

# Effect of corrective exercises for subjects with shoulder, neck and upper back discomfort

<b>Submission date</b> 16/07/2016	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 20/07/2016	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 20/07/2016	<b>Condition category</b> Signs and Symptoms	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Long-term pain in the neck/shoulder/upper back region is very common in people of all ages. It is especially common, even in young people, who take part in desk-based work and little physical exercise. The main reason for this is thought to be because of poor posture, which causes certain muscles to become overworked and others to be underused. This imbalance causes tightness in the overworked muscles and weakness in the underused ones. Over time, this creates discomfort during activity and thereby reduces daily activities. Traditionally, back and neck problems are treated separately, rather than working on the upper body as a whole. The back and neck are physically connected and so a problem that occurs in the upper back can lead to changes in the shoulders and neck. Stretching muscle groups is important for ensuring that underused muscles gain strength and overworked muscles relax, but there are different techniques for doing this. The aim of this study is to compare two stretching-based exercise programmes to find out whether they are able to improve function.

### Who can participate?

Adults aged between 25 and 50 who have discomfort in the neck/shoulder/upper back region.

### What does the study involve?

Participants are randomly allocated to one of two groups. Those in the first group take part in an exercise programme which involves passive stretching of muscles (where the physiotherapist moves the body to cause the stretch) in order to improve the strength of lesser used muscles and increasing endurance of the deep neck muscles, as well as relaxed deep breathing exercises. Those in the second group take part in a conventional exercise programme which involves active stretching (where the participant stretches themselves) with deep breathing exercises. For both groups, sessions take place three times a week for eight weeks and last around 45 minutes each. Participants in both groups are examined at the start of the study and then again after 8 and 12 weeks to find out if there has been any improvement to their functioning.

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

All participants benefit from having a physical therapist examine their shoulder/neck/upper back region, which gives them information about what is causing their discomfort. Participants who take part in the exercise programme benefit from strengthening their muscles which could help

to reduce tension in tight muscles, lessening pain and improving function. There are no notable risks involved with participating in this study.

Where is the study run from?

Mohamed Sathak AJ College of Physiotherapy (India)

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

February 2014 to August 2017

Who is funding the study?

Mohamed Sathak AJ College of Physiotherapy (India)

Who is the main contact?

Professor Purushothaman Senthil

## Contact information

### Type(s)

Scientific

### Contact name

Prof Purushothaman Senthil

### ORCID ID

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### Contact details

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600073

## Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers

N/A

## Study information

### Scientific Title

Effectiveness of corrective exercise strategy on upper body dysfunction

**Acronym**

UBD

**Study objectives**

Corrective exercise is better than conventional exercise on upper body dysfunction.

**Ethics approval required**

Old ethics approval format

**Ethics approval(s)**

Doctoral ethical committee, School of Physiotherapy, Vel's University, 28/08/2015, ref: EC/PHD /14/FEB/PHY/001

**Study design**

Single-blind randomised controlled trial

**Primary study design**

Interventional

**Secondary study design**

Randomised controlled trial

**Study setting(s)**

Community

**Study type(s)**

Prevention

**Participant information sheet**

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

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

Shoulder/neck/upper back dysfunction

**Interventions**

Participants are randomised to one of two groups.

Experimental group: Participants undergo passive stretching of overactive muscles and graded strengthening of underactive muscles and training deep cervical flexors endurance and relaxed diaphragm breathing exercises.

Control group: Participants undergo conventional exercise of active stretching of overactive and free exercise and isometric exercise to underactive muscles with diaphragm breathing exercises.

For both groups, sessions last 45 minutes and take place three times a week for a total of eight weeks.

Participants in both groups are followed up at 8 and 12 weeks.

**Intervention Type**

## Procedure/Surgery

### Primary outcome measure

Functionality is measured using Patient specific functional scale at baseline, 8 and 12 weeks.

### Secondary outcome measures

1. Postural analysis is conducted using Posture Pro 8 software with Photo-imaging of participants at baseline, 8 and 12 weeks
2. Scapula-humeral muscle strength is measured using the Push-Pull dynamometer (150 lb type) at baseline, 8 and 12 weeks
3. Deep cervical flexors endurance is measured using a biofeedback unit at baseline, 8 and 12 weeks

### Overall study start date

02/02/2014

### Completion date

30/08/2017

## Eligibility

### Key inclusion criteria

1. Patient with discomfort in the neck/shoulder/upper back region
2. Aged 25 to 50 years
3. Degeneration cervical spine

### Participant type(s)

Patient

### Age group

Adult

### Sex

Both

### Target number of participants

Control (n) - 65; experimental (n) - 65.

### Key exclusion criteria

1. Patients with cervical disc diseases
2. Infection of neck/shoulder joints
3. Malignancy over the above region
4. Recent injuries/fractures over the above region

### Date of first enrolment

01/08/2015

### Date of final enrolment

01/02/2017

# Locations

## Countries of recruitment

India

## Study participating centre

**Mohamed Sathak AJ College of Physiotherapy**

144/1, Nungambakkam High Road

Nungambakkam

Chennai

India

600034

# Sponsor information

## Organisation

Mohamed Sathak AJ College of Physiotherapy

## Sponsor details

144/1, Nungambakkam High Road

Nungambakkam

Chennai

India

600034

## Sponsor type

University/education

## ROR

<https://ror.org/00b3mhg89>

# Funder(s)

## Funder type

University/education

## Funder Name

Mohamed Sathak AJ College of Physiotherapy

# Results and Publications

**Publication and dissemination plan**

Planned publications in peer reviewed journals in the following areas:

1. Isolated activation of middle Trapezius in subjects with protracted shoulder
2. Prevalence of the postural scapular dysfunction and corrective exercise training in school going children
3. Inter-reliability of posture analysis software in subjects with Kyphotic changes

**Intention to publish date**

30/01/2017

**Individual participant data (IPD) sharing plan****IPD sharing plan summary**

Data sharing statement to be made available at a later date