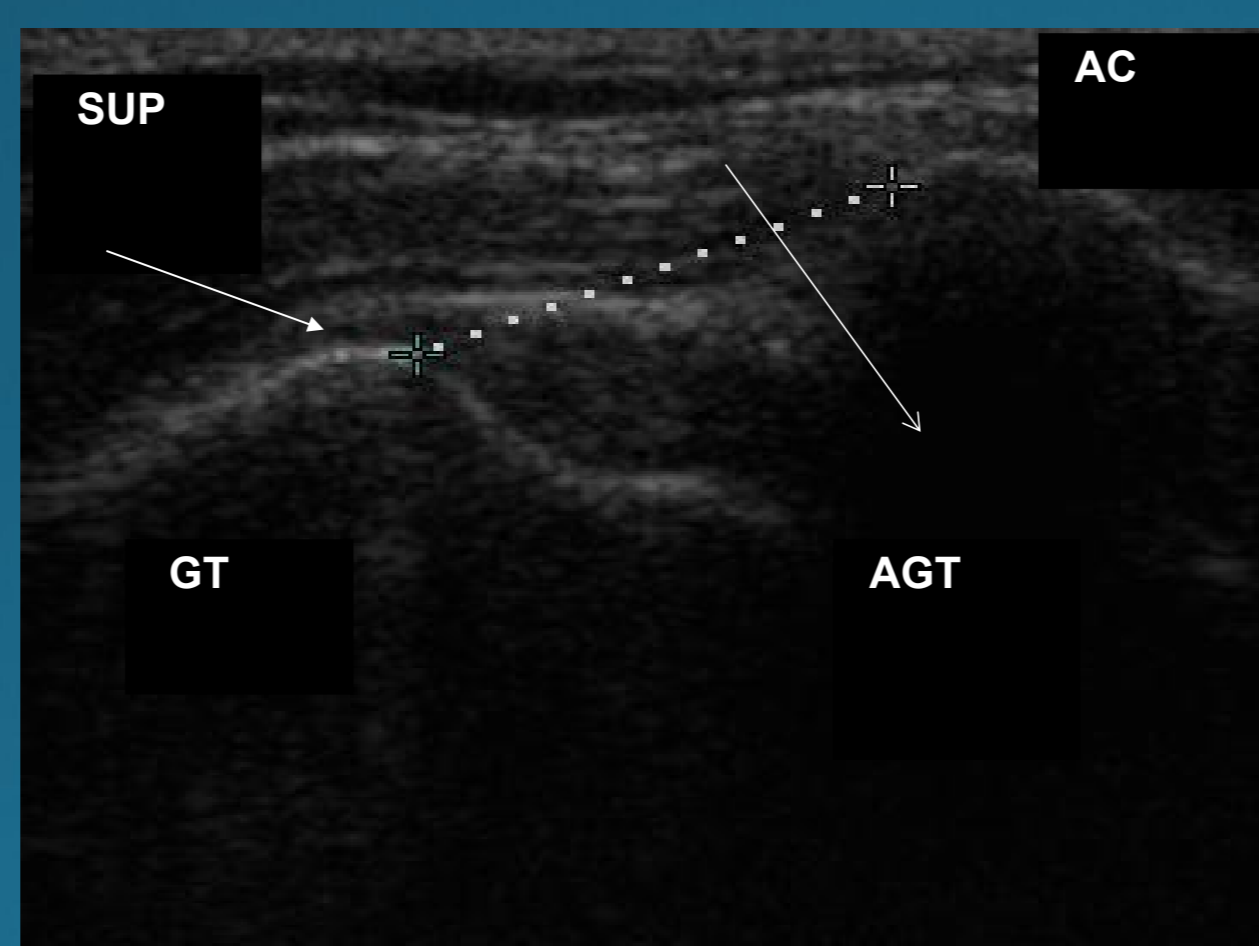
HRA approval and University Hospital Bristol Research and Development received

Data collection underway

**Figure 1: Application of Lycra sleeve**



**Figure 2: Ultrasound measurement of GHS**



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