

TEACHER'S GUIDE SHEET

MODULE	BIOMECHANICS OF GAIT
DIDACTIC UNIT	C - How do I assess the gait, C.3 - What are the advantages of the use of instrumental techniques versus scales and physical examination to assess gait?
TITLE OF ACTIVITY/CLASS	Methodological and statistical characteristics of the methodologies available for evaluating human gait
OBJECTIVES	<ol style="list-style-type: none"> 1. To review the advantages and disadvantages of valuation methodologies for human gait. 2. To know the statistical properties of the gait assessment methodologies available. 3. To establish the technical knowledge that allow healthcare professionals to choose the most appropriate gait assessment technique for their clinical or research context.
LENGTH	1h50' - PowerPoint presentation of the contents + Reinforcement activity
PREVIOUS KNOWLEDGE REQUIRED	In order to fully understand the concepts explained during class, the student should previously revise the main mythologies and tools available to gait assessment (contents from Didactic Unit C.1 - What methods may I apply to assess gait appropriately?).
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 <i>pdf</i> file, print or online version. Each student need one copy.



DESCRIPTION OF THE CLASS/ACTIVITY

PART 1: TEACHER'S THEORETICAL EXPLANATION

At the beginning, the teacher should give an introduction to the topic, explaining that the methodological characteristics and statistical properties of the instruments for measuring human gait can influence the results and in some cases, blinded them.

Next, the teacher will explain each of the characteristics of the measurement instruments developed in the class (usability, equipment requirement, objectivity of the results, validity, reliability, sensitivity to change and responsiveness, and ceiling and floor effects) and will develop the topic with the examples indicated in the contents.

PART 2: PRACTICAL ACTIVITIES FOR STUDENTS

The practical part of the class consists of an activity where students must measure the gait speed of different conditions and in different subjects. They must first delimit a corridor of five, seven, and ten meters, and marking the beginning and the end with marks on the ground or with cones. Then, they have to take the time it takes a subject to walk each of the walkways three times. They will have to evaluate two subjects, a young person and an older adult at three different velocities (slow, comfortable, and fast). After calculating the speeds in the registration table provided in the class material, they have to answer some questions and analyze why the results may differ in each of the repetitions. This activity seeks to show that the methodology used to measure a gait parameter can change the reliability of the measurements.

TASKS TO BE DEVELOPED BY THE STUDENT IN CLASS

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).

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

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

EVALUATION METHODOLOGY

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

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