

## VALUE ADDED COURSE

**1. Name of the programme & (Code)**

Sports injuries (FMT- VAC 02)

**2. Duration & Period**

30 hrs & Jan 2022 to June 2022

**3. Information Brochure and Course Content of Value Added Courses**

*Enclosed as Annexure- I*

**4. List of students enrolled**

*Enclosed as Annexure- II*

**5. Assessment procedures:**

Multiple choice questions- *Enclosed as Annexure- III*

**6. Certificate model**

*Enclosed as Annexure- IV*

**7. No. of times offered during the same year:**

2

**8. Year of discontinuation: 2022**

**9. Summary report of each program year-wise**

Value Added Course- Jan 2022 to June 2022					
Sl. No	Course Code	Course Name	Resource Persons	Target Students	Strength & Year
1	FMT-02	Sports injuries	Dr. S.N.Rathod	2 <sup>nd</sup> MBBS	2022

**10. Course Feed Back**

*Enclosed as Annexure- V*

**SPORTS INJURIES**



175382466

**PARTICIPANT HAND BOOK**

## COURSE DETAILS

Particulars	Description
Course Title	Sports injuries
Course Code	FMT VAC 02
Objective	<ol style="list-style-type: none"> <li>1. Introduction to injury management and rehabilitation</li> <li>2. What is a sports injury</li> <li>3. Diagnosis of common sports injuries</li> <li>4. Exercise on prescription</li> <li>5. Sport on prescription</li> <li>6. Most common sports injuries</li> </ol>
Further learning opportunities	Radio-diagnosis and Physiotherapy
Key Competencies	On successful completion of the course the students should be able to diagnose and manage common sports injuries
Target Student	2 <sup>nd</sup> yr MBBS Students
Duration	30hrs Every July 2021– Dec 2021 & Jan 2022 – June 2022
Theory Session	22hrs
Practical Session	8 hrs
Assessment Procedure	Multiple choice questions

### **Introduction to injury management and rehabilitation**

This course is a practical and comprehensive view of what you as a physician, physio therapist, fitness trainer, coach, manager or athlete need to know to be able to understand, diagnose and manage the most commonly occurring injuries in sport, up to specialist level. It aims to help you address the ordinary questions that occur in relation to sport injuries: ‘What do I do now?’; ‘Can I continue exercising?’; ‘Must I rest completely?’ This book outlines the benefits and risks of common training methods and their indications and contra-indications in relation to familiar sports injuries. Note! As an individual, the management of your injury, exercise prescription and specific training for rehabilitation should always be guided by experts who know your circumstances, strengths and weaknesses and the details of your injury. However, by learning more you can take more responsibility for your training and have more fruitful discussions with experts, even if you have no

medical background. This is particularly important, since sports medicine is not in the curriculum of most medical schools and therefore many doctors may lack the specific skills required.

Exercise and sport is, nevertheless, important for us all whether we are professionals or recreational athletes. Physical activity levels have dropped dramatically in schools and in the daily routines of many people, leading to an increased incidence of obesity and poor fitness levels even in young, otherwise healthy, individuals. For them, exercise may make the difference between a healthy and prosperous life and development of ailments and early death.

The course also introduces some common sports injuries. The approach is problem-oriented and summarises the current understanding of best practice. For each injury, I begin with its location in the body and its associated symptoms and signs. Each page takes you through the consensus and controversies in understanding the mechanism of the injury; provides guidance on reaching a diagnosis; explains how this injury is clinically examined; describes the value of common investigations; enables you to refer it to an appropriate level of expertise; and guides you through rehabilitation on the way back to full sporting performance. After each section there is a traffic light chart that outlines what kind of training you should or should not do when you are injured.

### **What is a sports injury?**

A 'sports injury' can be defined as an injury that occurs during sporting activities or exercise. This can be broadened to include injuries affecting participation in sports and exercise and affecting athletes of all ages and all levels of performance. Patients who seek medical attention at sports injury clinics represent the spectrum from top professional to recreational athletes. Even though we can identify the mechanism of an injury and its pathoanatomical correlate or diagnosis, its consequences may be very different for different athletes.

For doctors, the keys to success are: consulting evidence-based criteria for the definition and diagnosis of an injury; using reliable examination techniques; considering the background and fitness level of the patient; and being prepared to admit to a lack of knowledge and to refer the patient to someone who may know more. They must recognise the changes and developments that are occurring in sports medicine and the cultural differences that exist in the management of these injuries. Doctors should not take the view that sports injuries are self-inflicted and tell their patients to 'stop doing these silly things'. In societies threatened by obesity, osteoporosis and a general decline in fitness due to inactivity, exercise and sport are potent means of keeping the population fit and healthy. Most sports injuries are specific to the sport and the level of participation: for example, 70 per cent of keen runners will be affected by a lower limb injury during their career, usually through over-use; soccer players have a high risk of traumatic ankle or knee injuries from tackles. The incidence of injury in soccer is between 15 and 20 injuries per thousand activity hours, with the highest risk during games. The figures are somewhat higher for rugby: between 20 and 40 injuries per thousand activity hours and with higher risks of upper limb injuries, in particular those of the

shoulder joint. Golf is a low-risk sport but a knee or shoulder injury can affect performance and the ability to walk a five kilometre course.

### **Diagnosis of common sports injuries:**

The principles of injury management rely on the premise that we know what we are treating. Diagnosis is the key to success. We must differentiate injuries such as 'knee sprain', 'muscle strain' and 'bruises' from the corresponding pathoanatomical diagnoses: 'rupture of the anterior cruciate ligament', 'grade II muscle rupture' or 'intra-muscular haematoma'. In some cases, the diagnosis is obvious from the person's history, symptoms, signs and clinical tests; in others an X-ray, MRI scan or second opinion from a general surgeon, rheumatologist or other specialist will be required. Even when the diagnosis is clear, opinions may vary as to the most appropriate treatment. There are consensus and controversies that change over time and depend on routines, skills and resources. For example, an anterior cruciate ligament rupture of the knee can be treated with physiotherapy, with or without surgery, depending on the patient and other factors. With the rapid and improved access to information offered by the Internet, many patients do their homework before they arrive at the sports clinic, although the material they find may need careful interpretation. The results of studies may be interpreted in different ways, depending on the quality of the study and the patients studied. For example, non-active patients who sprain their knee and rupture their anterior cruciate ligament do very well without surgical reconstruction, while a professional footballer's career would be ended without surgery. We need to know how best to read and understand the literature to reach an informed decision to the benefit of the injured athlete. With the technical wizardry available to healthcare professionals today, it is easy to forget the importance of hands-on skills. Clinical symptoms and signs, combined with a thorough history of the patient can, in the majority of cases, give a clear lead to the correct diagnosis, providing the professional knows how to test and what to ask. Asking the injured athlete to describe what happened and their symptoms is usually more fruitful. Diagnoses can then be confirmed with a clinical test, or perhaps an X-ray or scan, before treatment. Thorough inspection and palpation and passive and active mobility and resistance tests of dynamic muscle function, comparing the healthy and injured sides is also very important. In a general clinical practice, examination of a knee or shoulder injury cannot, for practical reasons, take more than ten to fifteen minutes, which is sometimes inadequate. In a sports injury clinic like mine, we usually allow 30 to 45 minutes for the initial consultation, including the clinical examination. For most acute limb injuries, this is adequate but for chronic problems arising from over-use, two or more sessions may be required before a diagnosis can be reached. The main, and most crucial, question to ask any injured person is: can you please demonstrate and describe, in your own way, what happened? Many athletes will be able to demonstrate and explain in such detail that they provide the diagnosis as if from the text book. Before rushing to carry out detailed specific tests, the doctor should evaluate posture and gait, look for signs of pain or discomfort and

