

EMG analysis. The EMG activity of the muscles involved in kicking was recorded with surface electrodes (silver / silver chloride, T-00-S, Medicotest, Ølstykke, Denmark) attached to the skin in a standardised manner: in the direction of the muscle fibres, with an inter-electrode distance of 3 cm. Before attaching the electrodes, the skin was shaved and rubbed with alcohol in order to lower the skin resistance. EMG electrodes were attached to several sites on the dominant leg (Figure 4).

The muscle groups included:

- Sartorius (Ch. 1)
- Rectus femoris (Ch. 2)
- Tensor fasciae latae (Ch. 4)
- Vastus lateralis (Ch. 5)
- Vastus medialis (Ch. 3)
- Semitendinosus (hamstrings) (Ch. 6)
- Biceps femoris (hamstrings) (Ch. 7)
- Gastrocnemius (Ch. 8)
- Shoulder (ground)



Figure 4. The EMG electrodes were placed on the selected muscles of the lower extremity.

After attaching the electrodes, the electrode cables were connected to the electrodes at one end and to the pre-amplifier at the other end. The pre-amplifier was close to the pads, eliminating the artifacts caused by subjects' movements. The pre-amplifier was fixed on the skin with paper, adhesive, tearable tape (3M, Transpore) to prevent any vibration of the amplifier.