**Anderson Gait Analysis Laboratory**

SMART Centre,

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**What is Gait Analysis?**

Gait analysis is the study of walking - a detailed examination of how the skeleton and muscles work together when we walk. In the gait analysis laboratory we study complex walking problems in adults and children. This is used in planning patient management and in evaluating outcomes of treatment.

**Who will benefit?**

Anyone with a movement problem which affects their walking may benefit from gait analysis. It may be used to plan therapy, surgery, check orthotic or prosthetic prescription, for research, or as a baseline record of the walking pattern.

**What is involved?**

Firstly a video recording is made of your/your child’s walking. A special skin marking pencil is used to mark the centre of the knees and heels to help us to analyse the video more easily. Following this small reflective markers are applied to the legs and pelvis with sticky tape, and are used by computer linked-cameras to track the movement of the limbs when walking. A pressure sensitive area on the floor records the forces being experienced by the joints and muscles and transmits this information to the computer.

In some cases your doctor may want information about muscle activity which can be measured using a technique called EMG. If so small sensors are taped over the muscle to be tested and the information relayed to the computer.

A test of the energy expended during walking may also be undertaken. This is calculated using a small portable heartbeat monitor worn around the chest as you/your child walks.

Following these tests, measurements will be taken by a physiotherapist of the range of movement of the joints, strength and tone of the muscles, and measurements of leg length and height. This involves the physiotherapist holding and moving you/your child’s legs. A chaperone can be provided during this examination if required.

**What should you wear?**

The special markers must be stuck on (or close to) the skin, so you/your child should wear close fitting (lycra) shorts or swimming kit. Lycra shorts are available here if required. **It is also important to bring along any splints, insoles, braces, and walking aids normally used.**

**How long does the gait analysis take?**

This depends on the number of tests being undertaken, and varies between an hour and a half and four hours. The final report is sent to your doctor within 4 weeks of testing.

If you have any queries about the appointment or about gait analysis, please contact :

Jan Herman, Clinical Specialist Physiotherapist, at the above address or go to <http://www.smart.scot.nhs.uk/index.php/services/gait-lab>

For further information on the Anderson Gait Analsysis Laboratory including its statement of purpose please refer to [WWW.CMASUKI.ORG](http://WWW.CMASUKI.ORG)