remember that most musculo-skeletal injuries to a limb or joint will reduce the athlete's range of motion and control, which could cause muscle atrophy. Ask if the athlete has taken painkillers, which may blur your findings, and perform basic functional tests on the relevant part of the body.

Inspection and palpation of the injured area can identify signs of inflammation, such as oedema (swelling around the joint), effusion (fluid within the joint), tenderness, increased temperature, redness, impairment of function or bruising. Let the injured athlete demonstrate the movements that cause the problem. Muscle resistance tests can identify weakness or pain and should be done manually on all the relevant muscles, comparing the injured and non-injured sides. Joint laxity tests and specific injury tests are crucial for the diagnosis of many of the most common injuries. They are not always easy to perform and require years of training

### **Exercise 'on prescription'**

Close collaboration between well-educated rehabilitation staff and coaches is vital to the successful outcome of treatments. Advisors have to provide appropriate indications and restrictions. Professional teams have fitness trainers and physiotherapists; for recreational athletes, membership of a fitness centre with recognised instructors is a good alternative. It is important that everyone concerned has a basic understanding of different training methods. The skills and knowledge of the instructor are far more important than their equipment. For most injuries, a progressive training programme, which enables monitoring over time, is needed. A simple training diary is very important and can help to explain why training did not have the expected effect or perhaps caused further injury.

Exercise is a very efficient treatment if it is prescribed and performed appropriately and correctly, with clear and realistic targets. However, it can cause further injuries if misused. The aim of exercise and training during convalescence from an injury is to minimise any decline in the muscle function and tensile strength of the injured area. It also counteracts the negative effect an injury has on posture, core stability, general fitness levels and sport-specific techniques.

Decreased muscle function or muscle weakness can be caused by:

- Muscle atrophy, following the immobilisation of a limb. Progressive strength training is needed to restore muscle strength and volume.
- Impaired neuro-muscular control, following immobilisation. Proprioceptive and neuro-muscular control training is needed to restore muscle and joint control.
- Muscle fatigue and poor endurance after immobilisation. Aerobic and anaerobic exercises are needed to restore muscle performance.
- Reduced mobility after immobilisation. Restricted mobility can be passive, where mechanical factors, such as scarring, adhesions or joint injuries, limit the range of motion; mobilisation or even surgery may be needed. Stiff muscles may need stretching.
- An underlying functional instability of the joint, when proprioceptive and functional training is the key.
- Structural instability, where taping, support or stabilising surgery is required.

• Pain, or fear of pain. Understanding the source and character of the pain and controlling it is vital. Muscle training can activate muscle groups or single muscles. Closed chain exercises are important in the early stages of the healing of ligament ruptures and during rehabilitation after ligament reconstruction. (A closed chain exercise is one in which the end of the limb is firmly fixed, for example bicycling or leg presses. An example of open chain training is leg extension exercises in a sitting position.) Most rehabilitation plans combine specific training for the injured area with more functional training for the rest of the body. Prescribed exercise needs to be well-balanced to achieve the best outcome. Objective and subjective scoring of function, comparing the injured with the non-injured side, is vital and usually requires qualified assistance from a physiotherapist or sports therapist. The ultimate functional test is when the injured athlete returns to sport-specific training and games, monitored by their team medics. Even though most musculo-skeletal problems in athletes are caused by injuries, the following warning signals should not be neglected. Even though the athlete may have a history of trauma during sport and have a swollen joint or limb, an orthopaedic injury is not the only cause to consider:

- Muscular and neurological diseases can result in muscle atrophy and dysfunction.
- Infectious diseases can lead to local inflammatory signs and problems. A swollen joint can be the first sign of a systemic or local disease such as gout, ulcerous cholitis or diabetes.
- In an elderly athlete, the sudden onset of pain and swelling of a joint can be an early sign of a looming septic arthritis.
- In a young athlete, the sudden onset of pain and swelling of a joint can be an early sign of osteomyelitis.
- Referred pain from the spine can cause radiating pain and dysfunction of a limb.
- Vascular diseases, or deep vein thrombosis, can result in localised swelling and dysfunction.
- Tumours can cause musculo-skeletal symptoms.

I must reiterate the importance of a well-defined diagnosis and a mind open to re-evaluation if the prescribed exercise and training does not result in the expected outcome or if the symptoms persist or worsen. Unexpected consequences of training must sometimes be explained since, from the athlete's perspective, some of the effects may be considered unwanted or adverse. For example, in the calf muscles, strength training with heavy weights leads to an increase in volume that is hardly noticeable. This is a well-known dilemma for body builders. Equivalent training for the quadriceps muscles (at the front of the thigh) may result in an increase in volume that makes trousers feel too tight. A functionally excellent outcome of rehabilitation for knee problems may thus result in an unhappy patient who has to buy larger-sized trousers! Compliance with a defined rehabilitation programme is extremely important. Athletes and other people involved must understand the reason for the exercises prescribed and how to achieve the wanted effect. Highly motivated athletes may overdo the training, while cautious patients may not want to do an exercise because it could be painful. If, three months after rehabilitation starts, there is still obvious muscle atrophy and persistent symptoms, the athlete's compliance with the scheduled training programme must be questioned. If they have complied well, the diagnosis may have been wrong or complications may have occurred.

