

# Contents

	<b>Foreword</b>	ix	<b>2.4 Your Resources</b>	16
	<b>Preface</b>	x	2.4.1 Human Resources: A Team's Greatest Resource	16
			2.4.2 Support Human Resources	17
<b>1</b>	<b>Injury Prevention</b>	1	<b>2.5 Equipment and Facilities</b>	18
	<i>Jan Ekstrand</i>		2.5.1 What Resources Do You Have, and What Do You Need?	18
			<b>2.6 Developing Your Treatment Options Framework</b>	18
<b>1.1</b>	<b>Why Injury Prevention?</b>	2	<b>2.7 Planning</b>	19
<b>1.2</b>	<b>Is It Possible to Prevent Injuries?</b>	2	2.7.1 Daily Planning	19
<b>1.3</b>	<b>A Model of Prevention</b>	2	<b>2.8 Prognosis</b>	21
<b>1.4</b>	<b>Evaluating Risk Factors</b>	3	<b>2.9 Results and Audit</b>	22
1.4.1	Player Factors (Intrinsic Factors)	3	<b>2.10 Diagnosis</b>	23
1.4.2	Load Factors (Extrinsic Factors)	4	<b>2.11 Documenting the Injury</b>	23
1.4.3	Club Factors (Extrinsic Factors)	5	2.11.1 Injury Cards	23
1.4.4	Rule Factors (Extrinsic Factors)	6	<b>2.12 An Injury, from Day 1</b>	25
1.4.5	Who Is in Control of Injury Risk Factors?	6	2.12.1 An Injury Occurs in a Match	25
1.4.6	Methods Designed to Address Player Factors	7	2.12.2 The Day after the Injury the Player Comes in to Be Reassessed	25
1.4.7	Methods Designed to Address Load Factors	8	2.12.3 The Diagnosis of the Injury Has Been Established and the Rehabilitation Process Can Begin	26
1.4.8	Methods Designed to Address Team Factors	9	2.12.4 The Acute Phase of the Injury Is Now Passed and It Is Time to Start a Functional Progression	26
1.4.9	Methods Designed to Address Rules and Equipment Factors	9	<b>2.13 Planning Your Content</b>	28
<b>1.5</b>	<b>Are We Successful in Keeping the Players on the Pitch?</b>	10	2.13.1 How to Start	28
<b>1.6</b>	<b>Conclusions</b>	11	2.13.2 Where Do You Finish?	28
<b>2</b>	<b>Rehabilitation in Football Medicine</b>	15	<b>2.14 Drill Design Variables</b>	28
	<i>Jason Palmer</i>		2.14.1 Movement	28
<b>2.1</b>	<b>Introduction</b>	16	2.14.2 Intensity	29
<b>2.2</b>	<b>The Football Medicine Department and Rehabilitation</b>	16	2.14.3 Time/Volume	29
<b>2.3</b>	<b>Where Do You Start When You Want to Deliver Effective Football Rehabilitation?</b>	16	2.14.4 Working Space/Distance	30
			2.14.5 Reaction and Predictability	30
			2.14.6 Drill Complexity	30
			<b>2.15 Communication</b>	31
			<b>2.16 Observation and Demonstration</b>	31
			<b>2.17 Summary</b>	31

<b>3</b>	<b>Psychology</b>	33	<b>4.5</b>	<b>Special Environmental Challenges</b>	52
	<i>Christopher Willis</i>		<b>4.6</b>	<b>Cultural and Regional Issues</b>	53
<b>3.1</b>	<b>Introduction</b>	34	<b>4.7</b>	<b>Role of the Player, Support Staff, and Club</b>	54
<b>3.2</b>	<b>Components of Peak Performance in Football</b>	34	<b>5</b>	<b>Fatigue and Recovery in Football</b>	55
3.2.1	Culture of Excellence in the Football Organization: A Fundamental Factor for Peak Performance	34		<i>Grégory Dupont</i>	
3.2.2	Culture of Success in a Football Team	35	<b>5.1</b>	<b>Introduction</b>	56
3.2.3	Individual Psychological Components for Peak Performance and Well-Being	36	<b>5.2</b>	<b>Fatigue</b>	56
3.2.4	General Working Areas for Sport Psychologists	37	5.2.1	What Is Fatigue in Football?	56
<b>3.3</b>	<b>Psychological Demands of the Game</b>	37	5.2.2	What Are the Mechanisms Involved in Fatigue?	56
<b>3.4</b>	<b>Psychology of Injuries</b>	38	5.2.3	How to Monitor Fatigue	57
3.4.1	Psychological Antecedents of Sport Injury	38	<b>5.3</b>	<b>Recovery</b>	59
3.4.2	Injury Rehabilitation	39	5.3.1	Nutrition and Hydration	59
3.4.3	Educational Interventions	39	5.3.2	Sleep	59
3.4.4	Goal Setting	39	5.3.3	Cold-Water Immersion	59
3.4.5	Imagery	40	5.3.4	Compression Garments	60
<b>4</b>	<b>Football Nutrition</b>	43	<b>5.4</b>	<b>Conclusion</b>	60
	<i>Ronald J. Maughan</i>		<b>6</b>	<b>Nutritional Supplements</b>	65
<b>4.1</b>	<b>Nutrition Goals and Eating Strategies</b>	44		<i>Ronald J. Maughan</i>	
4.1.1	Nutritional Assessment	44	<b>6.1</b>	<b>Introduction</b>	66
<b>4.2</b>	<b>Energy and Macronutrients for Training and Match Play</b>	44	<b>6.2</b>	<b>Considerations for the Player</b>	66
4.2.1	Energy and Body Fat	44	<b>6.3</b>	<b>When Supplements May Be Useful</b>	67
4.2.2	Carbohydrate	45	<b>6.4</b>	<b>Supplements That May Be Effective</b>	67
4.2.3	Protein	47	6.4.1	Creatine	67
4.2.4	Timing of Intake	47	6.4.2	Caffeine	68
<b>4.3</b>	<b>Hydration Strategies</b>	48	6.4.3	Bicarbonate	68
4.3.1	How Much and When to Drink	48	6.4.4	$\beta$ -Alanine	68
4.3.2	Caffeine	49	6.4.5	Nitrates	68
4.3.3	How to Estimate Sweating Rate	49	<b>6.5</b>	<b>World Anti-Doping Agency and the Prohibited List</b>	68
4.3.4	Rehydration after Exercise	49	<b>6.6</b>	<b>Potential Health Risks</b>	69
4.3.5	Alcohol	49	<b>6.7</b>	<b>Supplements and Contamination</b>	69
4.3.6	Vitamins, Minerals, and Micronutrients	50	<b>6.8</b>	<b>Supplements and Anti-Doping Rule Violations (ADRV)</b>	70
4.3.7	Supplements	50	<b>6.9</b>	<b>Regulation and Risk Reduction Strategies</b>	70
4.3.8	The Pregame Meal	50	<b>6.10</b>	<b>Foods and Doping Risks</b>	71
4.3.9	Regulations and Guidelines Relating to Matches Played in Extreme Temperatures	51	<b>6.11</b>	<b>Other Risks</b>	71
<b>4.4</b>	<b>Special Needs When Playing Away/Traveling</b>	52			

