



INVESTMENTS IN EDUCATION DEVELOPMENT

Initial fixation of implant plays a crucial role for long term survival of implant and the overall success of the surgical procedure. The main objective of proposed paper is a preliminary study of ability of the vibrational technique for assessing the initial fixation of implant. The experimental results show a correlation between status of initial fixation of implant and evaluation of frequency response of bone - implant structure. The vibrational method has a potential to assess the initial fixation of implant, but the feasibility, repeatability and sensitivity testing are required.

### **The values of viscoelastic parameters of hair at different places on the head surface**

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Most works do not even consider the dependence of mechanical and viscoelastic parameters on the sampling places on the surface of the head, but it shows that these parameters significantly depend on the sampling places, as has been shown in our work (Šimková et al., 2013). This paper deals with describing this dependence on other viscoelastic parameters such as activation energy, the work necessary to break the hair, relaxation times, the Young's modulus, the ultimate strength and elasticity. The samples were taken from 40 women and the values determined for 600 hair. In addition to the previously found dependence of the hair diameter on the sampling places, dependence of two other parameters has been found.

### **Risk types of landing in volleyball for ACL injury**

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Anterior cruciate ligament (ACL) injuries frequently occur in landing from a jump on one or both legs near full extension (0-30° knee flexion). The aim of the study was identified the type of landings after volleyball block where knee flexion is found under critical value at the instant of first peak of resultant GRF. Subjects were required to land on force platforms using eight types of landing after performing a standing block jump movement. One-sample t-test (critical value 30°) was use for compare between types of landing and critical value 30° of