# **Appendix**

Appendix 1 – Effect Size

Appendix 2 – Sagittal Plane Normative Values

Appendix 3 – Frontal Plane Normative Values

Appendix 4 – Transverse Plane Normative Values

Appendix 5 – Summary of Normative Values for the Knee Joint

Appendix 6 – EMG Normative Values

#### Appendix 1 – Effect Size

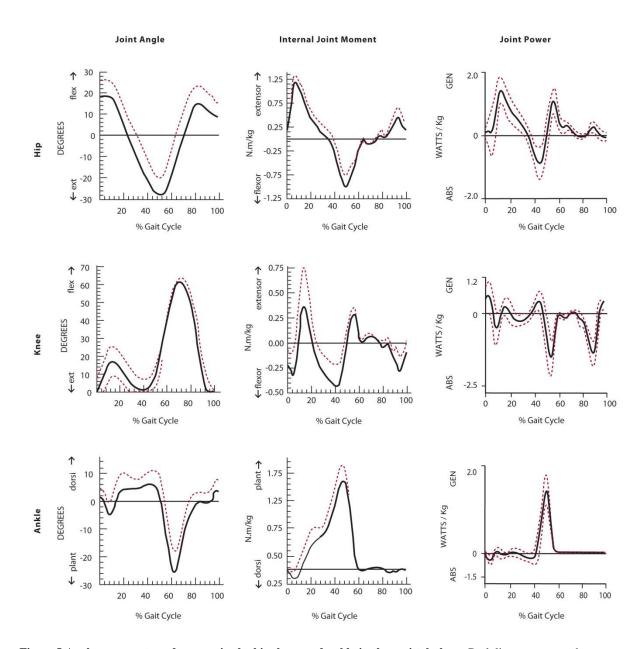
Effect size can be calculated with the use of the following formula (31):

Cohen's d = 
$$\frac{(Mean_{injured} - Mean_{control})}{SD_{pooled}}$$

This may be calculated with the help of a free downloadable spreadsheet from http://stat-help.com/. It is necessary to input the following data into the spreadsheet: mean, standard deviation (SD) and number of subjects for each group (for example the ACL group and the control group).

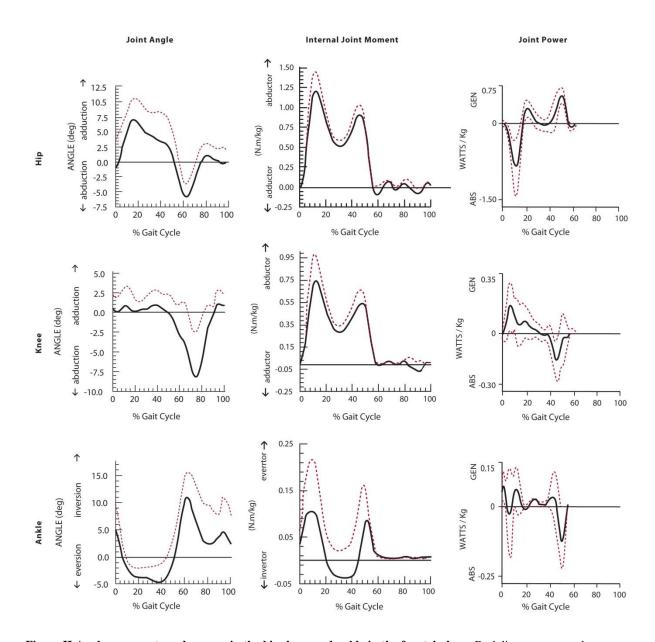
The greater the effect size (above or below zero) the more powerful is the finding of the researcher. Magnitude can be applied for easy interpretation of effect size with 0.2 as small, 0.5 as medium, and 0.8 as large.

### Appendix 2 – Sagittal Plane Normative Values



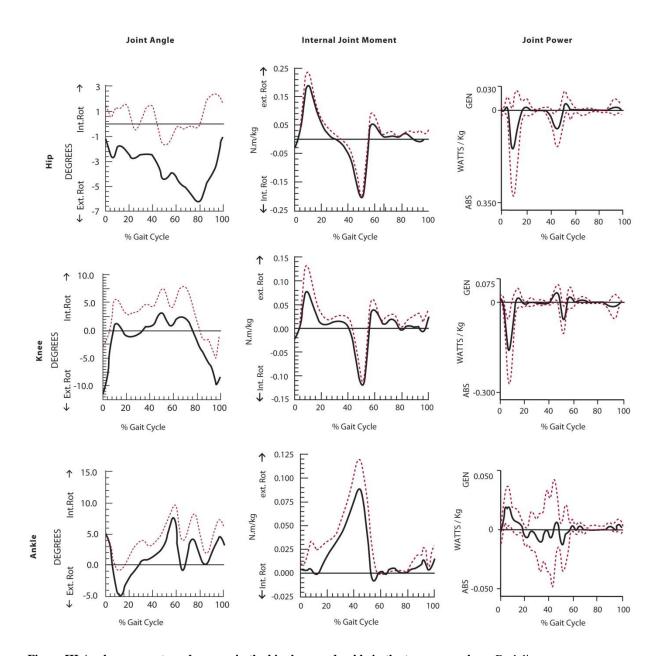
**Figure I Angles, moments and powers in the hip, knee and ankle in the sagittal plane.** Dark line represents the mean while the dotted line represents the standard deviation. Adopted from *Joint structure and function: a comprehensive analysis* (44).