## **PRINCIPLES OF BASIC TRAINING METHODS**

**STRENGTH TRAINING:** Muscle strength and endurance training can be controlled movement (machines), semi-controlled (cross wires) or free weights (dumb-bells or body weight). The choice of training method depends on the athlete's aims and training background and the character of the injury. Free weights are more difficult to control than fixed movement training machines but add more stress to muscle and joint control. Complex muscle groups are more effectively trained using free weights, while isolated muscle groups may be efficiently trained using machines. To achieve an increase in muscle strength and volume, progression in training may be guided by the Repetition Maximum (RM) method. One RM is the maximum resistance the athlete can manage once, in a controlled manner or specific movement. If the movement can be performed up to, but not more than, 10 times it is called 10RM. A 10RM movement will result in increase in muscle strength and volume if performed for six weeks or more. Before initiating heavy resistance training such as this, the instructor must emphasise the importance of warming up and learning the correct techniques for the method and apparatus used for each muscle group. The initial increase in performance after this kind of training is neuromuscular: the athlete learns how to use existing muscle fibres. To achieve a true increase in muscle volume and muscle hypertrophy, at least three months of regular training is required. Training with lighter resistance and more repetitions will improve muscle strength and endurance. This type of training predominantly uses slow-twitch fibres but, if performed at higher speeds, fast-twitch fibres will be used. Muscular endurance is defined as the ability to perform dynamic muscular work, with constant generation of power, over a limited time. If using resistance training to achieve this effect in a specific muscle group, more than 15 repetitions in sets of three to five are recommended. Other types of endurance training include running, bicycling, skiing, cross-training and sport-specific activities. Endurance training can be performed daily providing its intensity and duration is progressively and reasonably increased. Most injuries due to over-use are caused by 'too much too soon'. Strength training is best done not more than two to three times a week, with at least one day of rest between each session, but endurance strength training can be done daily. Most muscle strength and muscle endurance exercises are a combination of controlled, slowly executed concentric (where the muscles are shortened and contracted) and eccentric (where the muscles are extended and contracted) muscle contractions. Athletes must rest properly between each set of repetitions. Eccentric muscle strength is about 40 per cent greater than concentric. Concentrating on eccentric muscle training can increase resistance and enhance the effect of training. An athlete who can perform an eccentric manoeuvre three to five times can perform the same manoeuvre concentrically without ever having trained for it. This kind of training has been shown to be effective for over-use injuries such as chronic Achilles tendinosis.

**FLEXIBILITY TRAINING:** Flexibility is defined as the active or passive range of motion of a muscle group. A limitation in muscle flexibility can be due to muscle tightness, cramps or a restriction of joint motion. The underlying cause of restricted flexibility or joint motion must be defined before a treatment can be recommended. The normal flexibility of different muscle groups is sport-specific. For example, a ballet dancer can usually take their foot, with the leg straight, right up to their shoulder, while a marathon runner may be able to lift the straight leg to only 60 degrees. Symmetrical, bilateral apparent muscle tightness, which does not cause symptoms, may be considered as a functional adaptation to the sport being performed. However, if there is an obvious asymmetric flexibility or the athlete's movements are painful, mobilisation or other treatments may be indicated. Tight thigh muscles (hamstring) and hip-flexing (iliopsoas) muscles can not only cause



pain in those muscles but also back problems, disturbed core stability and similar symptoms. Tight calf muscles may prevent squats, whereby weight will be transferred to the lower back, causing pain there. Chronic muscle tightness can cause fatigue, pain and dysfunction. However, hypermobility and excessive unrequired flexibility is not to be preferred: stretching can cause as many problems as it can solve. There are different types of stretching but the difference in effect among the various methods is small. The most important thing to make the stretching as effective as possible is that the injured player 'finds' the middle of the muscle bulk they need to stretch. Stretching in this position should be held for about 10 to 15 seconds, followed by a few seconds of relaxation, repeated two to three times. (Interestingly, animals like dogs regularly stretch their legs for one to two seconds only.) Stretching should always be performed in warmed-up muscles.

**PROPRIOCEPTIVE TRAINING AND CORE STABILITY TRAINING:** Co-ordination, balance, proprioception and core stability are terms frequently used in sport but rather difficult to define. They involve the ability to perform, or regain, controlled movements, in a sport-specific, safe and precise way. We cannot pin-point each and every control mechanism but there is lots of experience to apply to sport. Tai chi is an excellent example of a method that aims completely to regain full body and mind control, so essential for elite sports. Martial arts and dancing focus on this type of training, which is a key to successful performance. Unfortunately, most contact sports such as soccer, rugby and ice hockey often neglect this type of training. For years I have tried to convince physiotherapists and coaches to learn from this: not only would it reduce the number of injuries and their consequences, but it would enhance performance and their players' ability to undertake effective rehabilitation when injured.

**SPORT-SPECIFIC TRAINING:** The aim of rehabilitation is to restore a sport-specific function to, or above, pre-injury levels. In cricket it could be the perfect bowling action, in tennis the serve, in baseball the throw, in football ball control or in gymnastics landing. This type of training requires knowledge and understanding of the sport's specific demands and is usually prescribed and supervised by a sports therapist in close collaboration with a coach. After surgery or long immobilisation, this final stage of rehabilitation training is the most time-consuming and risky. In the final stage of rehabilitation after healing of an injury, functional training back to full performance level must be gradual, over a period of time that corresponds to the functional requirements of the muscles and the healing process of the underlying injury. This period could vary from a few weeks after a simple ankle sprain to a year after complicated knee surgery. The training has to be specific and, preferably, performed in a controlled environment. Returning too soon to full-time play will inevitably result in further or new injuries. Objective performance scores, specific for the sport, are very valuable but poorly developed. I have tried to develop such scores for professional rugby and soccer and their validity is improving. One of the main reasons for the difficulties of objective scoring is that the functional scores used by orthopaedic surgeons or physiotherapists are developed for the general population, ranging from recreational athletes of all age groups to elite athletes from varying sports. A high shoulder or knee score compared to the general population may not indicate it is safe for a professional player to return to the game. Another reason is that a goalkeeper or striker in soccer, a winger, prop or full-back in rugby or a bowler or batsman in cricket may perform on the same level in the same team but the consequence of a low or high score may be very different for each of them. The evaluation of training outcomes is currently being investigated intensively. Hopefully, more specific scoring systems for different injuries and sports will soon be available. Until then, we have to trust in our experience and in close collaboration between the parties involved.

