**MOVEMENT AND EXERCISE**

Sport and the people who participate in it are central to the curriculum of the degree programs offered by Faculty of Physical Education and Sport. Through various modules and using a range of academic disciplines, students are able to examine and analyze the sporting performance and experience. This chapter is designed to provide students with basic terms used in sport and exercise at the very first stage of becoming a professional.

**Ability** is possession of qualities (especially physical qualities when speaking about the sport area) required to perform a given movement pattern. A **skill** is a capacity to perform it well. Skills are usually acquired or learned, as opposed to abilities, which are often thought of as innate. **Talent** is the potential or factual ability to perform a skill better than most people.

**Physical activity** is any body movement produced by skeletal muscles and resulting in energy expenditure.

**Exercise** is a physical activity that is planned, structured and repetitive. It involves repetitive movements of the body done to improve or maintain one or more of the components of physical fitness—cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition

**BASIC BODY POSITIONS**

**STANDING POSITION**: standing position can be performed with both legs parallel to each other, feet together, with toes pointing forward; or with feet slightly apart, hip-width apart, or wider than shoulder-width apart. We can stand on one or both feet and shift our weight from foot to foot, or assume tip-toeing position. As the body is still supported on the feet, **squat** is also considered a form of the standing position. Depending on the flexion at knees, which can be slight or full, **half squat** is also described. Balancing on one foot with other leg straight and high in the air, chest is down, is called **scale**.

**Kneeling position**is taken on your knees, with the hips pushed forward and back straight, or, when sitting on the feet

**Move your mouse over the sample standing positions to see images**:

* [**Basic standing position**: feet together](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**Straddle standing position**: feet apart](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**Squat**](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**Upright kneeling position**: back straight](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**Lunging**](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**Scale**: balancing position](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)

**LYING POSITION**: When doing exercises you can assume the lying position on your back, chest or side. These positions are also termed the back-lying, chest-lying or side-lying position. When in the back-lying position, your knees can be straight or bent, with the feet flat on the floor, apart or together. You can be also instructed to flatten/press your low back on the floor.

**Move your mouse over the sample lying positions to see images**:

* [**Lying on chest**, chest-lying position](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**Lying on back**, back-lying position](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**Lying on left/right side**, side-lying position](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)

**Move your mouse over the sample support positions to see images**:

* [**Front support**](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**Back suppport**](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)

**SITTING POSITION**: sitting position can be assumed with both legs parallel to each other, knees bent or straight, toes pointing upward, or, with the legs apart (split), or crossed and bent at the knees. **Tuck** position is a form of sitting position with both legs bent at the hips and at the knees, with the knees brought/pressed towards the chest. In some stretching exercises, sitting with one leg straight and the other bent at knee with the sole pressed to the knee of the straight leg, is also used.

**Move your mouse over the sample sitting positions to see images**:

* [**L seat**: (long sitting), feet together, knees and back straight](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**Tailor seat**: cross-legged sitting position](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**V seat**: sitting position, both legs raised, feet at the chest level](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**Straddle**: sitting position, legs apart, (straddle)](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**Hurdle seat**: sitting in hurdle position, with the left/right lead leg](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)
* [**Seat on heels**: sitting in the kneeling position](http://www.ftvs.cuni.cz/eknihy/jazyky/sportstudiesfundamentalterminologyinenglish/Texts/6-Movement.html#nogo)

**BASIC BODY MOVEMENTS**

**ARM MOVEMENTS**: exercises can be performed with the arms raised, stretched sideways, forward or backward, or crossed on the chest. They can be bent (slightly) at the elbows, or kept straight.

Changing the arm positions results in **arm action**, which is performed by e.g. circling, driving or bringing the arms forward or backward, lowering down, swinging or sweeping. The arm movements can be also done with the palms facing upward or down, or placed flat on the floor. The hands can be put, or rest, on the hips, clasped behind the head, or placed flat on the floor.

**LEG MOVEMENTS**: the exercise can be performed with the legs straight, stretched or bent (slightly or fully) at the knees or hips. Changing the position of legs results in**leg action** or **footwork**, which can be accomplished by raising/lowering the legs together or alternately, lunging, swinging, or driving the legs forward/backward. The leg action can be also taken with the feet flat on the floor, with the toes pointing upward, forward, inward, or outward.

**UPPER BODY (TRUNK) MOVEMENTS**: when doing the exercise, the upper body can be kept straight when we are instructed to stand o sit straight (tall), or (slightly) bent when leaning forward, backward, to side, or against e.g. a wall. Changing the upper body position can be also done by raising or lowering the upper body from the lying position, twisting in both directions, circling, or curling the trunk slowly and gradually.