### **Appendix 3 – Frontal Plane Normative Values**



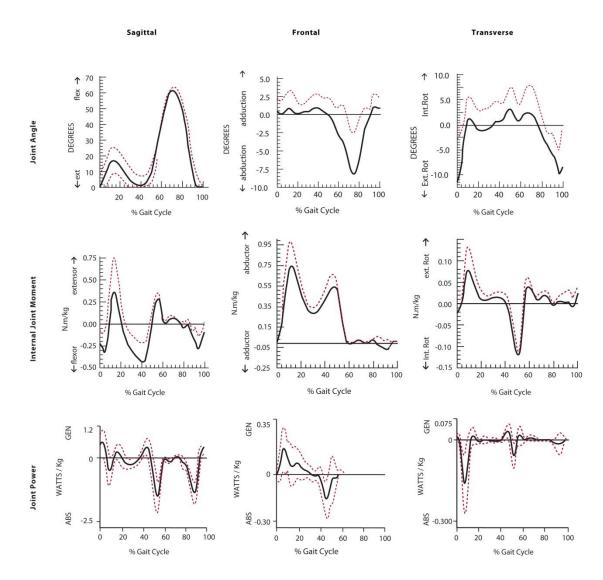
**Figure II Angles, moments and powers in the hip, knee and ankle in the frontal plane.** Dark line represents the mean while the dotted line represents the standard deviation. Adopted from *Joint structure and function: a comprehensive analysis* (44).

### Appendix 4 – Transverse Plane Normative Values



**Figure III Angles, moments and powers in the hip, knee and ankle in the transverse plane.** Dark line represents the mean while the dotted line represents the standard deviation. Adopted from *Joint structure and function: a comprehensive analysis* (44).

## Appendix 5 – Summary of Normative Values for the Knee Joint



**Figure IV Knee angles, moments and powers in the sagittal, frontal and transverse plane.** Dark line represents the mean while the dotted line represents the standard deviation. Adopted from *Joint structure and function: a comprehensive analysis* (44).

### Appendix 6 - EMG Normative Values

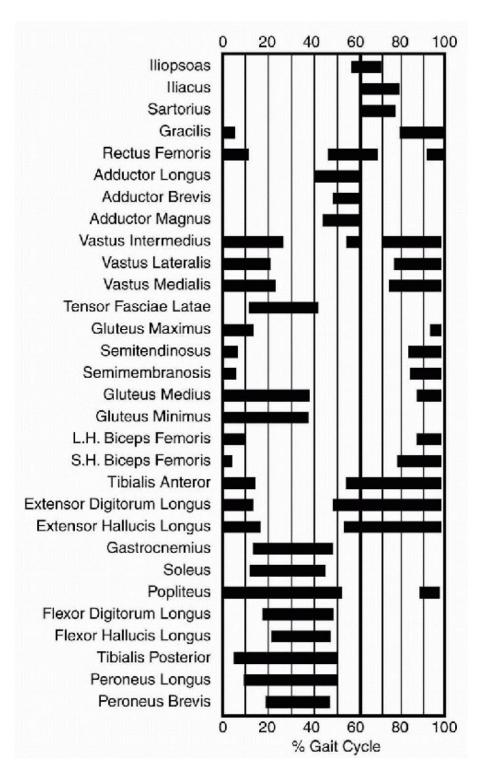
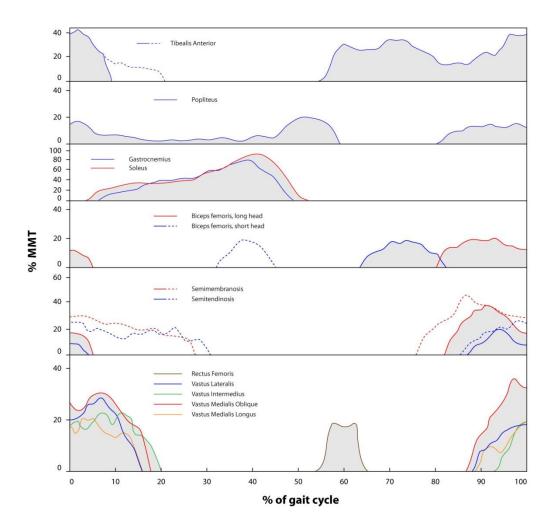


Figure V Normal timing (on-off) of muscles on the lower extremity (60)



**Figure VI Activity of selected muscles around the knee.** Thick lines represent results for the majority of the population while doted lines represent possible activity in a minority of the population. Shaded grey area represents the cumulative activity for a given muscle group. MMT – manual muscle test. Modified from *Gait analysis: normal and pathological function* (56)