## **Sport ‘on prescription’**

Running on a hard surface: Running is one of the most popular sports in the world. This not only covers marathons and track and field running – running is also part of the training in virtually all other sports, including soccer, rugby, handball and triathlon. Running is a very efficient method for maintaining or improving cardio vascular, respiratory and musculo-skeletal fitness and increasing the structural strength of the musculo-skeletal system. It is also an effective way of improving the tensile strength of the lower limbs. Modified levels and intensities of running can also be used as alternative training for most athletes with certain types of injuries. However, before running on a hard surface, such as roads or astroturf, the patient must be able to withstand the repetitive eccentric impact to the lower limbs, as each stride will create an impact force of five to ten times body weight for a fraction of a second. Since each stride stresses the same structures, their tensile strength and endurance lie between positive training effects and injury. Running can be over a distance, in a variety of intervals or as a varied running-jogging-walking programme. The intensity and the distance must be proportionate to the runner’s ability and objectives. Running on a hard surface mainly loads the lower limbs, where 90 per cent of running injuries are found. The most common error an inexperienced runner makes is to run too fast and too long too early, so that training causes new injuries instead of. Despite its popularity, running on asphalt is very demanding. It is important to use common sense when prescribing hard-surface running. For an inexperienced runner the safest way to build up performance after an injury is a slow and steady running tempo, including a proper warm-up. The best test of improvement in running capacity is repeatedly to measure the runner’s effort and time in a simple test race. For a fairly unfit but otherwise healthy person who wants to improve their general fitness and aerobic performance, running can be recommended as part of a progressive programme. From a reasonable starting point, such a programme would usually increase less than 15 per cent in distance and intensity per year. An elite marathon runner with an over-use injury may simply reduce their running time from two hours to one hour per day; not pushing over the pain threshold but gradually increasing the time day by day. A 130 kg rugby player, even though extremely fit, is not a good candidate for long-distance or road running. Their knees will undoubtedly say ‘no!’ to this madness. This type of exercise also cannot be recommended for obese or generally unfit recreational athletes or people with structural knee or hip problems, such as osteoarthritis. A reasonable running tempo that can be maintained for 30 minutes is essential for a persistent training effect. Runners should aim for a pace at which they can chat with a running mate while breathing almost normally; this is equivalent to 60 to 70 per cent of maximum aerobic capacity. The subjective experience of running is far more important than the heart frequency, which is not directly proportionate to the runner’s feeling. Even with the same heart frequency, for example 160 beats per minute, running can be very easy one day and very uncomfortable the next.

The subjective experience of training is very important for a non-runner’s motivation. Since the surface is consistent for each stride the same structures in the lower limbs will be put under repeated stress. While this leads to a functional adaption of the strength of the structures it can also lead to injuries in the short term. This also highlights the importance of proper, comfortably fitting running shoes with a cushioned sole, which can reduce the impact from touchdown in the stride, distribute the forces and provide stability to the ankle and foot. The commercial running shoe market is unfortunately mainly fashion-orientated and new models are pumped out every six months. Despite improved biomechanical knowledge, which manufacturers claim has revolutionised the market, and lighter high-quality materials and technology within the sole to compensate for

different individual factors, modern running shoes do not last long. It may also be questioned whether they have reduced the incidence of injuries. When Arthur Lydiard introduced his running shoes around 1970, I could hardly run out a pair in two years' intensive running, and new soles could be reattached at least once before the shoe broke up. Today, most running shoes are worn down by regular running within 6–12 months. Regular runners will soon find their own style, but might have more trouble getting a consistent style of footwear. Most running injuries are caused by training errors. In some cases, bio - mechanical factors, such as excessive pronation, contribute to the injury. If such factors are suspected, an experienced podiatrist may be able to help. Running on a hard surface is a very efficient training method but as a primary alternative training form for the untrained, overweight or those with major injuries to the lower limbs, it should be prescribed with care.

#### Running on soft surfaces:

Running on soft surfaces maintains or increases fitness and tensile strength of the lower limbs and with less eccentric impact compared to running on hard surfaces. A well-balanced running programme over moors, in parklands or in forests can be recommended as a primary alternative training for most runners and other athletes with over-use injuries, even those of the lower limbs. People with mild or moderate knee or hip osteo-arthritis, who struggle to run 500 m on the road, may be able to jog a 5 km orienteering course without adverse effects. A varied and soft running surface creates a lower impact on the musculo-skeletal system, due to the longer time for shock absorption from each stride and the wider distribution of forces over the kinetic chain. On the other hand, the runner is forced to work harder, from a muscular point of view; they need to lift the knees higher when running uphill or over obstacles on the ground like vegetation. This consumes more energy and, all in all, uses more muscle groups than running on hard surfaces. (Running in forests consumes up to twice as much energy per kilometre as road running.) Running on soft surfaces is less demanding for the lower limbs but, due to the increased energy demand, puts more stress on the cardiovascular and respiratory system and so is good for weight reduction and general fitness. There are risks in the prescription of this type of training. Over uneven terrain, the risk of ankle sprains and falls increases. Even though temporarily running on soft surfaces can be recommended for a marathon runner with over-use injuries of the lower limbs, they must be aware of the increased risks. Proprioceptive ankle training and core stability training must accompany alterations in running type. Older athletes, or fragile patients with osteoporosis or disabling injuries, may jog or walk on softer surfaces instead of running.

#### Walking:

Walking has been recommended by doctors for rehabilitation since the eighteenth century. Long walks were used as regular training by established marathon runners as long ago as the nineteenth century. It is a natural way of exercising, which does not require any special preparation, equipment or clothing (except clothes suitable for the climate). This low intensity and low-impact exercise produces increased tensile strength of the lower limbs for a relatively low cardiovascular effort. It is a training form that can be prescribed to almost everyone, except people on crutches who cannot bear their weight fully. Even very unfit, elderly or obese patients may benefit from walking slowly and for reasonable distances. It is well documented that ageing of muscles and skeleton in the locomotor system can be altered with low-intensity regular physical activity. This kind of training can

be done in the same way as running, with varying distances and speeds. While Olympic athletes can walk 10,000 metres in less than 40 minutes, most people wouldn't be able to run it in that time. To increase energy consumption at low walking speeds, a rucksack or weight belt may be carried. Walking in forest, parklands or the beautiful countryside is an extremely popular weekend activity for a great many British people: a day out can be a great experience as well as excellent exercise. To help city dwellers and single elderly people who may not dare to walk alone, walking clubs are springing up in most cities.. We should not underestimate the effect of daily walking, even in big cities. A modern shopping or outlet centre can provide kilometres of walking. Red 'SALE' signs will enhance the pace of walking for most visitors! The effect of this kind of exercise for general health is substantial – as long as we walk somewhere, it doesn't matter how or where.

