

Student's full name:

MODULE BIOMECHANICS OF GAIT

Didactic Unit D: INSTRUMENTED ANALYSIS OF GAIT

D.1 Which gait biomechanical instrumented evaluation protocols exist?

Activities

ACTIVITY ONE

To solve the following activities, you must have studied the contents of Unit D.1. After reading the clinical case that we present below, answer the proposed questions.

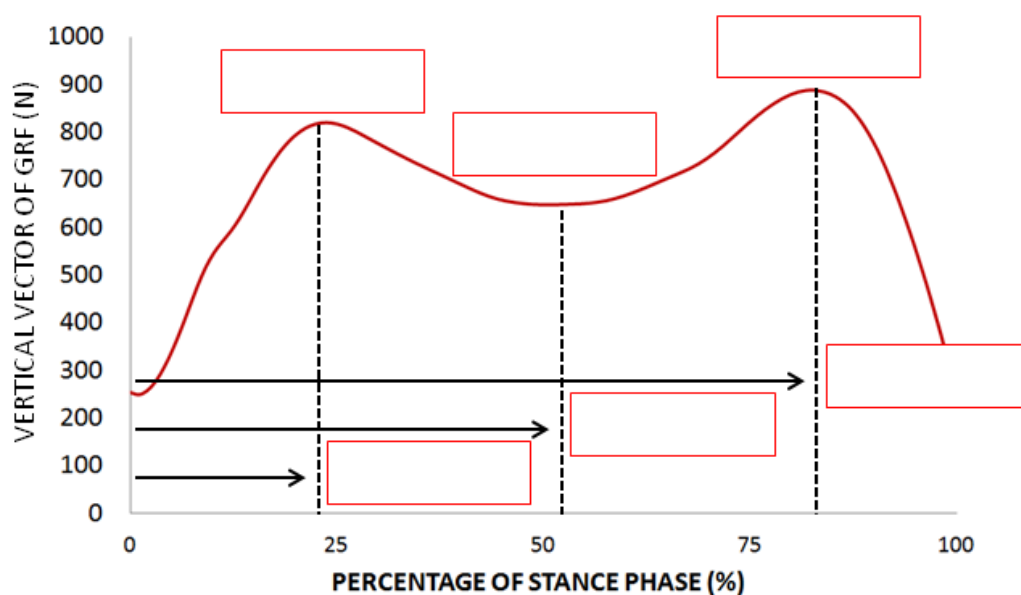
A 54-year-old male patient goes to a medical consultation with a traumatologist specialist after right knee joint replacement surgery. He refers that during walk feels instability in the operated knee and intense pain in his left hip, which disappears when he is sitting or supine position. When the patient walks, a limp of the right side is observed, taking less time of the stance phase with the affected side. At the passive and active range of motion examination, no limitation of movement is observed in the left hip.

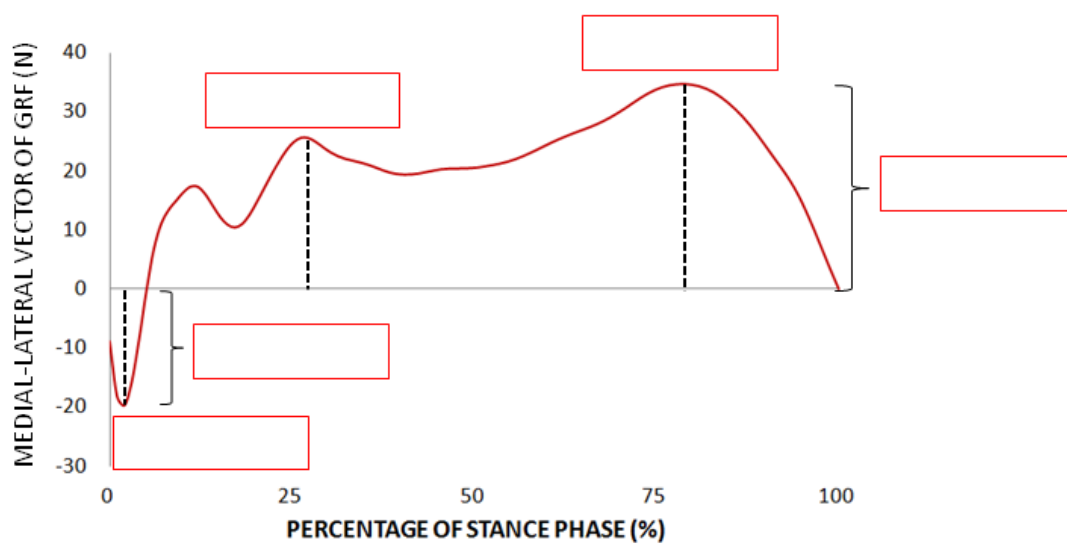
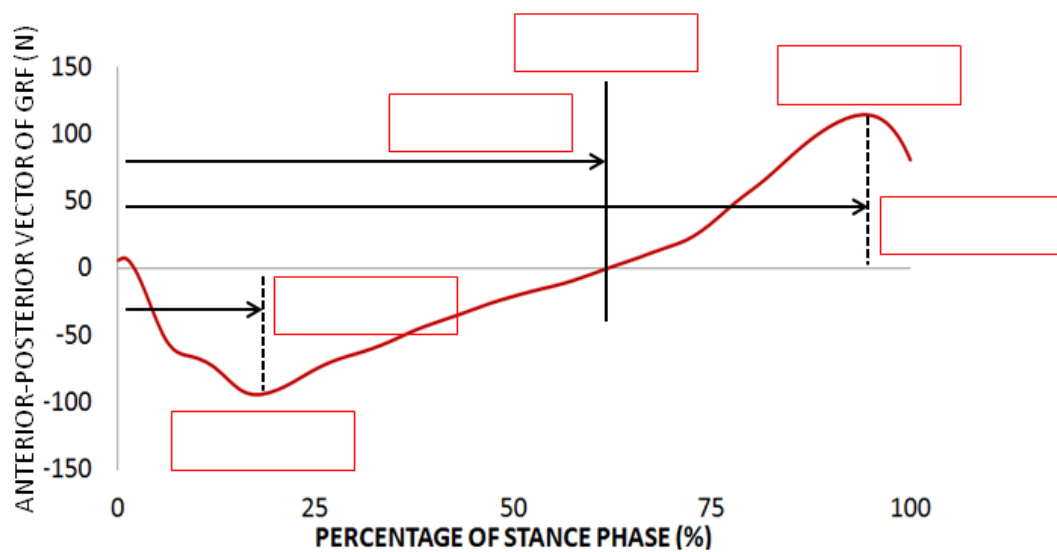
1. Which biomechanical assessment tool would you use to make an objective assessment of the gait deficit? Justify your answer



2. In the case of performing a kinematic evaluation of gait with photogrammetry, which segments would you define with a marker model? Where should markers be located to define the segments involved and do a three-dimensional study? Draw in the image the markers that you think are necessary.

3. In addition to performing the kinematic evaluation with photogrammetry, you also perform a kinetic evaluation with dynamometric platforms. Before reading the patient's results, you review the meaning of the forces that make up the ground reaction force vector. Put the corresponding name in the blank boxes.





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