

# ENDURANCE ABILITIES AND THEIR DIAGNOSTIC

## Contents Part I

<b>1</b>	<b>Introduction</b> .....	<b>5</b>
<b>2</b>	<b>Endurance abilities – structure and classification</b> .....	<b>9</b>
2.1	Classification .....	10
2.2	The sources and types of coverage of energy needs of organism .....	14
2.3	Lactate and its role in providing energy for the body .....	20
<b>3</b>	<b>Physiological aspects of endurance abilities</b> .....	<b>21</b>
3.1	Heart rate .....	21
3.1.1	The maximum, anaerobic threshold and resting heart rate ..	22
3.1.2	Factors affecting the heart rate (HR) .....	25
3.2	Maximum oxygen consumption ( $VO_{2max}$ ) .....	33
3.3	Anaerobic threshold .....	38
3.4	Economy of movement .....	47
<b>4</b>	<b>Endurance abilities of children and youth, the age of peak performance</b> .....	<b>51</b>
4.1	Development of individual components of aerobic fitness during ontogeny .....	52
4.2	The age of peak performance in selected endurance events .....	59
<b>5</b>	<b>Diagnostic of endurance abilities</b> .....	<b>60</b>
5.1	Performance tests .....	61
5.1.1	Local static endurance tests .....	62
5.1.2	Local dynamic endurance tests .....	63
5.1.3	Global endurance tests .....	68
5.2	Functional (load) tests .....	82
5.3	Procedures of $VO_{2max}$ determination .....	87
5.4	Division of tests according to prevailing energy systems .....	88
	<b>Standards</b> .....	<b>91</b>
<b>6</b>	<b>Bibliography:</b> .....	<b>100</b>