JOINT COMMITTEE ON SPECIALIST TRAINING

SPORTS MEDICINE SUBSPECIALTY TRAINING REQUIREMENTS

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SPORTS MEDICINE SUBSPECIALTY TRAINING PROGRAM

EXECUTIVE SUMMARY

The Sports Medicine Subspecialty Training (SpMed SST) Programme is parallel to, and as rigorous as other medical subspecialties. The competency-based training comprises a 3-year Subspecialty Training (SST).

Selected disciplines / specialties – namely Family Medicine, Internal Medicine, Orthopaedic Surgery, or Emergency Medicine – shall serve as the entry criteria / base specialties for the Sports Medicine. Being a broad-based discipline, these four disciplines are considered as relevant foundation training for Sports Medicine Subspecialty Trainees.

Sports Medicine Subspecialty Training covers a minimum of three years, comprising postings, attachments, tutorials, courses and research, culminating in an exit examination. The Sports Sciences, which are very relevant and specific to Sports Medicine and not covered elsewhere in the undergraduate or postgraduate medical curriculum, is covered during the SST. As Sports Physicians work very closely with athletes and coaches, stints at the National Sports Associations will form part of the attachments.

1. SPORTS MEDICINE SUB-SPECIALIST TRAINING PROGRAMME

1.1. Introduction

Sports Medicine encompasses Sport and Exercise Medicine, as well as the Sports Sciences (Exercise Physiology, Strength & Conditioning, Sports Nutrition, Sports Biomechanics, and Sports Psychology). Sports Physicians need to be familiar with a wide variety of sports and related physical activities (e.g. performing arts, military activities). The exercising population that the Sports Physician deals with is not a homogenous one – it ranges from elite and professional athletes, to recreational athletes, children, women, elderly, and the disabled. Sports Physicians deal not only with the injured, but also with healthy athletes seeking performance enhancement and clinical populations requiring exercise testing and exercise prescription. Hence, the training programme will be broad based, but focusing on clinical aspects.

To be eligible for the Sports Medicine Subspecialty Training (SpMed SST) Programme, candidates need to have fully exited from Family Medicine, Internal Medicine, Orthopaedic Surgery, or Emergency Medicine.

This Programme is designed to be competency-based, rather than time-based. A conscious effort has also been made to minimize the examinations that trainees have to sit for without compromising on the assessment of each trainee. Also, the examination format has been made as objective as possible.

1.2. Objectives

The goals of the SpMed SST are to produce Sports Physicians that:

1.2.1. Are clinically competent in the diagnosis and management of sports injuries and sports-related medical conditions in a tertiary care setting.
1.2.2. Are clinically competent in fulfilling the duties of a Team Physician, including pre-participation screening, event medical coverage, doping control and counselling, early management of sports injuries, and sports-related medical conditions in a primary care setting.
1.2.3. Are proficient in exercise testing and prescription in both diseased and disease-free populations.
1.2.4. Possess habits of life-long learning to build upon their knowledge and skills.
1.2.5. Are proficient in applying the principles of Sports Science (i.e. Exercise Physiology, Strength and Conditioning, Sports Nutrition, Sports Biomechanics, Sports Psychology) in the management of competitive and recreational athletes
1.2.6. Are fairly familiar with a wide variety of sports.
1.2.7. Foster professional and healthy interactions within the multidisciplinary team supporting the athlete, including coaches, sports administrators, sport scientists, paramedical professionals (e.g. sports physiotherapists, podiatrists, sports trainers), and medical colleagues from other disciplines (e.g. sports orthopaedic surgeons).

1.2.8. Are proficient in conducting applied research in the fields of Sports and Exercise Science and Medicine.

The scope and practice of Sports Medicine are summarized in appendix 1.