**SAMPLE STRETCHING AND STRENGTHENING EXERCISES**

**Abdominal Curl-up**
Lie on your back, with the knees bent (to about 90 degrees) and feet flat on the floor. Avoid anchoring your feet down. Do a “pelvic tilt”, pressing your lower back to the floor, then slowly curl forward, lifting your shoulder blades and upper back off the floor. Hold this “up position” for couple of seconds, then slowly curl back down. Look toward the ceiling (not at your knees) throughout so you don’t bend your neck too fat forward. Make the curl-up increasingly difficult by changing the arm positions: with arms straight, slide hands along the floor; with arms straight, slide the hands up the thighs as far as the knees; cross arms on the chest; bend arms and hold hands against the ears.

**Thigh Stretch**
While standing, bend one knee, grasp your ankle and pull your foot gently toward your buttocks. Keep the supporting leg slightly bent and your back straight. Use a chair for support if you need to.

**Low Back Stretch**
While lying on your back, grasp your hands behind one knee and bring it toward your chest.

**Push-up**
Take the starting press-up position, position your hands at shoulder level with your palms flat on the floor slightly more than shoulder-width apart. Use either the knees or the feet for the pivot point (using the feet requires more strength). Then keeping your body in line (don’t sag!), straighten your arms to push your body up, then lower it again until you are almost touching the floor and repeat the whole pattern again.

**LOCOMOTION**

In a general sense, **locomotion** simply means active movement or travel.

**Walking** is the main form of locomotion, distinguished from running. Walking is generally distinguished from running in that only one foot at a time leaves contact with the ground. During forward motion, the leg that leaves the ground swings forward from the hip. Then the leg strikes the ground with the heel and rolls through to the toe. The motion of the two legs is coordinated so that one foot or the other is always in contact with the ground.

**Running** is a complex, coordinated process which involves the entire body. Running is executed as a sequence of strides, which alternate between the two legs. Each leg's stride can be roughly divided into three phases: support, drive, and recovery. Support and drive occur when the foot is in contact with the ground. Recovery occurs when the foot is off the ground. The motions of the upper body are essential to maintaining balance and a forward motion for optimal running. They compensate for the motions of the lower body, keeping the body in rotational balance. A leg's recovery is matched by a forward drive of the opposite arm, and a leg's support and drive motions are balanced by backward movement of the opposite arm. The shoulders and torso are also involved.

**READING (Authentic text)**

**GYMNASTICS - FORWARD ROLL**

The forward roll has a tremendous number of applications, beginning with a simple **tucked forward roll**, progressing through a more difficult **straddle forward roll** to the **handstand forward roll**. Handstand forward roll begins with performing the handstand. After holding the handstand position, the gymnast allows the body to lean slightly, and, while tucking the head, rolls forward and arrives in a standing position. Advanced skills may be presented such as a cartwheel, followed by handstand with transition to the forward roll.

**Forward roll progression** usually starts with the **rock back exercise**. The gymnast assumes sitting tuck, clasps the knees tightly to the chest and keeps feet together. The head is moved over the knees to form rounded back. The gymnast rocks back on to the shoulders, rocks back to the sitting tuck, and repeats the whole movement again.

The exercise can be modified by starting in the squat position, rocking back on to the shoulders and arms reaching forward to return to the squat position again. Feet are together.

Next step to take is using an**inclined padded bench**. The gymnast starts in the squat position, feet together, hands placed on the side of the bench; then tucks the head to the knees and pushes chin to the chest; raises the bottom and starts to roll. Arms reach forward to return to squat position.

On a padded inclined bench the teacher supports the gymnast through the roll by gently pushing the back of the head, allowing the gymnast to roll on to the top of the shoulders.

Forward roll progression may be completed by forward roll from **tuck squat to tuck squat**.

**BASKETBALL - CHANGING DIRECTION BY CROSSOVER DRIBBLE, CHEST PASS**

**Crossover Dribble**
The player dribbles with his right hand. Bouncing the ball in front of his body, he passes the ball to his left hand. He continues dribbling with his left hand and repeats the same action from the left to the right. Through the whole movement he watches the ball only through his peripheral vision.

**Through the Legs Crossover**
The player dribbles with his right hand on the right side. The ball is passed from his right hand through the legs to his left hand at the moment when his right leg is in the back position. He continues dribbling repeating the action from the left to the right. Again only using his peripheral vision.

**Behind the Back Crossover**
The player dribbles with his left hand and passes the ball from left to right behind the body at the moment when his left leg is in the back position. Then he continues dribbling on the right side. The same action is repeated the right to the left when the right leg is in the back position, again using only his peripheral vision.

**One-Handed Chest Pass**
The player is standing with one leg slightly forward, weight distributed on both feet and legs slightly bent at the knees. The ball is held with both hands waist-high. Arms are flexed, with elbows slightly opened to protect the ball. The pass is performed using the whole arm. The arm extends from the elbow. The pass is completed with the follow-through of the wrist.

**Reference**:

*GELS, J. A. (2007). Coaches Clipboard. Retrieved April, 2007, from http://www.coachesclipboard.net/VideoClips.html Gymnastic Drills. In Gymnastics Coaching. Retrieved May 10, 2007, from http://www.sportplan.net/drills/Gymnastics*