<b>7</b>	<b>Anti-Doping</b>	73	7.6.3	Review of Evidence	80
	<i>Mike Earl and Zoran Bahtijarevic</i>		7.6.4	General Advice for Doctors on TUE Management	80
<b>7.1</b>	<b>Introduction</b>	74	<b>7.7</b>	<b>Anti-Doping Organizations' Testing Authority</b>	80
<b>7.2</b>	<b>Rules and Regulations</b>	74	<b>7.8</b>	<b>Whereabouts Management</b>	81
<b>7.3</b>	<b>Organization of the International Anti-Doping Network</b>	74	7.8.1	Minimizing Risk	82
<b>7.4</b>	<b>Types of ADRV and Their Associated Sanctions</b>	75	7.8.2	National Teams	82
7.4.1	Presence of a Prohibited Substance or Its Metabolites or Markers in an Athlete's Sample	75	<b>7.9</b>	<b>Doping Control Procedures</b>	82
7.4.2	Use or Attempted Use by an Athlete of a Prohibited Substance or a Prohibited Method	75	7.9.1	Compliance with Requests for Doping Control	82
7.4.3	Evading, Refusing, or Failing to Submit to Sample Collection	75	7.9.2	Managing Players	82
7.4.4	Whereabouts Failures	75	7.9.3	The Key Stages of the Doping Control Process	83
7.4.5	Tampering or Attempted Tampering with Any Part of Doping Control	75	7.9.4	Points for the Doctor to Consider during the Doping Control Process	85
7.4.6	Possession of a Prohibited Substance or a Prohibited Method	76	<b>7.10</b>	<b>Other Special Considerations with Regards to Anti-Doping Procedures</b>	86
7.4.7	Trafficking or Attempted Trafficking in Any Prohibited Substance or Prohibited Method	76	7.10.1	Managing an ADRV	86
7.4.8	Administration or Attempted Administration to Any Athlete In-Competition of Any Prohibited Substance or Prohibited Method, or Administration or Attempted Administration to Any Athlete Out-of-Competition of Any Prohibited Substance or Any Prohibited Method That Is Prohibited Out of Competition	76	7.10.2	Anti-Doping and Minors	86
7.4.9	Complicity	76	7.10.3	Cooperation between Club Doctor and National Team Doctor	87
7.4.10	Prohibited Association	77	7.10.4	Managing a Player's Medical Network	87
7.4.11	Consequences for Team Sports	77	<b>7.11</b>	<b>Summary</b>	87
<b>7.5</b>	<b>List of Prohibited Substances and Methods</b>	77	<b>8</b>	<b>Match and Tournament Preparation</b>	89
7.5.1	Inclusion Criteria	77		<i>Ian Beasley</i>	
7.5.2	Defining In- and Out-of-Competition	77	<b>8.1</b>	<b>Introduction</b>	90
7.5.3	Treatment Routes	78	<b>8.2</b>	<b>The National Team Doctor (Medical Officer)</b>	90
7.5.4	Checking Prohibited Status	78	<b>8.3</b>	<b>General Issues</b>	90
7.5.5	Traveling Abroad	78	8.3.1	Planning Meetings	90
<b>7.6</b>	<b>Procedures for Therapeutic Use Exemption (TUE) Approval</b>	78	8.3.2	Club Visits and Contacts for the National Team Doctor	91
7.6.1	Preparing an Application	78	8.3.3	Roles and Responsibilities	91
7.6.2	Submitting a TUE Application to the Correct Organization	79	8.3.4	Emergency Action Plans	91
			8.3.5	Knowledge of Any Current Medical Issues in the Traveling Party	91
			8.3.6	Travel	91
			8.3.7	Hotels	92
			8.3.8	Training Venue	92
			8.3.9	Stadium	92
			8.3.10	Local Emergency Service Provision	92
			8.3.11	Player Health and Immunization Status	93