1.3. Subject Areas in Sports Medicine

- Anatomy
    - Musculoskeletal
    - Neurological, peripheral, and central
    - Vascular, peripheral, and central
    - Thoracic, abdominal and pelvic viscera
    - Other systems
- Biomechanics
    - Human movement analysis
        - Basic kinematics
        - Basic kinetics
        - Centre of mass determinations, segmental kinetics, etc.
    - Biomechanical analysis of sports techniques, kinetics and kinematics of sports equipment and surfaces
    - Biomechanics of the musculoskeletal system
        - Characteristics of whole bone tissue, stress, strain and fatigue
        - Biomechanical properties of tendon, ligament and articular cartilage, stress, strain and failure
        - Functional anatomy of important joints and musculotendinous units
    - Biomechanics of gait and gait analysis techniques
    - Notational / tactical analysis
- The physiology of exercise
    - Respiratory
    - Cardiovascular
    - Aerobic and anaerobic energy systems
    - Renal, fluid and acid/base homeostasis in exercise
    - Neurophysiology
    - Muscle physiology, metabolism
    - Metabolic and endocrine physiology, including metabolic calculations
    - The physiological effects of training and conditioning on the respiratory, cardiovascular, endocrine and musculoskeletal systems
    - Principles of training
    - Haematological changes with exercise and altitude
- The effects of environment and physical activity
    - Temperature regulation
    - Heat stress and thermal injury
    - Cold
    - Altitude, depth and barotrauma
- Physical fitness consultancy

    - Basic fitness testing principles – cardiovascular, respiratory, muscle flexibility, strength, etc
    - Testing protocols
    - Exercise prescription for general and specific groups
    - Health education
- Pathophysiology of injury and repair
- General pathology of the musculoskeletal system
    - Tumours
    - Infection
    - Inflammatory arthritis / connective tissue disorders
    - Osteoarthritis
    - Metabolic and endocrine conditions
- The pharmacology of sport and exercise
    - Doping substances, methods and dope testing
    - NSAIDs / analgesics
    - Corticosteroids
    - Effect of certain medications on physical activity e.g. beta blockers, anti-hypertensives, anti-epileptics, insulin
- Physical activity in specified populations
    - Women
        - Exercise and pregnancy
        - The female triad
        - The effect of exercise on the menstrual cycle and vice versa
    - Children
        - Musculoskeletal injuries in children
        - Exercise and medical illness in children
    - The elderly
- Disability and physical activity
    - Spinal injury
    - Stroke and other acute neurological disorders
    - Congenital and chronic neurological disorders
    - Amputees
    - Wheelchair athletes
- Illness and physical activity. Indications, contraindications and special precautions regarding physical activity in acute and chronic medical conditions
    - Acute febrile illness
    - Asthma, exercise induced asthma and other respiratory disorders
    - Diabetes and other metabolic disorders
    - Epilepsy and neurological conditions
    - Hypertension, congenital and acquired cardiovascular disease or dysfunction
    - Bleeding disorders
    - Other medical conditions affecting participation in sport and physical activity
- General principles of management of injury in sport and recreation
    - Emergencies in sporting trauma
    - First aid
        - General principles
        - Resuscitation

- Diagnostic techniques
  - Principles of musculoskeletal injury assessment
  - Radiology, diagnostic ultrasound, nuclear medicine, MRI and other imaging techniques
  - Muscle testing
  - EMG and nerve conduction studies
  - Compartmental pressure measurement etc.
- Principles of conservative management of sporting injury
- Principles of surgical investigations and management
- Principles of rehabilitation
  - Assessment of disability
  - Protected function and functional progression in musculoskeletal rehabilitation
  - Rehabilitation and physiotherapy modalities
  - Maintenance of cardiovascular fitness during specific rehabilitation
  - Roles and responsibilities of members of a multidisciplinary rehabilitation unit
  - Pain mediation / physiology of pain / pain management
- Splints, braces and other orthotic devices
- Measurement of malalignment / goniometry
  - Types of orthoses
  - Orthosis materials
  - Orthosis fabrication

