

SYLLABUS

Certified Mobility & Stretching Manoeuvre Specialist (CMSMS)

Brief Description: To achieve more strength we need flexibility. Learning stretching manoeuvre of different muscle group will give students an edge of their profession while setting warm up and cool down protocol of their clients.

Minimum age: 18 Years and above

Personal Attributes: The job requires individual to have good communication skills, time management skills and ability to understand the body language of the trainees. The job requires individual to possess key qualities such as self-discipline, confidence, maturity, patience, compassion, active listening, time management, empathy, language proficiency.

Duration of course: Not less than 15 hrs

Course Fees	Rs 3000/- (Three Thousand)
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Job Role: Sports coach, Gym trainer, Fitness Trainer, Fitness trainer role in all sports and game.

Requirement/ Eligibility: For admission in the course it is suggested/desired that the candidate should have passed 10th standard/ Secondary School Certificate from a recognized board or equivalent, with two years of working experience.

Affiliation: SPFL-SC

Opportunities: Sporting club, Sports academy, Health club

A) INTRODUCTION

DEFINITION OF FLEXIBILITY: Flexibility relates to Range of Motion (RoM) of and at a specific joint with regard to a particular Degree of Freedom.

B) Name of movement :

1. Flexion ⇔ Extension
2. Internal Rotation ⇔ External Rotation
3. Abduction ⇔ Adduction
4. Traction ⇔ Approximation
5. Protraction ⇔ Retraction
6. Inversion ⇔ eversion
- 7. Varus ⇔ Valgus**
8. Pronation ⇔ Supination
9. Anterior Gliding ⇔ Posterior Gliding (rocking)
10. Medial Gliding ⇔ Anterior Gliding (rocking)

C) Techniques to increase Functional Range Of Motion (FROM): few techniques are –

Modification of neuromuscular processes that regulate tension and length of the tissues in the muscle complex.

Increase of length and strength of other soft tissues of the muscle complex, particularly the collagenous tissues like the fascia.

Lengthening and shortening of the other soft tissues, particularly those in the joint capsule and ligament .

Restructuring the articular surfaces of the joints, as a natural result of many years of regular, heavy loading in specific movement patterns.

D) REQUIREMENTS OF GENERAL FITNESS AND SPORTS: The real-life requirement is active flexibility. Passive flexibility may, at best, provide a protective reserve – insurance – in the even a joint is unexpectedly stressed beyond its regular operational range of movement.

Sporting prowess (quantified in terms of competition success) correlates more strongly with active rather than passive flexibility.

E) EFFECTS OF STRETCHING : Optimize the athlete's learning, practice and performance of many types of skilled movements, Increase in range of useful movement, Increase in the level of biomechanical skills and musculoskeletal efficiency, Enhances awareness of the body, Decrease in risk and occurrence of injury etc.

F) BODY RESPONSE TO STRETCH: The Muscular and Skeletal Systems are relevant to us in the context of Strength Training and Development. Bones make up the specialised support arrangement for the human skeleton.

G) NEUROMUSCULAR SYSTEM AND FROM:

FROM is not only influenced by the musculoskeletal structure and the mechanical properties of their soft tissues but also by the level of MOTOR UNIT ACTIVITY in the relevant muscles,

The muscles and tendons have a large number of two receptors,

Involuntary reflexes are initiated by the action and interaction of the MS and GTO during muscle movement in the following manner

H) The stretch reflex or, the myotatic reflex: different type of stretch reflex -

Dynamic or phasic stretch reflex, Static or tonic stretch reflex, Negative stretch reflex.

I) COMPONENTS OF JOINT FLEXIBILITY: Any joint flexibility (or, stiffness) is influenced by the soft tissues connected to the joint. The components are - Muscles and their fascial sheaths, Structure of the joints, including ligaments, Skin, Tendons and their sheaths etc.

J) Factors of Flexibility: Flexibility depends upon few factors like - Exercise and training history, age, gender, temperature, types of join, types of movement.

K) Soft Tissue Biomechanics and Flexibility:

Different methods are required for conditioning muscles, tendons and other soft tissues, Slow twitch muscles have higher proportion of connective tissue than fast twitch muscle groups, Higher stiffness and low level of strain of slow twitch muscles is most suitable for continuous support

of posture , Different mechanisms in brain and spinal cord control high speed, low speed and topological patterns of muscle activity , Different rates of loading and stretching have different effects on bone, tendon and muscle etc.

L) **Stretching technique** : There are two types of stretching, -

a) Static stretching - Free Static Stretching, Passive Stretching.

b) Dynamic stretching - Ballistic Stretching, Active Stretching, Proprioceptive Neuromuscular Facilitation (PNF) Stretching, Plyometric (Impulsive) Stretching,

M) **Flexibility measurement technique**: For every exercise prescription we need few measurement or result - Sit and Reach Flexibility Test, Chair Sit and Reach Test, Floor Touch Test, Groin Flexibility Test, Calf Muscle Flexibility Test, Trunk Rotation Test , Shoulder Flexibility Test etc

N) **Stretching glossary (muscle and joint)**: Knowledge of muscle and joint actions will enable more “accurate” stretching a list of muscles to be stretched and the actions that will enable the stretch