

# CONTENTS

MEET THE AUTHOR .....	6
ASSISTANT AUTHOR .....	8
OTHER ACKNOWLEDGMENTS AND RESEARCH COLLABORATORS .....	9
REFERENCES .....	10
FOREWORD BY WALTER SMITH .....	11
KEY TERMS .....	12
INTRODUCTION .....	13
<b>CHAPTER 1: DISTANCE AND INTENSITY OF RUNNING IN FOOTBALL .....</b>	<b>15</b>
1. DISTANCE COVERED DURING GAMES .....	17
Overall Distance Covered .....	18
Total Distance Covered in High-Intensity Running .....	20
Changes of Direction (COD) .....	22
Practice Example: Changing Direction at Speed and Finishing .....	24
Effects of Eccentric Overload Training on Changes of Direction and Performance .....	25
The Different Physical Demands for Different Playing Positions .....	26
Variations During Games and Halves .....	29
2. THE IMPACT OF THE SCORE, THE TIME OF DAY AND OTHER VARIABLES .....	31
Home Advantage in Football .....	34
Sleep Cycles and Sports Performance .....	35
3. SPECIFIC WORK RATE PROFILES .....	36
Chapter Summary .....	38
How can I Implement this Information into my Training? .....	40
<b>CHAPTER 2: PHYSIOLOGICAL DEMANDS OF FOOTBALL .....</b>	<b>41</b>
1. ENDURANCE TRAINING COMPONENTS (AEROBIC) .....	43
Monitoring Heart Rate (HR) .....	45
Oxygen Kinetics .....	50
Carbohydrates: Intake Targets for Athletes .....	55
Running Economy (CR) .....	56
The Effects of Small Sided Games .....	58
Strategies to Improve Running Economy .....	59
2. SHORT TERM INTENSIVE TRAINING COMPONENTS (ANAEROBIC) .....	60
Lactate Threshold and Phosphocreatine System (PCr) .....	62
Training and Nutrition for Explosive Sports .....	66
Lactate Threshold (LT) .....	67
Active Recovery .....	73
Glycogen Depletion and Hormonal Evolution .....	74
Repeated Sprint Ability (RSA) .....	77
High Intensity Interval Training .....	83



3. SPEED, AGILITY AND COORDINATION DEVELOPMENT .....	84
The Effect of Resisted Sprint Training on Maximum Sprint Kinetics and Kinematics .....	87
Multi-Directional Sprints and Small Sided Games.....	88
Chapter Summary .....	89
How can I Implement this Information into my Training? .....	91
<b>CHAPTER 3: SPEED TRAINING DRILLS .....</b>	<b>92</b>
Practice Format .....	93
Key .....	93
Speed Reaction Drill .....	94
Speed Endurance Training in a Football Specific Conditioning Drill.....	95
Acceleration and Explosive Power in a 1 v 1 Duel Finishing Practice .....	96
Speed Endurance in a Functional Practice With a 1 v 1 Duel.....	97
Speed Endurance and Explosive Power in an Attacking Combination with Finishing.....	98
Speed and Agility Circuit with One-Two Combination .....	99
Speed Endurance in a Quick Break Away Functional Practice With Finishing .....	100
Speed Endurance Conditioning: Dribble, Sprint and One-Two Combination.....	101
Dribbling and Speed Endurance in a Continuous Technical Circuit .....	102
One Touch Combination Play in a Speed Endurance Circuit .....	103
Sprint, Receive, One-Two and Finish in a Speed Endurance Exercise .....	104
Sprint, Cross and Finish in a Speed Endurance Circuit.....	105
Speed Endurance and Conditioning in a Position Specific 3 v 2 Practice .....	106
Speed Endurance in a 3 v 2 Attack vs Defence.....	108
Dynamic Speed Endurance Circuit.....	109
Quick Reactions and Changes of Direction in a Speed Exercise.....	110
Acceleration and Reaction Speed in Continuous Passing Channels.....	111
<b>CHAPTER 4: INJURIES AND PREVENTION TECHNIQUES.....</b>	<b>112</b>
Introduction .....	113
Injuries in Football: What are the Risk Factors?.....	115
Injury Statistics in Football .....	116
Injury Prevention Techniques Used in Football .....	117
Effect of an Injury Prevention Programme on Muscle Injuries: Does it Work?.....	118
Factors Influencing Performance and Chances of Injury .....	119
Likelihood of Injury Based on Hours of Sleep per Night .....	120
The 'FIFA 11+' Injury Prevention Programme .....	121
What are the Components of a Good Injury Prevention Warm Up? .....	122
Training Load (Intensity and Volume) .....	123
Training Load Management: Reducing the Risk of Injury.....	124
How to Limit the Rate of Injuries (Training Load = Volume x Intensity).....	128
Heart Rate Based Training Intensity and its Impact on the Amount of Injuries .....	129
Chapter Summary .....	130
How can I Implement this Information into my Training? .....	133
<b>CHAPTER 5: WARM UP DRILLS .....</b>	<b>135</b>
Collective Pressing in Formation Warm Up .....	137
Coordination, Agility and Speed Circuit Warm Up .....	138



Continuous Movement in a Technical Warm Up ..... 139  
 Agility Training with a Tag Game Warm Up ..... 140  
 Coordination and Agility with One-Two Combination Warm Up..... 141

**CHAPTER 6: INJURY PREVENTION, STRENGTH AND CONDITIONING EXERCISES ..... 142**

**PHASE 1: FOAM ROLLS ..... 143**

Foam Roll Release Work ..... 144  
 Foam Roller: Calf ..... 145  
 Foam Roller: Lower Back..... 146  
 Foam Roller: Glutes ..... 147  
 Foam Roller: Iliotibial Band (ITB) ..... 148  
 Foam Roller: Hamstrings ..... 149  
 Foam Roller: Quads ..... 150  
 Foam Roller: Adductors ..... 151

**PHASE 2: GLUTE ACTIVATION ..... 152**

Glute Activation: Side Lying Resistance Exercise ..... 153  
 Glute Activation: Standing Resistance Exercise ..... 154  
 Glute Activation: Standing Hip Out Resistance Exercise..... 155  
 Glute Activation: Single Leg Bridge ..... 156  
 Glute Activation: Exercise Ball Bridge ..... 157  
 Glute Activation: Extensions..... 158

**PHASE 3: CORE DEVELOPMENT ..... 159**

Neuromuscular and Athletic Performance Following Core Strength Training ..... 161  
 Core Development: Straight and Side Plank..... 162  
 Core Development: Exercise Ball Rollouts ..... 163  
 Core Development: Exercise Ball Mountain Climber ..... 164  
 Core Development: Alternate Leg Crossover ..... 165

**PHASE 4: FUNCTIONAL STRENGTH..... 166**

Preventing Hamstring Injuries ..... 169  
 Proprioception and Balance Training..... 170  
 Single Stiff Leg Dead Lift: Ankle, Single Leg Strength, Balance and Stability..... 172  
 Kettle Bell Split Squats: Single Leg Strength/Stability, Hip Flexibility and Core Development ..... 173  
 Kettle Bell Sumo Squat: Glutes, Hamstrings and Quadriceps ..... 174  
 Kettle Bell Swings: Whole Body Strength Exercise ..... 175  
 Bosu Press Ups: Progressive Core Stabilisation and Anti-Rotation Capability ..... 176  
 Dead Lift: Glutes, Hamstrings, Quadriceps and Whole Body Exercise ..... 177  
 Inverted Row: Strengthening the Back and the Core Region ..... 178

**BIBLIOGRAPHY ..... 179**