#### Swimming:

Swimming is often recommended as an alternative training method for people with injuries of the lower limbs and back problems, but for upper limb injuries and neck injuries it may be contra-indicated. The technique of swimming is very demanding and often hampers its aerobic and anaerobic effects and thus the time spent in the water. To swim for 30 minutes requires a well-developed technique. Even though there is no direct impact, swimming may cause problems if the training is not precisely defined: it is important to recommend or restrict different techniques of swimming for different injuries. For example, swimming the breaststroke can exacerbate knee injuries such as medial meniscus tears, osteoarthritis, anterior knee pain and most shoulder injuries. Most swimming techniques will provoke sub-acromial impingement and patients with multidirectional instability in the shoulder should not be prescribed swimming. Low back pain and neck pain may well be aggravated if the athlete does not lower the head down into the water in the swimming stride but looks up, protecting the face or eyes from the chlorine but hyper-extending the cervical and lumbar spine. Such simple mistakes often mean that the athlete does not comply with the programme. The advice to include swimming in a training programme must be supported by a detailed history of the injured athlete's abilities and restrictions. For an elderly elite swimmer or a triathlete with an Achilles tendon injury, swimming is an excellent alternative to running on roads.

#### BICYCLING:

Cycling, either on a stationary or a normal bicycle, can maintain and improve aerobic and anaerobic endurance and muscle strength in the legs. It is a good way of initiating a fitness programme for untrained, elderly and overweight patients. Cycling can be prescribed for injuries where running is impossible. The leg muscles will be trained differently, depending on the saddle height, pedal position and handlebar shape and position. Varying these factors will stress specific muscle groups: for example, an athlete with a cast on a lower limb, perhaps for Achilles tendon repair, can place the pedal under the heel and cycle. People with femuro-patellar pain or hip osteoarthritis will often require a higher saddle, while those suffering a rupture of the hamstring muscles or back pain will need an upright position and a higher handlebar, and those with carpal tunnel syndrome must avoid gripping the handlebar too hard. A stationary bicycle at a sports clinic makes it possible to test and adjust seating position, and advise on training individually. There are very few injuries where you cannot cycle and cycling is a very good training alternative for all ages. Cycling can be done over a distance, in intervals, in classes or individually; resistance and pace can be altered to suit most athletes. Cycling in the countryside is lovely but can be more demanding, depending on the terrain,

weather and traffic conditions. As for other exercise prescriptions, the programme and progression must be detailed.

#### TENNIS AND OTHER RACKET SPORTS:

Racket sports, such as tennis, squash, racketball and badminton can sometimes be prescribed as alternative training for general fitness development and during convalescence for a number of injuries. Modifications may be required: for example, a sore knee may allow baseline tennis play on grass but not allow sprints and turns on a hard court. A stiff shoulder may not allow overhead serves but be perfectly all right for baseline play. Elbow injuries, such as lateral epicondylitis, may require double backhands to avoid pain. Double or mixed games do not involve the same amount of running as singles. Squash is more demanding for the wrist and elbow than the shoulder; badminton is very demanding for the Achilles tendon but may be played with a non-dominant shoulder injury. Thus, instead of resting completely, a keen player can maintain parts of their play until treatment and rehabilitation is completed. Meeting and playing with friends is also very important for encouraging the return to sport.

#### SOCCER, RUGBY AND OTHER CONTACT SPORTS:

Most contact sports have an undeserved reputation for being dangerous. Even though injuries do occur and are sometimes severe, especially in the professional game, the rate of injury per hour of training and playing is relatively low. At a recreational level, players can agree to avoid unnecessary and dangerous body contact: choosing non-contact netball instead of basketball, agreeing to keep hockey sticks below the waist, using proper protection and so on, can keep the injury rate low. It can be difficult safely to stage the return to playing: being out of rugby for six months and then playing a full 80-minute game is very risky. Going back must be stepped: running in a straight line, then faster running, side-stepping, turning, improving core stability and posture, light contact and passing, full contact, playing the last 20 minutes in a reserves' game and so on. Such staging requires good teamwork but is more difficult for recreational players who have no access to coaches or team medics. Many of the injuries we see in contact sports are caused by insufficient rehabilitation from previous injuries. The aim must first be to restore balanced limb performance and then an appropriate and sport specific level of fitness. One way to achieve this is to compile a functional score, which includes a subjective score, an objective examination and the results of simple functional tests. The problem is that each sport and each level of performance requires its own score. Golf is a great 'lifestyle' sport where you can keep fit and socialise at the same time. Ball sports have an unfair reputation as more risky, but there are only more injuries because these sports are so popular.

**WORKING-OUT AND GYM TRAINING:** Working-out, aerobics and similar activities are excellent, and often essential, rehabilitation methods and useful alternatives during rehabilitation of many injuries. Gym training, with a variety of fixed stations for weight training, has become popular recreational exercise. It is also used for basic pre-season training in almost every sport. There is no better way to learn functional anatomy than to work-out the muscle groups step by step in a gym. No equipment is better than the skills of the instructor. Working-out with weights is technically difficult and there are lots of pitfalls that need to be considered in close collaboration with a licensed instructor and access to appropriate training equipment. Training should start with an objective function test, so a reasonable measure of progress can be made. Beginners usually start with an individual training

programme based on six to ten exercises. After working-out a few times at low resistance and learning the specific movements, the training is documented, including what kind of equipment is used, how many repetitions and sets and how much resistance. Warming up, on a bike or treadmill, is essential before strength training. Depending on any underlying problems, such as osteoporosis or injury, such as a temporary fragile cruciate ligament graft, the programme must be modified over time.

#### HIDDEN HOME EXERCISES:

Even for the general, sedentary, non-sporty population, exercise is an essential part of well-being. Exercise is also the 'drug' prescribed for a number of major health problems such as high blood pressure, heart insufficiency, diabetes, asthma, obesity, osteoporosis, rheumatoid arthritis and multiple sclerosis. Although for each of these disorders there are exercise alternatives that may be prescribed under the close supervision of a specialist doctor, we should be wary of sending unmotivated people to gyms or fitness centres where they feel out of place and uncomfortable. We should not underestimate the negative effects of how modern society has turned many into crisp-eating, soap-watching, coach potatoes. On the other hand, we should not underestimate the positive effect of everyday activities. For example (and this applies to both sexes), one to two hours of vigorous weekly cleaning of a normal house will force a middle-aged sedentary person to use 70 to 80 per cent of their maximal oxygen uptake, equivalent to running for 45 minutes at a good pace. Cleaning windows manually is excellent rotator cuff training after shoulder injuries; vacuum cleaning requires core stability and posture; washing dishes in warm water is excellent for a healed radius fracture. There are many, many other examples: running up and down stairs, standing on one leg on a wobble board while brushing your teeth, stretching out in the shower, cutting the hedges, mowing the lawn, walking or jogging the dog, jumping off the bus one stop away from the office, using stairs instead of lifts. We neglect many of these things (if we can) during the week, then we spend money and energy on a one-hour run on a treadmill and gym training. Who needs a gym if there is a garden to attend to? Who needs exercise if you are running after three small children all day or taking the dog out once a day? Exercise on prescription is not new. A Swedish doctor who lived in the early twentieth century gave detailed prescriptions: six walks a day around the park, three sit-downs and stand-ups from each of the park benches and so on. In ancient literature, from the Egyptians and Greeks to the Chinese, exercise is named as a basic and essential ingredient of life. If we sit still we die! Without sounding like an old schoolmarm, I do think we should go back to some of these basic ideas, to avoid further deterioration of sedentary people's fitness levels and help motivate injured athletes by prescribing a balanced diet of alternative exercises.

#### 6. Most common sports injuries:

**Types of sports injuries** Different sports injuries produce different symptoms and complications. The most common types of sports injuries include:

- **Sprains.** Overstretching or tearing the ligaments results in a [sprain](#). Ligaments are pieces of tissue that connect two bones to one another in a joint.
- **Strains.** Overstretching or tearing muscles or tendons results in a [sprain](#). Tendons are thick, fibrous cords of tissue that connect bone to muscle. Strains are commonly mistaken for sprains.

- **Knee injuries.** Any injury that interferes with how the knee joint moves could be a sports injury. It could range from an overstretch to a tear in the muscles or tissues in the knee.
- **Swollen muscles.** Swelling is a natural reaction to an injury. [Swollen muscles](#) may also be painful and weak.
- **Achilles tendon rupture.** The Achilles tendon is a thin, powerful tendon at the back of your ankle. During sports, this tendon can break or rupture. When it does, you may experience sudden, severe pain and difficulty walking.
- **Fractures.** [Bone fractures](#) are also known as broken bones.
- **Dislocations.** Sports injuries may [dislocate a bone](#) in your body. When that happens, a bone is forced out of its socket. This can be painful and lead to swelling and weakness.
- **Rotator cuff injury.** Four pieces of muscle work together to form the rotator cuff. The rotator cuff keeps your shoulder moving in all directions. A tear in any of these muscles can [weaken the rotator cuff](#).

**Sports injuries treatment:** The RICE method is a common treatment regimen for sports injuries. It stands for:

- rest
- ice
- compression
- elevation

This treatment method is helpful for mild sports injuries. For best results, follow the RICE method within the first 24 to 36 hours after the injury. It can help reduce swelling and prevent additional pain and bruising in the early days after a sports injuries.

Both over-the-counter and prescription medications are available to treat sports injuries. Most of them provide relief from pain and swelling.

If your sports injury looks or feels severe, make an appointment to see your doctor. Seek emergency care if the injured joint shows signs of:

- severe swelling and pain
- visible lumps, bumps, or other deformities
- popping or crunching sounds when you use the joint
- weakness or inability to put weight on the joint
- instability

Also seek emergency attention if you experience any of the following after an injury: difficulty breathing, dizziness, fever.

Serious sports injuries can require surgery and physical therapy. If the injury doesn't heal within two weeks, contact your doctor for an appointment.

**Sports injuries prevention:** The best way to prevent a sports injury is to warm up properly and stretch. Cold muscles are prone to overstretching and tears. Warm muscles are more flexible. They can absorb quick movements, bends, and jerks, making injury less likely.

Also take these steps to avoid sports injuries:

**Use the proper technique:** Learn the proper way to move during your sport or activity. Different types of exercise require different stances and postures. For example, in some sports, bending your knees at the right time can help avoid an injury to your spine or hips.

**Have the proper equipment** Wear the right shoes. Make sure you have the proper athletic protection. Ill-fitting shoes or gear can increase your risk for injury.

**Don't overdo it** If you do get hurt, make sure you're healed before you start the activity again. Don't try to "work through" the pain. When you return after letting your body recover, you may need to ease yourself back into the exercise or sport rather than jumping back in at the same intensity.

**Cool down** Remember to cool down after your activity. Usually, this involves doing the same stretching and exercises involved in a warmup.

**Resume activity slowly** Don't be tempted to nurse your injury for too long. Excessive rest may delay healing. After the initial 48-hour period of RICE, you can start using heat to help relax tight muscles. Take things slowly, and ease back in to exercise or your sport of choice.

**Diagnosis:** Many sports injuries cause immediate pain or discomfort. Others, like overuse injuries, might be noticed only after long-term damage. These injuries are often diagnosed during routine physical examinations or checkups.

If you think you have a sports injury, your doctor will likely use the following steps to get a diagnosis. These include:

- **Physical examination.** Your doctor may attempt to move the injured joint or body part. This helps them see how the area is moving, or how it's not moving if that's the case.
- **Medical history.** This involves asking you questions about how you were injured, what you were doing, what you've done since the injury, and more. If this is your first time visiting this doctor, they may also ask for a more thorough medical history.
- **Imaging tests.** [X-rays](#), [MRIs](#), [CT scans](#), and ultrasounds can all help your doctor and healthcare providers see inside your body. This helps them confirm a sports injury diagnosis.

For sprain or strain, the doctor may recommend you follow the RICE method.

Follow these recommendations and keep an eye on your symptoms. If they get worse, that can mean you have a more serious sports injury.



### **Most common sports injuries with regards to their location**

**Foot:** fracture of metatarsal bones, Hallus valgus, Plantar fasciitis

**Ankle:** Anterior impingement syndrome, Lateral ankle ligament ruptures, Multi-ligament ruptures of the ankle, Peroneus tendon rupture, Tarsal tunnel syndrome

**Lower leg:** Achilles tendon rupture, Achilles tendinosis, fracture of fibula and posterior tibia

**Knee:** Anterior cruciate ligament tear(ACL), Lateral collateral ligament tear, Medial collateral ligament tear, Meniscus tear, Patella tendon rupture, Posterior cruciate ligament tear, rupture of quadriceps or hamstring muscles

**Shoulder:** Acromio-clavicular dislocation, Anterior shoulder dislocation, Clavicle fracture, Frozen shoulder, Rotator cuff rupture, Internal impingement syndrome

**Wrist:** Baseball mallet finger, Bowler's thumb, Carpal tunnel syndrome, Rugby finger, De Quervain's tenosynovitis

**Elbow:** Distal biceps tendon rupture, Golfer's elbow

**Thigh and Groin:** Adductor tendonitis, fracture of femur neck, fracture of pelvis, rupture of rectus femoris muscle.

**Head injuries:** very frequent and notorious in contact-sports. Concussion is the most common injury due to head-injury which may or may not be associated with skull fracture and is dependent upon the severity of impact. It may be associated with intracranial injuries.