- Sports medicine administration
  - The role of the team medical officer
  - Sports safety, sporting event medical coverage
  - Structuring training to prevent injury
  - Sports hygiene, immunization and prevention of illness on tour with sporting teams
  - Time zone and heat acclimatization
  - Drug testing principles and protocols
  - Administrative considerations in providing a sports medicine service
  - Medico-legal considerations (evidence, reports, liability, etc.)
- Biostatistics, research methods and epidemiology of sports trauma
- Psychosocial aspects of sport and physical recreation
  - Motor learning, selective attention and information processing theories and models
  - Motivation, arousal and performance, including attribution theories
  - Psychological aspects of staleness
  - Psychological aspects of stress, trauma, disability and rehabilitation
  - Group psychology – team, coach, medical team, group dynamics, behaviour modelling
  - Other psychological aspects of physical activity and psychology of retirement from elite sport
  - Sociology of sport
- Nutrition in sport and physical activity
  - Nutrition and health
  - Fuels for exercise

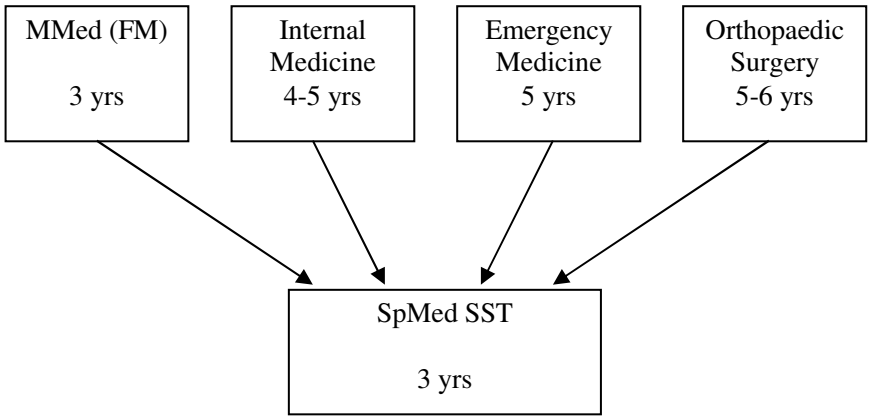
- Dietary requirements and deficiencies e.g. diabetes
- Dietary requirement for special groups
- Dietary supplements, ergogenic aids

- Sport specific issues
  - Considerations of issues relating to specific sporting codes
- Mental Skills for Sports

1.4. Eligibility

Sports Medicine Trainees will be selected through an interview process.

To be eligible for the SpMed SST, candidates need to have fully exited from one of four disciplines:



The following certifications should be obtained before or soon after commencing SpMed SST, and remain current during traineeship:

- Basic Cardiac Life Support
- Advanced Cardiac Life Support
- Advanced Trauma Life Support

1.5. Duration

A minimum of 3 years and upon completion of the requirements below, whichever is later.

1.6. Postings

The following postings must be completed:

- 24 months of clinical Sports Medicine practice at an accredited institution
- 6 months of Sports Science at an accredited centre

- 6 months of research at an accredited centre, where the trainee will design, conduct, and write up a research paper in either Sports Medicine or Sports Science

During the 24-month clinical Sports Medicine posting, the Trainee will be supervised in running Sports Medicine clinics, performing diagnostic and therapeutic procedures, conducting event medical coverage, conducting anti-doping counselling, conducting exercise tests, and prescribing exercise. All trainees will be required to maintain at least three full day clinics per week for each 6 months posting. They are allowed 2 clinic sessions per week to maintain their base specialty with 2 sessions of protected time per week given.

During the 6-month Sports Science posting, the Sports Physician from the Sponsoring Institution will oversee the trainee and to ensure qualified Sport Scientists are assigned to each trainee. The trainee should be rotated to all branches of Sports Science, i.e. Exercise Physiology, Strength & Conditioning, Sport Nutrition, Sport Biomechanics, and Sport Psychology. The trainee will supervise athletes, conduct tests, and counsel athletes under the supervision of sport scientists, and will submit case write-ups and do a presentation of an assigned topic at the end of each of the Sport Sciences rotation.

