Development of innovative training solutions in the field of functional evaluation aimed at updating of the curricula of health sciences schools

TEACH

Erasmus+

Student's full name:

_____

MODULE BIOMECHANICS OF GAIT

Didactic Unit C: HOW DO I ASSESS GAIT?

C.2 What clinical scales exist to assess gait performance?

Activities

ACTIVITY ONE

The student will implement the activity once the thematic unit on Assessment Scales has been studied and the test of 13 questions about the unit has been passed:

A 67-year-old male patient comes to the hospital for a routine check-up. He has suffered a stroke 1 year ago having an affectation of the left part of the body. He is proposed to be one subject of evidence in a biomechanical study on movement in pathological neurological gait.

Answer the following questions to complete the study characteristics:

1. Could the Tinetti Mobility Test (TMT) be chosen for the study? TRUE/FALSE

2. If we are looking for a scale that has described a specific reliability and validity for this case of chronic subjects, will we use the Wisconsin Gait Scale (WGS)? TRUE/FALSE

3. The patient is unable to maintain normal gait without technical help. Could he use a cane or a walker in the DYPAGS test? TRUE/FALSE (DYPAGS is described for subjects with Parkinson's disease)

4. The subject has achieved a time of 17 seconds in the Time Up and Go test. Does he have risks of falling doing his usual activities according to the test? TRUE/FALSE

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ACTIVITY TWO

The student will implement the activity once the thematic unit on Assessment Scales has been studied and the self-test of 13 questions about the unit has been passed:

STUDY CASE

Maria is 50 years old, suffered a stroke 10 years ago suffering from severe hemiplegia on the right side of the body. She currently has a normal life, has managed to overcome many of the difficulties of day to day, but she still feels motor deficiencies. She is proposed to conduct a biomechanical study on the coordination of movements on the march: she accepts. Once in the biomechanical laboratory, the evaluators make her walk barefoot on a flat surface several times while she is videotaped.

Maria is seen a rounded shoulders and her trunk appears a slight inclination to the right, in addition her right elbow does not extend completely while standing (25º of flexion) but nevertheless walking her arm is balanced in the same way as the left. When walking, Maria has a small trunk flexion and when she must support her right leg she avoids stepping in the same way as with her left leg. It is also observed that her right foot, just at the moment of support, points slightly towards the opposite leg and that his knee flexes 20º until he stops resting on the ground.

Once Maria rests her left leg on the floor, the right leg reacts naturally during the oscillation phase, although there is a knee flexion of 40º in the middle of the phase. Her ankle manifests a slight inversion with flexed fingers during said phase, in addition his trunk flexes up to 20 ° each time he changes her leg support. It is also observed that his left pelvis rises considerably, comparing it with the right, when it is observed by the evaluators from behind.

- The evaluators chose the Gait Assessment and Intervention Tool (GAIT) scale for the study. You'll make this evaluation and check the final score of Maria.

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- What will we value during the support and swing phase? And during the swing phase?

- Is there any inconvenience for the patient to walk 10 meters? And 5 meters?