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

Submission date
16/07/2016

Recruitment status
No longer recruiting

Registration date
20/07/2016

Overall study status
Completed

Last Edited
20/07/2016

Condition category
Signs and Symptoms

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] 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 their 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
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Additional identifiers

Protocol serial number
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

Study type(s)
Prevention

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

Key secondary outcome(s))
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

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

Healthy volunteers allowed
No

Age group
Adult

Sex
All

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
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600034

Sponsor information

Organisation
Mohamed Sathak AJ College of Physiotherapy

ROR
https://ror.org/00b3mhg89

Funder(s)

Funder type
University/education

Funder Name
Mohamed Sathak AJ College of Physiotherapy

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes