

Ergonomics in the laboratory

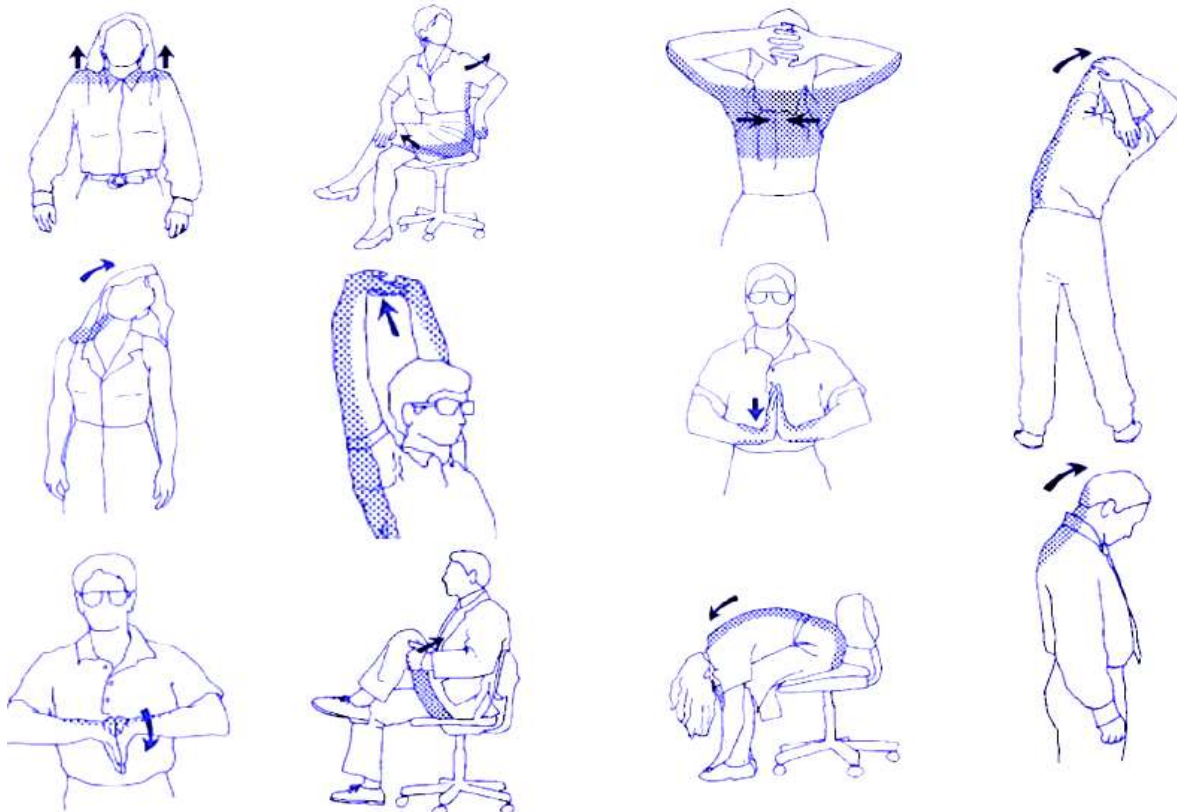
| Early warning signs could be: | Body parts that are particularly exposed to pain: |
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| <ul style="list-style-type: none">• Burning sensations• Cramps• Numbness• Swellings• Prickly, tingling sensations• Fatigue | <ul style="list-style-type: none">• Lower back• Thumbs• Wrists• Forearm• Elbows• Neck• Shoulders• Eyes and head |
| <i>Source: "Laboratorier, vejledning om EBA i laboratorier", Industriens Branchearbejds miljøråd (in Danish)</i> | |

Monotonous work may occur when working in a laboratory. To avoid monotonous work from causing ergonomic problems, this pamphlet has been created to offer you some advice, based on the experience obtained here at ENVS. The advice should be taken into account when planning new and ongoing laboratory tasks to avoid work-related injuries.

Based on experience, short-term injuries caused by monotonous work typically occur in periods of stressful situations and tight deadlines, and long-term injuries often occur when performing static work with monotonous tasks over time, so be particularly aware when such situations arise.

It is important to pay attention to early warnings of excessive load on the body and to react as soon as symptoms appear.

Stretch exercises



Facility tools

Electric/mechanical jar and bottle opener for opening and closing of lids. When handling and preparing samples, there may be many bottles/tubes/containers with screw caps to be opened and closed. An electric or mechanical jar and bottle opener can be useful.

Syringe filters press for filtering of samples through disposable filters. A syringe filter press can help relieve hands and fingers when working with lots of samples or in the cases with hard-to-filter samples.

Whirl mixer with accessory equipment that holds the test tubes/glass. Vibrations can be transferred to the hand and arm when holding the test tube/glass in one's hand on the whirl mixer.



Tasks performed standing up

Use floor mats

Using soft special mats, can ease tired feet and legs when standing up for a long time.

Avoid lifts above shoulder height

Lifting above shoulder height for a longer period of time, can be harmful.

Keep arms close to body

When performing finely controlled movements, e.g. when de-pipetting, it is less harmful for your body if you work centred in front of you and keep your arms as close to the body as possible with shoulders relaxed and arms and wrists in neutral postures. If possible, support elbows on the table and use multi-channel, electronic or latch mode pipettes.



Arrange your work area

Make sure your work area surroundings are spacious when performing your tasks. E.g. avoid having to reach into awkward positions to grab for tools etc. Position your chair and table into a suitable work height. Place both feet on the floor to support the movements of your body.

Share the tasks that involves harmful postures

If the above advice or other solutions are not sufficient or possible, make sure to plan your work by dividing/sharing the tasks between several persons and/or over multiple days. Stretch your arms, legs, body every 20-30 minutes.

Staying active results in less pain

Take precautionary measures with resistance band exercises. Simple exercises strengthen the muscles you use when working in a lab. The exercises help prevent pain and ache in neck, shoulders and arms. Guide to resistance band exercises <http://www.jobogkrop.dk/Oevelser-til-nakke-og-ryk/Oevelser>

We have resistance band training by conference room C2.05 Monday, Wednesday and Friday at 10.30 am and in the basement in building D140 on the same days at 11.30 am.

Keeping physical active helps, even if you already have aching muscles and joints - <http://www.jobogkrop.dk/Hvad-kan-I-goere/Hold-dig-aktiv>