## VALUE ADDED COURSE

### Sports injuries FMT VAC 02

#### 4. List of Students Enrolled January 2022 – June- 2022

<b>1<sup>st</sup> Year MBBS Student</b>		
<b>Sl. No</b>	<b>Name of the Student</b>	<b>Reg No</b>
<b>1</b>	VASIPALLI SUJITHA	U16MB391
<b>2</b>	VENKAT SRI RANGAN.P.B	U16MB392
<b>3</b>	VENKATACHALAPATHY .G	U16MB393
<b>4</b>	VIDHY ADHARAN.S	U16MB394
<b>5</b>	VIGNESH .D	U16MB395
<b>6</b>	VIGNESH .S	U16MB396
<b>7</b>	VIJAY .M	U16MB397
<b>8</b>	VINDUJA VIJAY	U16MB398
<b>9</b>	VIPIN SHARMA	U16MB399
<b>10</b>	VISALINI .S	U16MB400
<b>11</b>	SHACHI SHASTRI	U17MB371
<b>12</b>	SHATAVISHA MUKHERJEE	U17MB372
<b>13</b>	SHEDAM OMKAR MAHADEV	U17MB373
<b>14</b>	SHIVA VEERANNA HOUSR	U17MB374
<b>15</b>	SHIVAM ANMOL	U17MB375
<b>16</b>	SHIVANI BISWAL	U17MB376
<b>17</b>	SHREYA KUMARI	U17MB377
<b>18</b>	SHUBHAM KAMDE	U17MB378
<b>19</b>	SOTALA MANULIKHA CHOWDARI	U17MB379
<b>20</b>	SOUNDHARYA.K	U17MB380

## VALUE ADDED COURSE

### Sports injuries FMT VAC 02

#### 4. List of Students Enrolled 2022

1 <sup>st</sup> Year MBBS Student		
Sl. No	Name of the Student	Reg No
1	SANDHYA	U16MB371
2	SARA .R	U16MB372
3	SARASWATI .N	U16MB373
4	SATHYA VIJAYENDRAN P.U	U16MB374
5	SHAIKH IMRAN SHAIKH NAJIR	U16MB375
6	SHIKHA SONI	U16MB376
7	SINGAMSETTY SANDEEP	U16MB377
8	SINGAMSETTY SRINIVAS	U16MB378
9	SNEHA	U16MB379
10	SNEHA SINGH	U16MB380
11	SRIRAM .S	U16MB381
12	SUBALAKSHMI .D	U16MB382
13	SUNITHA .A	U16MB383
14	SURENDAR RAJ .S	U16MB384
15	SUSMITHA .V	U16MB385
16	SWATI GUPTA	U16MB386
17	SWATI KUMARI	U16MB387
18	THAMARAIAK KANNAN	U16MB388
19	THEEPTHI .T	U16MB389
20	UDDIP DATTA RAY	U16MB390



# SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION AND RESEARCH

Annexure - IV

## SPORTS INJURIES

### MULTIPLE CHOICE QUESTIONS

Course Code: FMT 02

#### I. ANSWER ALL THE QUESTIONS

1. What is a sprain
  - a. Broken ankle
  - b. Ligaments that are stretched
  - c. Overuse injury
  - d. Stress fracture
2. What is the other name for patellar tendinitis
  - a. Joint contusion
  - b. Runner's knee
  - c. Jumper's knee
  - d. Chondromalacia
3. What causes the pain in injuries
  - a. Type of injury
  - b. Swelling
  - c. Bone
  - d. All of the above
4. What are sports injuries
  - a. refer to the kinds of injuries that least common occur during sports or exercise
  - b. refer to the kinds of injuries that most common occur during sports or exercise
  - c. refer to the kinds of injuries that most common occur during sleeping
  - d. refer to the kinds of injuries that least unusual occur during sports or exercise



## SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION AND RESEARCH

5. Strains are injuries to
- a. Ligaments
  - b. Tendons or muscles
  - c. Bone
  - d. Skin

## Student Feedback Form

Course Name: **Sports injuries**

Subject Code: **FMT VAC 02**

Name of Student: \_\_\_\_\_ Roll No.: \_\_\_\_\_

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear					
2	Course contents met with your expectations					
3	Lecturer sequence was well planned					
4	Lectures were clear and easy to understand					
5	Teaching aids were effective					
6	Instructors encourage interaction and were helpful					
7	The level of the course					
8	Overall rating of the course	1	2	3	4	5

*\* Rating: 5 – Outstanding; 4 - Excellent; 3 – Good; 2– Satisfactory; 1 - Not-Satisfactory*

Suggestions if any:



# Sri Lakshmi Narayana Institute of Medical Sciences

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## Annexure 1

Date: 2<sup>nd</sup> Jan 2022

From  
Dr. S.N. Rathod,  
Professor and Head,  
Department of Forensic Medicine,  
Sri Lakshmi Narayana Institute of Medical Sciences,  
Bharath Institute of Higher Education and Research,  
Chennai.

To  
The Dean,  
Sri Lakshmi Narayana Institute of Medical Sciences,  
Bharath Institute of Higher Education and Research,  
Chennai.

### **Sub: Permission to conduct value-added course: Sports injuries**

Dear Sir,

With reference to the subject mentioned above, the department proposes to conduct a value-added course titled: **Sports injuries** from January 2022 – June 2022. We solicit your kind permission for the same.

Kind Regards

Dr. S.N. Rathod

---

### **FOR THE USE OF DEANS OFFICE**

Names of Committee members for evaluating the course:

The Dean:

The HOD:

The Expert:

The committee has discussed about the course and is approved.

Dean

(Sign & Seal)

Subject Expert

(Sign & Seal)

HOD

(Sign & Seal)



# Sri Lakshmi Narayana Institute of Medical Sciences

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## Circular

3<sup>rd</sup> January 2022

### **Sub: Organising Value-added Course: Sports injuries reg**

With reference to the above mentioned subject, it is to bring to your notice that Sri Lakshmi Narayana Institute of Medical Sciences, **Bharath Institute of Higher Education and Research**, is organizing **Sports injuries**. The course content and registration form is enclosed below.”

The application must reach the institution along with all the necessary documents as mentioned. The hard copy of the application should be sent to the institution by registered/ speed post only so as to reach on or before January 17<sup>th</sup> 2022. Applications received after the mentioned date shall not be entertained under any circumstances.

Encl: Copy of Course content and Registration form.