During the 6-month research posting, the Trainee shall have the equivalent of at least five sessions per week (each session being half a day) of protected time for research. The trainee shall continue to attend the combined teaching sessions and run at least three hospital-based clinic sessions a week, in order to stay in touch with clinical work. The rest of the time may be spent fulfilling the attachment requirements.

Exchange or rotation of trainees amongst the accredited sites or institutions is strongly recommended to provide more exposure for trainees.

1.7. Posting Exemptions / Prior Recognition

Trainees who have obtained a Masters of Sports Medicine by full time coursework from a recognized institution may be given prior recognition equivalent to a maximum of three months of clinical Sports Medicine posting and three months of Sports Science posting.

Trainees who have obtained a Masters of Sports Medicine by correspondence from a recognized institution may be given prior recognition equivalent to a maximum of two months of Sports Science posting.

Trainees who hold other postgraduate degrees (e.g. Graduate Diploma in Sports Medicine, Masters in Kinesiology, Graduate Diploma in Sports Nutrition) may submit their course syllabus to the SSTC, and exemptions will be on a case-by-case basis.

1.8. Specific Objectives and Minimum Requirements

Specific Areas		Minimum no. of cases / procedures / events *
1.8.1.	Proficiency in the diagnosis and management of common acute and chronic sports injuries, including:	
	▪ Head and neck injuries	10
	▪ Spinal injuries	25
	▪ Upper limb injuries	50
	▪ Lower limb injuries	100
	▪ Chest and abdominal injuries	10
1.8.2.	Proficiency in the diagnosis and management of common sports-related medical conditions, including:	
	▪ Acute febrile illness	5
	▪ Asthma, exercise induced asthma, and other respiratory disorders	10
	▪ Diabetes and other metabolic disorders	10
	▪ Epilepsy and other neurological conditions	3
	▪ Hypertension, congenital and acquired cardiovascular disease or dysfunction	15
	▪ Bleeding and other haematological disorders	3
	▪ Other medical conditions affecting participation in sport and physical activity (e.g. chronic fatigue syndrome)	-
1.8.3.	The appropriate use and interpretation of investigative procedures commonly used in Sports Medicine, including X-rays, bone scans, CT scans, MRI, musculoskeletal ultrasounds, and other imaging techniques	-
1.8.4.	Proficiency in performing common diagnostic procedures in Sports Medicine, including:	
	▪ Musculoskeletal ultrasound sonography of the heel, ankle, knee, elbow, shoulder, and muscles	25
	▪ Compartment pressure measurement	3
	▪ Gait analysis	10
1.8.5.	Proficiency in common therapeutic procedures in Sports Medicine	
	▪ Cortisone injection	15
	▪ Ultrasound-guided cortisone injection	5
	▪ Knee / other joint aspiration	10
	▪ Ultrasound-guided aspiration	5
	▪ Extra corporeal shock wave therapy	10
	▪ Toilet and suture for superficial wounds	5
	▪ Sports taping	15
1.8.6.	Proficiency in conducting pre-participation screening	15

