

TEACHER'S GUIDE SHEET

MODULE	BIOMECHANICS OF GAIT
DIDACTIC UNIT	D: INSTRUMENTED ANALYSIS OF GAIT
TITLE OF ACTIVITY/CLASS	D.2 How is a normal biomechanical assessment of gait?
OBJECTIVES	<ol style="list-style-type: none"> 1. To know the relevance of normative gait data in clinical practice. 2. To review the main outcomes that characterize human gait, their definition and clinical relevance. 3. To know the normative values of the biomechanical assessment of human gait in healthy people and the influence on the results of age and sex.
LENGTH	1h - PowerPoint presentation of the contents + Reinforcement activity (Activity 2). The time of the class with the Activity 1 could exceed 1h30'.
PREVIOUS KNOWLEDGE REQUIRED	In order to fully understand the concepts explained during class, the student should previously revise the biomechanical tools for gait assessment (Didactic Unit D.1)
TECHNICAL NEEDS	PC with software for the power point presentation. Projector and screen to show contents appropriately to all the students during class. You can give the activity material to students online or print.
RESOURCES NEEDED	PowerPoint file of class material presentation and the reinforcement activity pdf file, print or online version. Each student needs one copy.



DESCRIPTION OF THE CLASS/ACTIVITY

Part 1: Teacher's theoretical explanation

The teacher introduces the didactic unit explaining the medical importance of knowing the normal data of gait biomechanics outcomes. Then, develop the class according to the sections on normal values of spatiotemporal, kinematic, kinetic data, plantar pressure and electromyographic patterns. In each sub-section a reference is made to the influence of age and sex on the results obtained from healthy people.

Finally, the teacher can conclude with the main ideas of the class.

Part 2: Practical activities for students

Activity 1

The activity consists of creating a normality database with the gait evaluations of the students in the class. This activity can be developed if the teacher has biomechanical tools for gait measurement. In any case, a free software alternative is proposed for recording with photogrammetry.

Activity 2

In case of not having tools to carry out activity 1 a crossword of 10 concepts is proposed that the student must complete with the clues and definition offered.

TASKS TO BE DEVELOPED BY THE STUDENT IN CLASS

In order to fully understand the concepts explained during class, the student should afterward resolve the 'Reinforcement activity' pdf.

TASKS TO BE DEVELOPED BY THE STUDENT OUTSIDE OF CLASS (if required)

After the class and concept presentation, the students should revise the PDF with the contents of the didactic unit or the PowerPoint presentation (what the teacher prefer to provide).

EVALUATION METHODOLOGY

The teacher can use the evaluation method that she/he considers. The correct answers for the Reinforcement activity are in the same document.

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