Managing Skin Abrasions from Artificial Turf

Rugby Union is investing in the new generation of synthetic grass pitches in order to support the growth in participation in the sport. Artificial turf provides a high quality surface that requires low maintenance throughout the year, and provides a consistent playing surface regardless of weather conditions.

The new pitches undergo rigorous testing to ensure they maintain a standard set by World Rugby to preserve and enhance safety and playability along with maximizing the durability of the turf.

Evidence so far is that overall injuries are no more frequent playing on artificial turf vs. grass.

However, there is an increase in skin abrasions from playing on artificial pitches. An abrasion is a superficial skin wound caused by frictional contact with the ground rubbing off layers of the skin.

The following are recommendations of ways to minimise the incidence of skin abrasions and how to manage them in the context of Rugby Union.

Who gets skin abrasions?

In the 15 a-side game skin abrasions are most common in wingers, centres and flankers. In the 7s game, because the game is faster, all players are equally at risk of getting abrasions.

Types of Abrasion

1st degree abrasion

Injury to the outermost layer only. The skin is pink/red and mildly painful. These are no more than a nuisance and usually heal in under a week.

2nd degree or abrasion

Injury involves the deeper layers of the skin as well. These are more painful because of exposed nerve endings in the deeper layers. There is usually some bleeding at the wound site initially that later gives way to a clear fluid discharge (exudate) that soils clothes and bed sheets if left unattended. This is the most common type of skin injury and is typically under-estimated in its potential for developing a complication such as an infection or scarring.

3rd degree abrasion

Involves all layers of the skin down to where the subcutaneous fat is exposed and/or there is skin loss. This is rare in Rugby.
Prevention:

1. Environmental
- Regular maintenance of the turf, as per the manufacturers’ and World Rugby recommendations will ensure even distribution of the rubber crumb infill and preserves the synthetic pile.
- Wet surfaces reduce the risk. It is recommended to water the pitch before a game especially during hot dry spells.

2. Clothing
- Covering up exposed skin, particularly of body parts at greatest risk, reduces the incidence and severity of skin abrasions:
  - Long sleeve shirts or base layers
  - Long trousers or base layers extending below the knee are permitted in youth game but not permitted in adult competitive games but may be used when training on turf.
  - When playing in shorts ensure socks are fully pulled up to cover as much of the lower-legs as possible.

3. Skin Barriers
- Application of petroleum jelly/paraffin such as Vaseline™ to at-risk areas reduces frictions with the surface. Repeated application may be needed over the course of a game.

Treatment

Whilst large 2nd degree and all 3rd degree injuries should be seen by a healthcare professional most 1st and small 2nd degree wounds can be self-managed.

1. Clean the wound
- Make sure the wound is clean of any dirt and debris from the playing surface. Irrigate the area with soap and warm running water for at least 20 seconds. If needed gently clean the area with medical gauze from first aid kit. If the wound is heavily contaminated and cannot be cleaned because it is too painful and/or debris is buried too deeply seek medical help.

2. Cover with a Dressing
- Do not leave abrasions uncovered to “dry out” or scab over. This practice is no longer encouraged because it increases the risk of infection, scarring and re-injury. Keeping the area moist encourages the wound to heal almost twice as fast than if a scab is allowed to form.
  - 1st degree abrasions can be simply dressed with an antiseptic ointment/cream that is readily available over the counter. Moisturise the area regularly to prevent light scabbing forming. The skin is typically back to normal in 5-7 days.
  - 2nd degree abrasions should have a moisture retaining dressing layer like paraffin gauze (Jelonet) placed directly over the area before covering with a non-adherent absorbable dressing. Larger abrasions, particularly around the lower leg or thigh, can weep heavily for the first couple of days and a thick absorbable dressing may be needed over this.
Infection

It is well recognised that there are generally fewer bacterial elements found on artificial pitches than on grass pitches and it would seem that infections occur when abrasions are not managed appropriately. Nonetheless it is important to recognise the signs of an infected wound:

• Increasing pain
• Increased redness around the wound edges or the surrounding skin
• Presence of pus, yellow discharge or abscess formation
• Increase/worsening odour
• Slow healing wound

If you suspect a wound infection you should see your doctor or attend your local minor injuries unit as soon as possible.

It is important to also ensure that you/the player are up to date with Tetanus vaccination.