## Annexure 2 – Course Proposal

**Course Title: Sports injuries**

**Course Objective: 1.** Introduction to injury management and rehabilitation

2. What is a sports injury

3. Diagnosis of common sports injuries

4. Exercise on prescription

5. Sport on prescription

6. Most common sports injuries

**Course Outcome:** On successful completion of the course the students will be able diagnose and manage common sports injuries

**Course Audience:** 2<sup>nd</sup> year MBBS student

**Course Coordinator:** Dr. Jayalakshmi

### **Course Faculties with Qualification and Designation:**

**1. Dr. S.Prasanth Kumaran** MBBS, MD (Forensic Medicine),  
Assistant Professor

### **Course Curriculum/Topics with schedule (Min of 30 hours)**

S.No	Date	Topic	Time	Hours
1	14-01-22	Introduction to injury management and rehabilitation	2 pm to 5 pm	3
2	28-01-22	What is sports injury	2 pm to 5 pm	3
3	11-02-22	Diagnosis of common sports injuries	2 pm to 5 pm	3
4	25-02-22	Exercise on prescription	2 pm to 5 pm	3
5	08-03-22	Exercise on prescription	2 pm to 5 pm	3
6	22-03-22	Sport on prescription	2 pm to 5 pm	3
7	13-04-22	Sport on prescription	2 pm to 5 pm	3
8	27-04-22	Most common sports injuries	2 pm to 5 pm	3
9	24-05-22	Most common sports injuries	2 pm to 5 pm	3



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10	08-06-22	Diagnosis of common sports injuries	2 pm to 5 pm	3
			Total Hours	30

## REFERENCE BOOKS: (Minimum 2)

1. Textbook of Sports medicine
2. Handbook of sports injuries

### Annexure 3

**Bharath Institute of Higher Education and Research**

**Sri Lakshmi Narayana Institute of Medical Sciences,**

Participant list of Value added course: **Sports injuries on January 2022 – June 2022**

Sl.No	Reg.No	Name of the candidate	Signature
1.	U16MB391	VASIPALLI SUJITHA	
2.	U16MB392	VENKAT SRI RANGAN.P.B	
3.	U16MB393	VENKATACHALAPATHY .G	
4.	U16MB394	VIDHY ADHARAN.S	
5.	U16MB395	VIGNESH .D	
6.	U16MB396	VIGNESH .S	
7.	U16MB397	VIJAY .M	
8.	U16MB398	VINDUJA VIJAY	
9.	U16MB399	VIPIN SHARMA	
10.	U16MB400	VISALINI .S	
11.	U17MB371	SHACHI SHASTRI	
12.	U17MB372	SHATAVISHA MUKHERJEE	



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13	U17MB373	SHEDAM OMKAR MAHADEV	
14	U17MB374	SHIVA VEERANNA HOUSR	
15	U17MB375	SHIVAM ANMOL	
16	U17MB376	SHIVANI BISWAL	
17	U17MB377	SHREYA KUMARI	
18	U17MB378	SHUBHAM KAMDE	
19	U17MB379	SOTALA MANULIKHA CHOWDARI	
20	U17MB380	SOUNDHARYA.K	



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## Annexure 4

### Course/Training Feedback Form

**Course:** Sports injuries  
**Date:** January 2022– June 2022  
**Name:**  
**Reg NO.**  
**Department:** Forensic medicine and toxicology

**Q 1:** Please rate your overall satisfaction with the format of the course:

- a. Excellent   b. Very Good   c. Satisfactory   d. unsatisfactory

**Q 2:** Please rate course notes:

- a. Excellent   b. Very Good   c. Satisfactory   d. unsatisfactory

**Q 3:** The lecture sequence was well planned

- a. Excellent   b. Very Good   c. Satisfactory   d. unsatisfactory

**Q 4:** The lectures were clear and easy to understand

- a. Excellent   b. Very Good   c. Satisfactory   d. unsatisfactory

**Q 5:** Please rate the quality of pre-course administration and information:

- a. Excellent   b. Very Good   c. Satisfactory   d. unsatisfactory

**Q 6:** Any other suggestions:

**Comments:**

**Thank you for taking the time to complete this survey, your comments are much appreciated.**

**OPTIONAL Section:** Name \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_



# Sri Lakshmi Narayana Institute of Medical Sciences

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## Annexure 5

Date: 09-06-2022

From  
Dr. S. N. Rathod  
Forensic Medicine & Toxicology  
Sri Lakshmi Narayana Institute of Medical Sciences  
Bharath Institute of Higher Education and Research,  
Chennai.

Through Proper Channel

To  
The Dean,  
Sri Lakshmi Narayana Institute of Medical Sciences  
Bharath Institute of Higher Education and Research,  
Chennai.

### **Sub: Completion of value-added course: Sports injuries**

Dear Sir,

With reference to the subject mentioned above, the department has conducted the value-added course titled **Sports injuries** from January 2022– June 2022. We solicit your kind action to send certificates for the participants, that is attached with this letter. Also, I am attaching the photographs captured during the conduct of the course.

Kind Regards

Dr. Jayalakshmi

Dr. S.N. Rathod

**Encl: Certificates**

**Photographs**



# Sri Lakshmi Narayana Institute of Medical Sciences

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## Annexure 6 - SAMPLE CERTIFICATE TO BE ATTACHED

	<b>Sri Lakshmi Narayana Institute of Medical Sciences</b> Affiliated to Bharath Institute of Higher Education & Research (Deemed to be University under section 3 of the UGC Act 1956)	
<b>CERTIFICATE OF MERIT</b>		
This is to certify that _____ has		
actively participated in the Value Added Course on “Moral Narration” held 2022		
Organized by <u>Sri Lakshmi Narayana Institute of Medical Sciences</u> , Pondicherry		
- 605 502, India.		
Dr. S.N. Rathod RESOURCE PERSON	Dr. Jayalakshmi COORDINATOR	



# Sri Lakshmi Narayana Institute of Medical Sciences

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## Annexure 4

### Course/Training Feedback Form

**Course:** Sports injuries  
**Date:** July 2021 – Dec 2021  
**Name:**  
**Reg NO.**  
**Department:** Forensic medicine and toxicology

**Q 1:** Please rate your overall satisfaction with the format of the course:

a. Excellent   b. Very Good   c. Satisfactory   d. unsatisfactory

**Q 2:** Please rate course notes:

a. Excellent   b. Very Good   c. Satisfactory   d. unsatisfactory

**Q 3:** The lecture sequence was well planned

a. Excellent   b. Very Good   c. Satisfactory   d. unsatisfactory

**Q 4:** The lectures were clear and easy to understand

a. Excellent   b. Very Good   c. Satisfactory   d. unsatisfactory

**Q 5:** Please rate the quality of pre-course administration and information:

a. Excellent   b. Very Good   c. Satisfactory   d. unsatisfactory

**Q 6:** Any other suggestions:

**Comments:**

**Thank you for taking the time to complete this survey, your comments are much appreciated.**

**OPTIONAL Section:** Name \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_