1.8.7.	Proficiency in conducting event medical coverage (including CPR, spinal injury care, etc)	10
1.8.8.	Proficiency in anti-doping counselling / anti-doping educational and doping control activities	3
1.8.9.	Proficiency in performing exercise testing, including	
	▪ Anthropometry (including skinfolds)	5
	▪ Graded exercise stress test	10
	▪ Exercise-induced asthma	2
	▪ Direct measurement of oxygen consumption	3
	▪ Tests of anaerobic capacity	3
	▪ Strength testing	3
	▪ Agility tests	3
	▪ Measurement of power	3
1.8.10.	Proficiency in applying metabolic calculations and prescribing exercise to medical and special populations, including:	
	▪ Diabetics	5
	▪ Hypertensives	5
	▪ Asthmatics	3
	▪ Cardiac patients	5
	▪ Overweight and obese individuals	10
	▪ Children	3
	▪ Elderly	5
	▪ Physically disabled (e.g. amputees, wheelchair athletes, stroke)	3
1.8.11.	Familiarity with (assist in) Sports Orthopaedic surgical procedures, including:	
	▪ Anterior cruciate ligament reconstruction	2
	▪ Partial meniscectomy	2
	▪ Meniscal repair	1
	▪ Supraspinatus repair	2
	▪ Acromioplasty	2
	▪ Bankart repair, inferior capsular shift	2
	▪ Ankle stabilization procedures	2
	▪ Spinal decompression	2
	▪ Operative reduction and internal fixation of fractures	3
	▪ Manipulation and reduction of shoulder dislocation	3
	▪ Fasciectomy / fasciotomy	1
1.8.12.	Familiarity with (observe or perform) the common sports physiotherapy modalities and methods, including:	
	▪ Interferential current treatment	3
	▪ Ultrasound treatment	3
	▪ Icing, compression	3
	▪ Heat / short wave therapy	3
	▪ Traction	3

	▪ Mobilization	3
	▪ Manipulation	3
	▪ Deep friction massage	5
	▪ Soft tissue massage	5
1.8.13.	Familiarity with (observe) the common sports podiatry methods, including:	
	▪ Fabrication of orthotics (including plantar fascia accommodation)	5
	▪ Podiatric assessment of the foot	10
1.8.14.	Familiarity with (observe) the common sports rehabilitation training methods	
	▪ Proprioception training	5
	▪ Agility training	5
	▪ Strength training	5
	▪ Flexibility training	5
	▪ Core stability exercises / Pilates	5
	▪ Specific rehabilitation protocols e.g. ACL, rotator cuff exercises	5
	▪ Water-based training	5
1.8.15.	Ability to critically evaluate Sports Medicine and Sports Science literature	-
1.8.16.	Conduct applied research in Sports Medicine and Sports Science	1

* To be recorded in log book

1.9. Attachments

Throughout the three-year SST period, the trainee will undergo the following part-time attachments, either sequentially or concurrently:

	Minimum hours	Area/s of focus
Sports Physiotherapy / Training / Rehabilitation	30	Principles of physiotherapy Practical methods and techniques
Sports Podiatry	10	Podiatric assessment of the foot Fabrication of orthotics
National Sports Association	2 hours each, at 10 different sports	To observe national team training sessions

For the attachments, trainees should be attached to departments within any of the institutions (i.e. restructured hospitals or Singapore Sports Council). If the relevant discipline is not offered by the any of the institutions, then arrangements may be made or the trainee to be attached to a private institution / practice.

1.10. Courses

During the SST, the trainee shall attend and pass the following compulsory certifications:

- ACSM Clinical Exercise Specialist Certification or equivalent/ Certification
- Biostatistics / research techniques course
- Bioethics course

Trainees are encouraged to attend the following optional courses:

- IOC / ACSM / FIMS Team Physicians' Course
- Annual conference on Musculoskeletal Ultrasound (Musculoskeletal Ultrasound Society) or equivalent
- Conference / course on Extracorporeal Shock Wave Therapy (ESWT)

1.11. Tutorials

Trainees are required to attend at least 75% of the Sports Medicine Training Programme (SMTP). The SMTP is series of weekly tutorials that are specifically conducted for the Sports Medicine Trainees by the Sports Medicine Association of Singapore (SMAS) and the SSTC.

