

# Can taping improve hand posture and use in infants with brain lesions?

<b>Submission date</b> 04/07/2012	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 16/08/2012	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 28/01/2019	<b>Condition category</b> Nervous System Diseases	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Children who sustain damage to the developing brain often develop contractures (a permanent shortening of a muscle or joint) leading to thumb and wrist deformity. Early intervention with elastic taping prior to the development of contractures may help to improve thumb and wrist position, and hopefully have beneficial effects on function. However, this approach has not been well evaluated although it has begun to be used in clinical practice. The aim of this study is to determine the feasibility and acceptability of using elastic taping for this purpose in infants and young children, and to look for effects on hand and wrist posture and function.

### Who can participate?

Infants and young children aged 6 months to 3 years who have difficulties with hand and wrist posture and use, worse on one side than the other, following an injury to the developing brain

### What does the study involve?

Children are randomly allocated to one of two groups. One group receives routine care for 2 weeks then taping for 2 weeks. The other group receives taping for the 4-week period of the study. Videotaped assessments of hand and wrist posture and function are undertaken at baseline, 2 and 4 weeks with tape on and tape off. Families also complete a home diary and questionnaire to provide feedback regarding the experience.

### What are the possible benefits and risks of participating?

Taping is noninvasive and safe. The trialists check for skin sensitivity to the tape. It is not known at this stage whether taping is beneficial. However, if taping is felt to help a participant, treatment is continued after the study within the clinical service.

### Where is the study run from?

Child Development Centre, Newcastle upon Tyne NHS Hospitals Foundation Trust (UK)

### When is the study starting and how long is it expected to run for?

September 2012 to September 2014

Who is funding the study?

British Academy of Childhood Disability/Royal College of Paediatrics and Child Health (UK)

Who is the main contact?

1. Dr Anna Basu (anna.basu@ncl.ac.uk)

2. Dr Jill Kisler (jill.kisler@nuth.nhs.uk)

## Contact information

### Type(s)

Scientific

### Contact name

Dr Jill Cadwgan

### Contact details

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## Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers

N/A

## Study information

### Scientific Title

Can taping improve hand posture and use in infants with brain lesions? A feasibility study

### Study objectives

The aim of this pilot study is to determine, in infants and young children with asymmetric brain injury affecting hand posture and function:

1. The feasibility and acceptability of using elastic tape applied to the thumb, wrist and arm
2. Whether the elastic tape has a beneficial effect on hand and wrist posture and function both immediately when applied and in the longer term.

### Ethics approval required

Old ethics approval format

Ethics approval(s)

Not provided at time of registration

### **Study design**

Pilot randomised single-blinded (assessor) single-centre study. Based on a randomised cross-over design except that in the second time interval both groups will receive the intervention.

### **Primary study design**

Interventional

### **Secondary study design**

Randomised cross over trial

### **Study setting(s)**

Hospital

### **Study type(s)**

Treatment

### **Participant information sheet**

Not available in web format, please use the contact details to request a patient information sheet

### **Health condition(s) or problem(s) studied**

Elastic tape as intervention for hand and wrist posture and function after early brain damage

### **Interventions**

Application of elastic tape with intent to improve thumb and wrist posture and function.

Children are randomised to one of two groups, one receiving routine care for 2 weeks then taping for 2 weeks. The other group receive taping for the 4 week period of the study. Videotaped assessments of hand and wrist posture and function are undertaken at baseline, 2 and 4 weeks with tape on and tape off. Families also complete a home diary and questionnaire to provide feedback regarding the experience.

### **Intervention Type**

Other

### **Phase**

Not Applicable

### **Primary outcome measure**

1. Feasibility and acceptability of the intervention
2. Change in score on Assisting Hand Assessment (AHA)

### **Secondary outcome measures**

1. Thumb position, measured using the House Thumb classification
2. Hand and wrist position, measured using the Zancolli classification

### **Overall study start date**

03/09/2012

**Completion date**

03/09/2014

## Eligibility

**Key inclusion criteria**

1. Infants and young children age 6 months to 3 years
2. Asymmetric abnormalities of hand and wrist posture and function secondary to non-progressive brain lesions and including acquired brain injury

**Participant type(s)**

Patient

**Age group**

Child

**Lower age limit**

6 Months

**Upper age limit**

3 Years

**Sex**

Both

**Target number of participants**

20

**Key exclusion criteria**

1. Known allergy to tape adhesive
2. Known progressive or degenerative disorder
3. Already recruited to another trial
4. Other splinting already in use

**Date of first enrolment**

03/09/2012

**Date of final enrolment**

03/09/2014

## Locations

**Countries of recruitment**

England

United Kingdom

**Study participating centre**

**Royal Victoria Infirmary**  
Newcastle upon Tyne  
United Kingdom  
NE14LP

## **Sponsor information**

### **Organisation**

Newcastle upon Tyne NHS Hospitals Foundation Trust (UK)

### **Sponsor details**

Joint Research Office  
Leazes Wing  
Royal Victoria Infirmary  
Queen Victoria Road  
Newcastle upon Tyne  
England  
United Kingdom  
NE1 4LP

### **Sponsor type**

Hospital/treatment centre

### **Website**

<http://www.newcastle-hospitals.org.uk/>

### **ROR**

<https://ror.org/05p40t847>

## **Funder(s)**

### **Funder type**

Charity

### **Funder Name**

British Academy of Childhood Disability (UK) - Paul Polani Research Fund

## **Results and Publications**

### **Publication and dissemination plan**

The results were presented orally at the Annual Conference of the British Academy of Childhood Disability in March 2014. The results paper is in preparation with an aim to submit by March 2017.

## Intention to publish date

16/03/2017

## Individual participant data (IPD) sharing plan

## IPD sharing plan summary

Not provided at time of registration

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	01/01/2020	28/01/2019	Yes	No