**Semester 4**

**GENERIC ELECTIVE: PHYSICAL EDUCATION**

**POSTURE, ATHLETIC CARE AND FIRST AID**

**UNIT 3: FIRST AID, ERGOGENIC AIDS AND REHABILITATION**

**Sports Injuries and First Aid (P.R.I.C.E.)**

Sports injuries are commonly caused by overuse, direct impact, or the application of force that is greater than the body part can structurally withstand. There are two kinds of sports injuries: **acute and chronic.** An injury that occurs suddenly, such as a sprained ankle caused by an awkward landing is known as an acute injury.
Whereas, Chronic injuries are caused by repeated overuse of muscle groups or joints. Poor technique and structural abnormalities can contribute to the development of chronic injuries. Medical investigation of any sports injury is very important. For example, what seems like an ankle sprain may actually be a bone fracture.

**P.R.I.C.E.**

P.R.I.C.E. principle is shortly used after the injury occurs. The acronym stands for:

* Protection
* Rest
* Ice
* Compression
* Elevation

It may be particularly helpful during the first 24 to 72 hours after the injury. Its goal is to control the amount of swelling to the injured area, prevent further injury, and reduce pain.

* **Protection (P)**

The first principle is protection. The purpose of protection is to avoid further injury to the injured area. The type of protection used varies depending on the injured area but may include bandage, splint, sling, protective tape, or brace. These devices are applied so that the injured structures are protected from further injury. For example, an individual who recently suffered an [ankle sprain](https://www.sportsmd.com/sports-injuries/foot-ankle-injuries/sprained-ankle/)may initially wear an ankle brace. A good ankle brace protects the athlete from movement of inversion (movement of the ankle/foot inwards) and eversion (movement of the ankle/foot outwards).

* **Rest (R)**

Rest is the second component of the P.R.I.C.E. principle. The purpose of rest is to allow the body’s own healing processes to naturally occur without being impeded by movement of the injured area. Any increase in movement of an injured tissue results in increased circulation to the area which in turn may result in further damage and/or increased swelling.

For injuries to the lower extremities, crutches may be a good option for rest. The crutches provide a safe means for the athlete to move around while ensuring that the damaged area is not stressed.

* **Ice (I)**

Ice is another component of the P.R.I.C.E. principle. Ideally, ice packs are made of crushed ice because the crushed ice is more comfortable for the athletes and conforms to the contours of the injured area better than cubed ice. Ice can be placed into plastic or Ziploc bags. A light barrier should be placed between the skin and the ice bag (paper towel) to prevent injury to the skin during the application of the ice. The ice pack can be secured with an ace bandage if needed. The ice should be applied for 20 minutes at a time and then removed. This can be repeated every two hours while the athlete is awake.

Some athletes are hypersensitive to ice or may actually be allergic to ice. In this case, the athlete’s skin may become red, raised, and blotchy where the ice made contact with the skin. If this occurs, immediately remove the ice pack and let the area rewarm.

* **Compression (C)**

Once the ice pack is removed, a compression wrap should be applied to the injured area. The compression wrap serves as a mechanical barrier so that swelling is minimized in the injured area. There are a number of compressions wrap available, but the most commonly used is an elastic or ace bandage.

Elastic bandages come in a number of sizes (2”, 3”, 4”, and 6”) and should be selected depending upon the body part that needs to be wrapped. A two-inch elastic bandage is ideal for an adult’s wrist/hand or a child’s ankle. Three and four- inch elastic bandages can be used for an adult’s ankle or elbow. Six -inch elastic bandages are perfect for the application of compression to the thigh for a quadriceps or hamstring injury.

* **Elevation (E)**

The last component of the P.R.I.C.E. principle is elevation. Elevation is important immediately post-injury to reduce the amount of blood flow to the injured area. For the lower extremities, the athlete can elevate his/her leg by lying down and elevating the injured limb on pillows. The key is that the athlete needs to have the injured area above his/her heart level.

Following the PRICE principles is an effective way to minimize the swelling in an injured area so that the athlete can return to play quickly.