## Classification of cardiovascular system according to the heart load JIŘÍ NOVÁK, FRANTIŠEK MARŠÍK\*

Department of Anatomy and Biomechanics FTVS, Charles University, Prague; \*Institute of Thermomechanics, Academy of Sciences of the Czech Republic, Prague, Czech Republic *Acta Bioeng Biomech*, 2004; 6(2):43-53

**Abstract:** The aim of this paper was to show a possibility of determining energetic efficiency of the heart and to estimate the corresponding quality of the whole cardiovascular system of the man, with a simple non-invasive measurement only. For the examination we selected the probands whose cardiovascular systems demanded different energy. On the basis of clinical examinations we found the parameters  $\Delta h_{ch}$ ,  $K_H$ . They allowed us to measure the quality of the pumping ability and the efficiency of the cardiovascular system. These quantities made it possible to categorise the energy need of the heart and the compliance of the blood vessels.

Key words: categorization, cardiovascular system, hypertension, physical load