

# The Squat Exercise in Athletic Conditioning

## Position Statement:

**The following nine points related to the use of the squat exercise constitute the Position Statement of the Association. They have been approved by the Research Committee of the Association.**

1. Squats, when performed correctly and with appropriate supervision, are not only safe, but may be a significant deterrent to knee injuries.
2. The squat exercise can be an important component of a training program to improve the athlete's ability to forcefully extend the knees and hips, and can considerably enhance performance in many sports.
3. Excessive training, overuse injuries and fatigue-related problems do occur with squats. The likelihood of such injuries and problems is substantially diminished by adherence to established principles of exercise program design.
4. The squat exercise is not detrimental to knee joint stability when performed correctly.
5. Weight training, including the squat exercise, strengthens connective tissue, including muscles, bones, ligaments and tendons.
6. Proper form depends on the style of the squat and the muscles to be conditioned (see **Appendices A and B**). Bouncing in the bottom position of a squat to help initiate ascent increases mechanical loads on the knee joint and is therefore contraindicated (6).
7. While squatting results in high forces on the back, injury potential is low with appropriate technique and supervision.
8. Conflicting reports exist as to the type, frequency and severity of weight-training injuries. Some reports of high injury rate may be based on biased samples. Others have attributed injuries to weight training, including the squat, which could have been caused by other factors.
9. Injuries attributed to the squat may result not from the exercise itself, but from improper technique, pre-existing structural abnormalities, other physical activities, fatigue or excessive training.

The following literature review has been prepared by the authors in support of the aforementioned position statement.