1.12. Research

During the six-month research posting, the trainee will be posted to or based in an accredited Sports Medicine or Sports Science centre, but the research may be conducted outside of these centres, depending on the research topic, which may be in the Sports Medicine or Sports Science domains. As with all postings, the accredited supervisor will be a Sports Physician. In addition, the research posting will have a research supervisor who is the subject matter expert on the research topic. This subject matter expert need not be a Sports Physician who is an accredited supervisor. Prior to the start of the research, the trainee shall submit the (1) research topic and (2) the proposed subject matter expert who will be supervising the research to the Sports Medicine SSTC for endorsement. A full research paper should be completed in publishable quality and submitted to the SSTC by the end of the SST cycle, accompanied by a report from the supervising subject matter expert, comprising his or her assessment of the research and the trainee. The dissertation that was submitted for the base specialty, Graduate Diploma or Masters in Sports Medicine (if any) cannot be re-submitted.

1.13. Modes of Instruction

The prescribed modes of instruction include:

- Direct responsibility for the care of Sports Medicine patients under supervision during the postings
- Specified attachments

- Specified courses
- Sports Medicine Training Programme (weekly lectures and tutorials on core topics (see above) organized by SSTC & SMAS)
- Monthly journal clubs alternating between CSMC and SMRC
- Clinical conferences e.g. SMAS Annual Conference
- Annual Scientific Meetings

1.14. Documentation of Training

The trainee will maintain a logbook detailing reference cases encountered and procedures performed. There will be 2-monthly reviews with the assigned supervisor, who will discuss targets and shortcomings. Suggested remedial actions (if any) should be forwarded to the Department Head for action, with a copy to the Sports Medicine SSTC. The main 6-monthly training reviews (prepared by the Department Head) will be a conjoint exercise conducted by the Sports Medicine SSTC to discuss all trainees within the system and to plan rotations and electives if necessary.

1.15. Structured Exit Examination

1.15.1. Time & Venue

The examinations are held annually, not earlier than 3 months before end of training.

1.15.2. Eligibility

A candidate may be admitted to the examination provided he / she has (as verified by the Sports Medicine SSTC):

- Successfully exited from one of the four specified base disciplines / specialties, and
- Completed the requisite SpMed SST postings and attachments specified above, and
- Attended at least 75% of the SMTP during the SST
- Submitted a logbook demonstrating that the SST posting requirements have been fulfilled, together with the supervisors' reports
- Submitted the SST dissertation

1.15.3. Syllabus

As stated in section 1.3

1.15.4. Format

The format of the exit examination will consist of:

- Theory paper comprising MCQs on Sports Medicine and Sports Science
- OSCE
- Conducting an exercise test
- Paper Critique

The candidate is required to pass all four sections to successfully exit.

1.15.5. Re-Examination

Unsuccessful candidates shall be required to repeat the entire examination or parts of the examination as determined by the Board of Examiners or SSTC. Any additional training requirements must be completed prior to the re-examination.

For repeating the entire examination, the candidate shall be re-examined at the next exit exam for the subsequent cohort of trainees completing their training.

For repeating only parts of the examination, the candidate may be re-examined at an appropriate time to be determined by SSTC.

2. TRAINERS

2.1. The pool of trainers / supervisors will comprise of accredited Sports Medicine Physicians

2.2. Adjunct trainers (for the above compulsory and elective attachments) will include relevant specialists, allied health personnel and sports scientists.

Prepared by Sports Medicine Subspecialty Training Committee

3. GENERAL GUIDELINES

Please refer to Annex 1 for General JCST Guidelines on the following:

- Leave Guidelines
- Training Deliverables
- Retrospective Recognition
- Changes to Training Period
- Part-time Training
- Overseas Training
- Withdrawal of Traineeship
- Exit Certification

