

# CONTENTS

<b>REVIEW 1 .....</b>	<b>1</b>
<b>REVIEW 2 .....</b>	<b>5</b>
<b>ABSTRACT .....</b>	<b>9</b>
<b>CHAPTER 1 .....</b>	<b>15</b>
<b>THE ROLE OF TAKE-OFF POWER IN THE EXECUTION OF THE SKI JUMPING TECHNIQUE .....</b>	<b>15</b>
SKI JUMPING TECHNIQUE .....	15
SKI JUMPING TECHNIQUE IN THE TAKE-OFF PHASE .....	17
TAKE-OFF ACTION PERFORMANCE IN TERMS OF AERODYNAMICS .....	31
PERFORMANCE OF THE TAKE-OFF MOVEMENT TECHNIQUE IN TERMS OF TAKE-OFF ACCURACY .....	42
PERFORMANCE OF THE TAKE-OFF MOVEMENT TECHNIQUE IN TERMS OF VERTICAL VELOCITY AT TAKE-OFF .....	48
TAKE-OFF POWER AS A REFLECTION OF THE FUNCTIONAL PERFORMANCE OF KINETIC MECHANISMS .....	55
SKI JUMPERS' TAKE-OFF POWER IS EXPRESSED THROUGH MUSCULAR TAKE-OFF FORCE .....	56
RELATIONSHIP BETWEEN MUSCLE FORCE AND MOVEMENT VELOCITY .....	58
THE ROLE OF VARIOUS TYPES OF MUSCLE FORCE IMPULSE IN DEVELOPING TAKE-OFF POWER .....	60
IMPROVEMENT OF THE TAKE-OFF FORCE .....	62
TAKE-OFF FORCE AS AN INTEGRAL OF ANGULAR MOMENTUMS .....	63
FUNCTIONAL ASPECT OF MUSCLE ACTION IN THE TAKE-OFF AND EARLY FLIGHT PHASES .....	68
ROLE OF ANKLE JOINT MUSCLES IN THE PERFORMANCE OF THE TAKE-OFF AND EARLY FLIGHT TECHNIQUE .....	73
LOAD DISTRIBUTION ON THE FOOT DURING A SKI JUMP .....	75
ROLE OF THE MUSCLES OF THE SHOULDER GIRDLE AND ARMS IN EXECUTING THE EARLY FLIGHT TECHNIQUE .....	77
<b>CHAPTER 2 .....</b>	<b>79</b>
<b>DEVELOPMENT OF TAKE-OFF POWER IN IMITATION TAKE-OFFS WITHOUT BASIC MOVEMENT VELOCITY .....</b>	<b>79</b>
<b>TYPES OF TRAINING TOOLS FOR IMITATION TAKE-OFF WITHOUT THE BASIC MOVEMENT VELOCITY .....</b>	<b>82</b>
TRAINING DEVICE FOR DEVELOPING ISOMETRIC LEG POWER AT THE KNEE JOINT .....	82
THE TRAINING DEVICE FOR DEVELOPING ISOMETRIC POWER IN THE IN-RUN POSITION .....	86
A TRAINING DEVICE FOR DEVELOPING TAKE-OFF POWER IN STATIONARY TAKE-OFF – HIGHER HORIZONTAL TAKE-OFF COMPONENT .....	94
TRAINING DEVICE FOR DEVELOPING DYNAMIC TAKE-OFF POWER – SHORTER HORIZONTAL TAKE-OFF COMPONENT .....	96
TRAINING DEVICE FOR DEVELOPING SPECIAL DYNAMIC TAKE-OFF POWER IN STATIONARY TAKE-OFF .....	97
<b>CHAPTER 3 .....</b>	<b>99</b>

<b>STRUCTURE OF TAKE-OFF POWER IN SKI JUMPING TAKE-OFF IMITATION WITHOUT BASIC VELOCITY .....</b>	<b>99</b>
INTRODUCTION TO THE ISSUE OF STUDYING TAKE-OFF POWER .....	99
THE STRUCTURE OF TAKE-OFF FORCE IN VERTICAL TAKE-OFF .....	101
THE STRUCTURE OF TAKE-OFF POWER IN A FORWARD-LEAN IMITATION TAKE-OFF .....	107
TRAINER-SUPPORTED IMITATION TAKE-OFF.....	108
DEVELOPMENT OF A MEASURING DEVICE TO EXAMINE THE TAKE-OFF FORCE DURING IMITATION TAKE-OFFS .....	111
THE DISPLAY OF THE SHAPE OF THE TAKE-OFF FORCE-TIME CURVE .....	121
THE ANALYSIS OF THE SHAPE OF THE TAKE-OFF FORCE-TIME CURVE DURING IMITATION TAKE-OFFS OF AN ELITE SLOVENIAN FEMALE SKI JUMPER .....	134
ANALYSING THE IMITATION TAKE-OFF FROM A HORIZONTAL SURFACE .....	138
ANALYSING THE IMITATION TAKE-OFF WITHOUT BASIC MOVEMENT VELOCITY ON A 10-DEGREE INCLINE .....	141
ANALYSIS OF SELECTED VARIABLES OF IMITATION TAKE-OFFS IN SKI JUMPING BOOTS FROM A SURFACE WITH A 10-DEGREE INCLINE .....	149
THE ROLE AND IMPORTANCE OF VARIOUS TYPES OF IMITATION TAKE-OFFS IN DEVELOPMENT OF THE TAKE-OFF FORCE OF SKI JUMPERS .....	164
THE DILEMMAS OF EFFECTIVE DEVELOPMENT OF THE TAKE-OFF POWER OF SKI JUMPERS BY USING IMITATION TAKE-OFFS.....	167
<b>LITERATURE .....</b>	<b>179</b>
<b>INDEX.....</b>	<b>185</b>