



## SMARTPLAY

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Speed H & Finch C. *Shooting for Basketball Injury Prevention – A Review of the Literature*. Research Report No. 98004. School of Human Movement, Faculty of Health and Behavioural Sciences, Deakin University, August 1998.

This fact sheet is sponsored by Sport and Recreation Victoria, the Department of Human Services, and the Victorian Health Promotion Foundation.

Funding for the research project was provided by Sport and Recreation Victoria.

Photograph courtesy of Deakin University.

Prepared by Deakin University, August 1998.

Illustration by Debbie Mourtzios.

### Common-sense safety hints

- Players should be aware of the dangers of mis-using or inappropriately using basketball equipment (e.g. swinging on the basket ring).
- Children should only participate in basketball activities under adult supervision.
- Children competing together should be matched in terms of physical maturity and skill level.
- Young players should be encouraged to participate in the 'Oz-ball' and 'mini-basketball' versions of the game which use modified rules and equipment.
- Players should be aware of their own physical capabilities and limit themselves to basketball activities appropriate to their level of fitness.
- Players with a history of head injury should seek professional advice about the appropriateness of headgear.
- Injured and/or bleeding players should be immediately removed from the game and receive prompt first aid or medical attention.
- Injured players requiring further treatment should seek prompt medical attention for their injury.
- Advice from the injured player's treating health professional should always be sought before a decision about return to play is made.



### **The game of basketball**

Basketball is one of the most popular participant sports in Australia.

Basketball is played by both males and females, across many age groups and levels of participation, from recreational to professional sport.

Basketball is a dynamic game of speed and penetration, with frequent and aggressive body contacts.

Players require a high level of strength and fitness to move quickly around the court and to safely execute a range of cutting, jumping and ball throwing manoeuvres.

### **Common injuries during basketball**

Basketball is associated with a significant number of medically-treated sports injury cases.

Physical contact between players is the most frequent cause of injuries. Ballistic movements such as sharp cutting, pivoting and abrupt changes of direction also cause many injuries.

The majority of injuries are to the lower limb, with ankle sprains being the most common injury.

Knee injuries are also common, particularly in females, and account for most time lost in training and games.

Injuries to the hand and fingers are frequent in young players and are usually the result of contact with another player or the ball.

Head and facial injuries are less common but are of particular concern because of their potential severity.

Dental injuries can also occur due to contact with other players, the basket or the backboard.

Overuse injuries are most common in high level players, due to the duration and intensity of their participation.

### **Players at risk of injury**

There are three main categories of players at risk of sustaining a basketball injury:

Professional and elite players who participate in state and/or national league (senior and junior) competitions.

Non-elite adults and children who regularly participate in organised club-based competitions.

Recreational and non-competitive players who engage in informal or social basketball games and activities.

Many injuries in basketball can be prevented by athletes, coaches, officials and clubs adopting strategies that:

promote a safe environment for basketball play, increase the physical capabilities or fitness of players, and

directly protect the player against injury.

The following injury prevention tips apply to all players, irrespective of the level at which they play.

### **Preparing for basketball**

All competitive players should undertake a supervised pre-season physical conditioning program that concentrates on cardiovascular fitness, muscular strength and flexibility.

Recreational players should attain a reasonable level of physical condition and fitness prior to engaging in vigorous basketball activities.

Players should undergo a pre-participation physical assessment, including both general physical and basketball-specific examinations, before the start of each season.

Players should follow a 10–20 minute regimen of warm-up activities immediately before, and cool-down activities immediately after, playing basketball.

Stretching exercises should only be undertaken after light physical activities (e.g. jogging, cycling) to warm the muscles.

Players should maintain a well-balanced diet and ensure they are adequately hydrated (i.e. drunk enough water) before playing.

### **Safety during play**

All players should be aware of the rules of the game, particularly as they relate to safety factors.

Officials should strictly enforce rules to minimise potentially dangerous plays.

Regular players should wear shoes designed specifically for basketball (e.g. medium-tops) when training and competing.

Players with a history of ankle injury should always wear some form of external ankle support (e.g. taping/braces).

All players, including children, should wear a mouthguard during training and competition.

Custom-made mouthguards are preferable.

Players should maintain adequate hydration during training and games.

Highly stressed players may be at risk of injury because of increased muscle tension and reduced ability to concentrate. Such players should adopt stress management techniques, and where necessary, seek professional counselling.

### **Environmental safety factors**

The playing surface and surrounds should be examined prior to use, and any debris or potentially injurious objects (e.g. discarded track-suit jacket) removed.

The playing surface should be free of moist spots caused by sweat or spillage.

Players, or responsible adults, should check that backboards and baskets are of high standard and securely mounted to an appropriate fixture, particularly in outdoor recreational settings.

Backboards and their supports should be suitably padded according to FIBA standards.

Players should avoid high-intensity basketball activities in extremely hot or cold weather. Where possible games should be re-scheduled.

Coaches, players and parents should be aware of symptoms associated with heat stroke.

All basketball facilities should have first-aid kits and a telephone for emergency calls.