- **Appendix 1**

SCOPE AND PRACTICE OF SPORTS MEDICINE

	Broad Areas	Remarks
1.	▪ **Sports injury management**	With a focus on musculoskeletal and non-surgical injuries. Accurate diagnosis, identification of root causes (e.g. sports technique, training methods), multidisciplinary approach (e.g. with sports physiotherapist, sports trainer, sports scientists, coach), and intensive rehabilitation are emphasized to facilitate quick return to sporting activities.
2.	▪ **Pre-Participation screening**	Includes: ▪ SCUBA diving clearance ▪ Musculoskeletal screen for various sports, especially competitive sports ▪ Medical populations
3.	▪ **Field cover**	Examples: ▪ Rugby, soccer, martial arts, badminton, orienteering, gymnastics, etc. ▪ Mass events like marathons, biathlons, triathlons ▪ As team physicians for overseas and local competitions
4.	▪ **Clinical exercise testing:**	Examples: ▪ Graded exercise stress test ▪ Exercise Induced Asthma test ▪ Lung function tests
5.	▪ **Exercise prescription**	For: ▪ Medical populations, e.g. Asthma, DM, Epilepsy, HPT, CAD, Osteoporosis, OA, RA, obesity, peripheral vascular disease, etc. ▪ Rehabilitation ▪ Performance enhancement
6.	▪ **Special populations and considerations**	Includes: ▪ The female athlete ▪ Exercise in the elderly ▪ Children in sports ▪ The disabled athlete (including classifications) ▪ Performing arts, e.g. musicians, dancers ▪ Military personnel

		▪ Medical populations ▪ Altitude medicine ▪ Aquatic / hyperbaric medicine
7.	▪ **Musculoskeletal ultrasound sonography**	Common indications (diagnosis, assessment of severity, monitoring dimensions of lesions, and response to treatment): ▪ plantar fascitis, plantar fascia fibromas and tears ▪ Morton's neuroma ▪ ATFL, CFL tears ▪ syndesmosis sprains ▪ muscle tears ▪ bursitis e.g. psoas, popliteal, pes anserinus, retrocalcaneal ▪ patellar tendinits ▪ sportsman's hernia, conjoint tendon tears ▪ lateral and medial epicondylitis ▪ TFCC ▪ Long head of biceps tenosynovitis ▪ Rotator cuff tears
8.	▪ **Ultrasound-guided procedures**	Aspiration of haematomas and cysts, especially if deep-seated Injections, especially if precision need
9.	▪ **Extra corporal shockwave therapy**	Common indications: ▪ Plantar fasciitis ▪ Achilles tendonitis ▪ Patellar tendonitis ▪ Lateral epicondylitis ▪ Supraspinatus tendonitis
10.	▪ **Kinetics and kinematics**	Especially: ▪ Gait analysis ▪ Cycling analysis ▪ Tennis swing, golf swing, bowling ▪ Technique analysis in relation to injury causation
11.	▪ **Anti-doping**	Involves: ▪ In-depth knowledge of WADA / IOC list of banned substances and methods ▪ Anti-doping procedures ▪ Legal issues ▪ Dispensation ▪ Declaration ▪ Education

12.	▪ **Injury prevention**	▪ Pre-habilitation methods ▪ Periodization ▪ Adjustment of training programs ▪ Cross training methods ▪ Complementary / supplementary training ▪ Recovery strategies ▪ Quantitative methods of monitoring training ▪ Technique analysis ▪ Assessment of sports equipment
13.	▪ **Sports science / performance enhancement**	To understand and apply principles in: ▪ Exercise Physiology ▪ Strength & Conditioning e.g. core stability, functional training, pylometrics, max strength development, etc. ▪ Sports Nutrition ▪ Sports Biomechanics ▪ Sports Psychology
14.	▪ **Related fields and skills**	Need to know how to utilize the capabilities of and interact closely with: ▪ Sports Physiotherapy e.g. taping, sports massage, Pilates, proprioception, deep friction, manipulation, water-based training, electrotherapy modalities ▪ Sports / Athletic Trainer ▪ Sports Podiatrist ▪ Coach ▪ Sports Administrator ▪ National and international sporting bodies, e.g. SNOC, IOC, WADA, through their respective medical committees / commissions