

1. SOP Category

Clinical

2. Staff Category

Clinical

3. Purpose

To describe the procedure for obtaining flexible electrogoniometry data from patients and volunteers participating in research trials, therefore, promoting uniformity within the Glasgow Clinical Research Facility. The flexible electrogoniometers and datalog are used to collect joint angle data. The system allows range of motion (ROM) max/min joint angles of daily activities to be recorded and studied in depth in a non restricted setting.

4. Procedures (Measuring Knee Joint Angles)

Preparation of Equipment

- Using double sided medical tape the 2 green end plates of the electrogoniometer is attached to two lengths of 200mm plastic strips.
- Double sided medical tape is also attached to the other side of the plastic strips.

Preparation of Subject

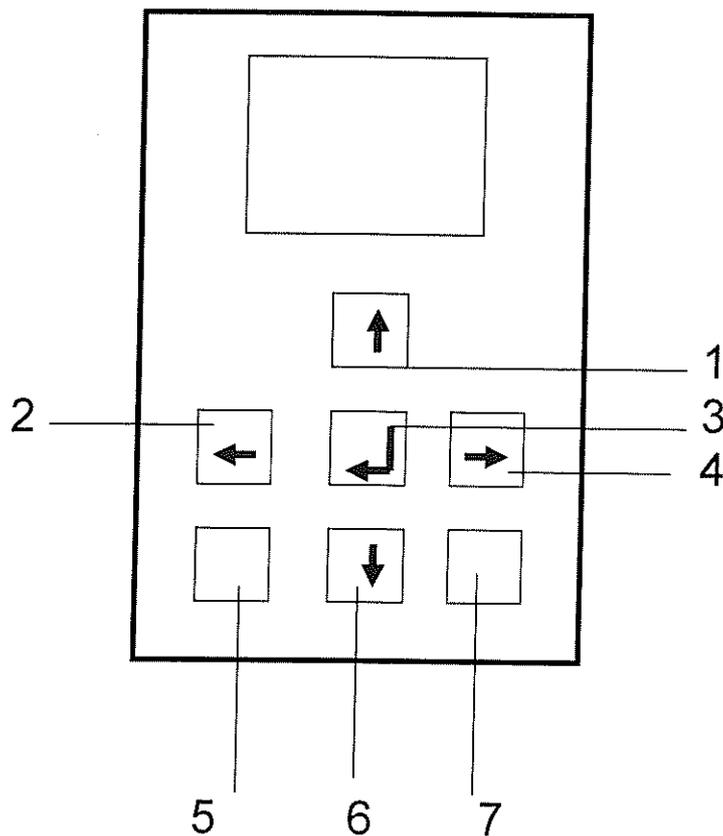
- Inform patient/subject of the procedure – used to obtain additional functional data.
- Informed written consent is obtained.

- Individual will have to wear shorts or a knee length skirt so that their lower limbs are accessible.
- Also shoes and socks must be removed for equipment attachment but can be worn during the test session.

Attachment/Procedure

- Ask the individual now to sit/lie on a bed so that the soles of their feet are visible.
- 2 flat footswitches (pressure sensors) are taped to the soles of each foot – one on the heel area and the other at the 1/2 metatarsal area. Now the socks are put back on – helps to keep the cables in place, along with their shoes.
- Now ask the patient to stand, far enough away from the bed so that you have space to move all around them.
- Check that their lower limbs are as straight as possible.
- The prepared electrogoniometer is attached to the lateral border of the individual's lower limb. It must be positioned so that the green end plates are equal distance from the centre of the knee joint bend, therefore straddles the knee joint.
- A thigh and shin velcro strap is then wrapped around the green end plates to give additional support.
- The cables from the footswitches are lopped in these straps to prevent them from becoming a safety issue.
- A cable connects the electrogoniometer to the datalogger which is hooked onto a waist belt worn by the individual.
- The footswitch cables are also connected to the datalogger.
- Finally the input channels used for each cable is recorded.

Use of Biometric Datalog/Recording



- To switch on hold down 5 for a few seconds.
- To switch off press 7, hold it and press 5.
- Key 3 is the 'ENTER' key.
- 1,2,4,6 move the move in the directions they illustrate.
- Input the memory card into the slot at the bottom of the datalog, and switch on.
- Ask the individual to stand with their lower limbs straight and when the 'Zero' menu is highlighted press 3.
- Press 6 when 'Set Zero' is highlighted and it will display 'Select channel: All'. Press 3.

- Press 4 so that the 'Cancel' menu is highlighted and press 3 taking you back to starting menus.
- Now give the instructions for the 1st task, example level walking along a corridor at the individual's self selected pace.
- Before the individual begins the task highlight the 'Rec' menu. To start and stop the recording manually, hold down 7 and press 3 to start the recording. Once the individual has completed the task to stop the recording again hold down 7 and press 3. Alternatively a recording time length can be entered. Highlight the 'Rec' menu and press 3. Then using the arrow keys a length of time for the recording can be selected. Once this has been input press 3.
- Once the individual has completed all the tasks switch off the datalog.
- All the equipment can now be removed with care.

Note for electrogoniometer removal:

When removing this from the individual's leg, remove the shin end block 1st then detach from the thigh. Do not allow the electrogoniometer to flop as the middle spring like section is easily damaged.

5. Referenced Documents

6. Document History