Flexibility and Warm-up

Flexibility - or mobility - training ensures that the complete range of movement is possible for each of the major joints and muscles. Scientific examination has shown that highly trained people are more flexible than the general population and these same people probably had to work hard to achieve that state. The badminton player who is highly flexible will be able to move more economically because he will be able to turn, twist and stretch with less effort.

Flexibility- or mobility-training also prepares the body for any exercise to follow. This is achieved by ensuring that the full range of movement has been completed before overloading the body. This means that the full extension of the muscles, so necessary for an adequate warm-up, may reduce the chances of muscle and joint injury. The common habit of badminton players to warm up by 'knocking up' is not adequate for competitive preparation. It is not uncommon for an inexperienced player to stretch to return a difficult shot during a knock-up and sustain an injury which may have been prevented by a thorough warm-up.

The lack of heating in many badminton halls is an additional reason for paying attention to this. No specialist equipment or extra space is required to warm up and so it should become a regular pre-competition activity. This chapter is divided into three sections:

1. Simple mobility exercises
2. A method of improving flexibility
3. A typical warm-up schedule

SIMPLE MOBILITY EXERCISES
These should be done in a relaxed manner rather than forced with natural, comfortable breathing. Improvement comes by gently increasing the range of movement. Never use sharp movements, and stop if the exercise becomes painful. The exercises need only be performed about ten times at each workout.
Arm-swinging
Start with the feet astride and the arms hanging loosely by the sides. Swing both arms forwards, up-wards, backwards and sideways in a circular motion. Brush the ears with the arms as they go by.

Side-bends
Start with the feet astride and the hands on the hips. Bend to the left and to the right sides alternately while keeping the head facing forward.

Trunk-, knee- and hip-bends
Start in the standing position. Raise the left knee and bring the head down to meet it. Repeat with the right knee. To maintain balance make this a smooth rhythmical movement. The supporting leg can be slightly bent if necessary.
Head-, arm- and trunk-rotating
Start with the feet astride and the hands and arms directly in front at shoulder level. Turn the head, arms and shoulder around to the left as far as possible, bending the right arm across the chest. Repeat the movement to the right always keeping the hips and legs still.

Alternate ankle-stretch
Start with the feet astride and both palms on the front of the upper left thigh. Slide the hands down the front of the left leg, allowing the trunk to relax. Return to the up-right position and repeat on the right side. Do not continue this exercise if there is pain in the lower part of the spine.

Lunges
Stand with the legs wide astride with the right leg directly in front of the left leg. The right foot points forwards and the left foot is turned to point outwards. Keep the rear leg straight and bend the knee of the front leg to lower the trunk into a deep lunge position. Push back to straighten the front leg and return to a standing position. Repeat this four times and then change over so that the left leg is in front.
IMPROVING FLEXIBILITY

This method has been shown to be far more effective than standard approaches, which have involved taking a joint to its comfort limit and then gently going past that point. The principle of this new approach is to reach the comfort limit for any joint and then push against an immovable object in the opposite direction to the intended improvement in flexibility. The effect on the nerves and muscles is such that during the relaxation period following the effort, flexibility is increased dramatically. The opposite-push effort needs only to be maintained for 6 seconds. This principle can be used with every joint in the body, but only a few examples, which are most applicable to the game of badminton, will be illustrated.

Shoulder flexibility

The player takes up the position shown in Figure 10.7 with his partner facing him with one hand on the shoulder and the other in the region of the wrist. The player reaches his arm up and stretches back as far as possible and in this position he then pushes hard for 6 seconds against his partner's upper hand. At the end of 6 seconds, the player relaxes and his partner gently presses the arm back and increases the shoulder-joint movement. This can be repeated several times for further improvements.

Hip flexibility

This is essential for lunging movements such as stretching for a wide shot. The player sits on the floor with his legs as wide apart as possible. The partner kneels between his legs, facing him and holding his ankles firmly. The player then attempts to close his legs, keeping them on the floor, with the effort lasting 6 seconds. At the end of six seconds the player relaxes and the partner pushes his legs further apart to reach a new starting position. The exercise is then repeated several more times.
**Spine flexibility**

This will allow a greater chance of returning overhead shots and also permit more use of the trunk in the preparation for the smash. The player kneels upright with his partner facing him. He leans back as far as possible and his partner places his hands on the player's shoulders. The player attempts to push forwards to straighten up for 6 seconds. After 6 seconds he leans further back and the exercise is repeated several more times.

![Spine flexibility exercise](image)

**A TYPICAL WARM-UP SCHEDULE**

The general principles of training (see Chapter 6) apply equally to warming up prior to competition. A progressive warm-up is essential (see page 101). The extent and duration of the warm-up is dependent on such things as the fitness of the individual and the temperature of the badminton hall. With experience any player should be able to construct a warm-up programme appropriate to his needs for practice or competitive play.

**Stage 1: Mobility exercises**
1. Arm-swinging
2. Side-bends
3. Trunk, knee- and hip-bends
4. Head, arm- and trunk-rotating
5. Alternate ankle-stretch

**Stage 2: Flexibility improvements**
1. Shoulder flexibility
2. Hip flexibility
3 Spine flexibility
4 Other joints as required

Stage 3: Repeat Stage 1.

Stage 4: Running
1 Jog around badminton hall x 3.
2 Stride out one side and jog the remainder.
3 Stride out two sides and jog the remainder.
4 Stride out three sides and jog the remainder.
5 Jog around the hall x 2.
6 Sprint one side and jog remainder.
7 Sprint two sides and jog the remainder.
8 Sprint three sides and jog remainder.
9 Jog around badminton hall.

Stage 5: Badminton-related activities
1 Progress around the hall by sprinting 5 paces forwards, 5 paces backwards, 5 sideways and repeat.
2 Stride 5 paces forward, jump sideways to right and lunge. Return, continue and repeat to the left.
3 Jog around the hall. Every 5 paces jump and smash. Continue this around the hall.
4 On court do shadow badminton starting gently and building up in intensity.

The details of this schedule are not inflexible. The activities can be modified to suit the requirements of an individual player but the different stages give a guideline to thorough warm-up and once learned can be completed without any supervision. This gives the coach an opportunity to work on specific problems with an individual player. As a rule of thumb the warm-up should be sufficiently intense to promote a mild degree of sweating, but after warming up do not stand around allowing the effects to wear off before competing.