**ABSTRACT**

In locomotor biomechanics, three high groups of contraints are commonly encountared : pressure, traction and torsion. In supra-maximal conditions, all of these contraints would be responsible of some equine diseased locomotor systems. In order to understand better the contraints in the equine locomotor dynamics, some investigations have been carried out. Moreover, some measurement methods, based on the mechanics of Newton, have been performed. This review shows the different measurement techniques and introduces the mechanical basis that are compulsory for the understanding of the equine locomotor apparatus functioning.