



SELF-MANAGEMENT: PATIENT'S SECTION

## Dynamic warm-up<sup>☆</sup>

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Overuse syndromes or repetitive strain injuries are common amongst young athletes and “weekend warriors” alike. Playing a sport is healthy, but one must always train for the sport in order to prevent injuries. Sports place high, repetitive demands on vulnerable tissues such as the knee, back and shoulder. Therefore, it is important to “warm-up” these body parts with exercises that can also “groove” performance enhancing functional movement patterns that protect the joints.

### Squat

*Purpose:* To train good whole body posture by keeping the spine upright, knees over feet and shoulders back. Teaches motor patterns that spare the knees, spine and shoulder from repetitive strain injuries (see [Figures 1 and 2](#)).

- Keep the spine upright and squat down until your finger tips can brush the floor/ground as if you are fielding a groundball in baseball.

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- The key is to sit back in your hips (e.g. “stick your butt out”).
- Key errors to avoid include:
  - Your knees going forward of your toes.
  - Bending your spine forward at the waist.
  - Your knees being inside of your ankles and hips.
- Perform 3–4 times and hold each repetition for 2–3 s.

### Dynamic back lunge

*Purpose:* To train good whole body posture and mobilize the front of the hip by keeping the spine upright, knees over feet, and shoulders back

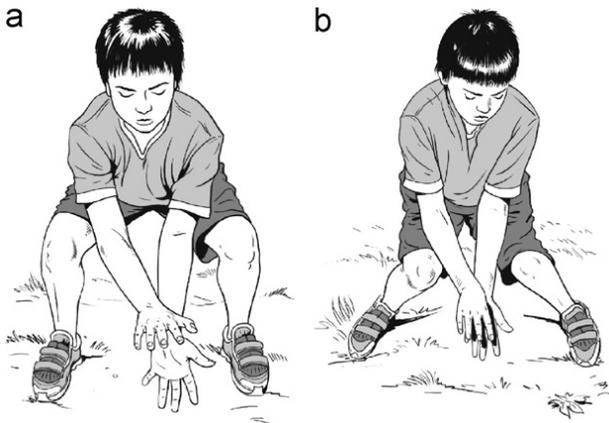
- Take a big step backwards and kneel on your back knee.
- Next, raise your arms and lean forward slightly until you feel a slight stretch in the front of your hip on your back thigh.
- Be sure to keep your back upright and your front leg's knee behind your toes.
- Finally, lean to the side of your front leg to increase the stretch (see [Figure 3](#)).
- Key errors to avoid:
  - Your knee going forward of your toes (see [Figure 4](#)).

- Perform 3–4 times and hold each repetition for 5–8 s.

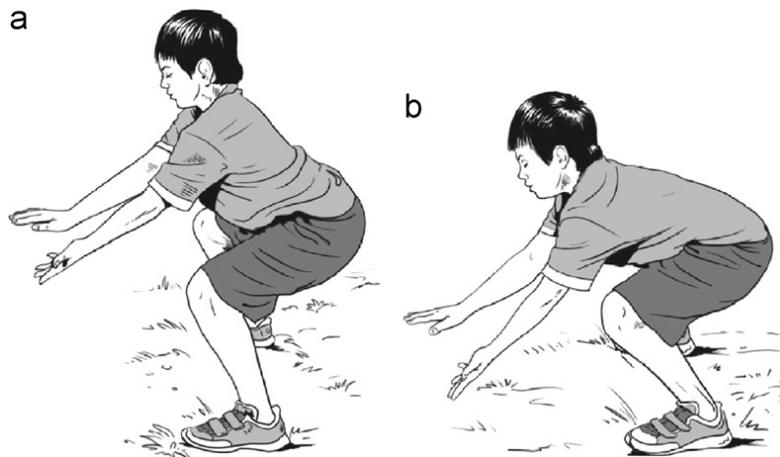
**Side steps**

*Purpose:* To train the gluteals and quadriceps to stabilize the ankle, knee, hip and torso during functional weight shifts as occur in sport.

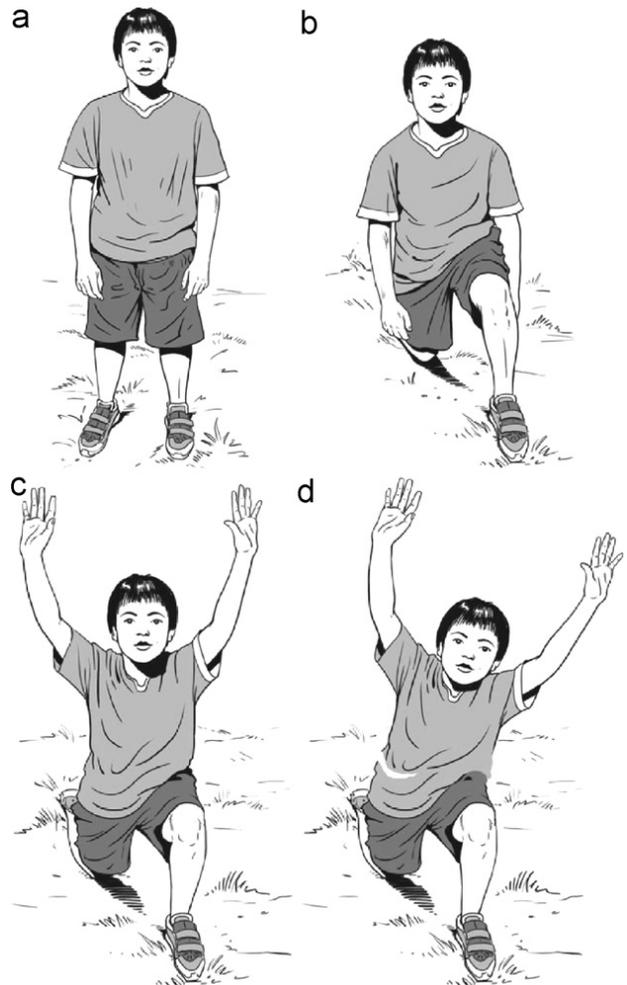
- Begin by getting into a partial squat position as if ready to lead off a base, return a serve in tennis or hit a golf ball.
- Next, step side ways while staying in this partial squat (Figure 5).



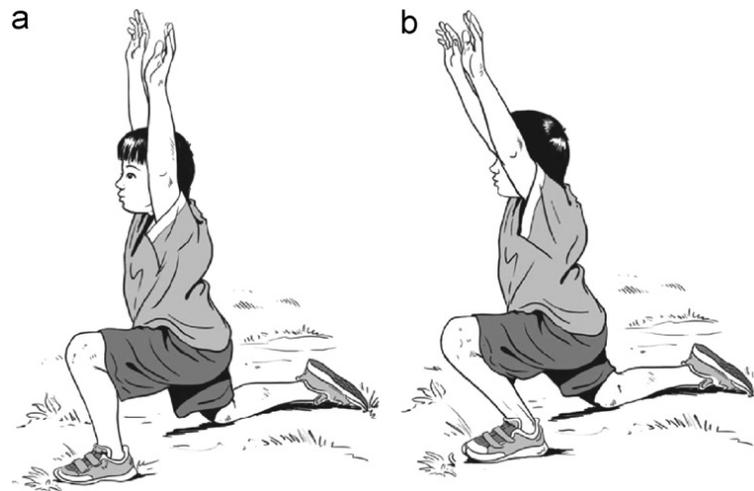
**Figure 1** The baseball infielder squat—front view: (a) correct: knee position over foot, (b) incorrect: knee position turned inwards.



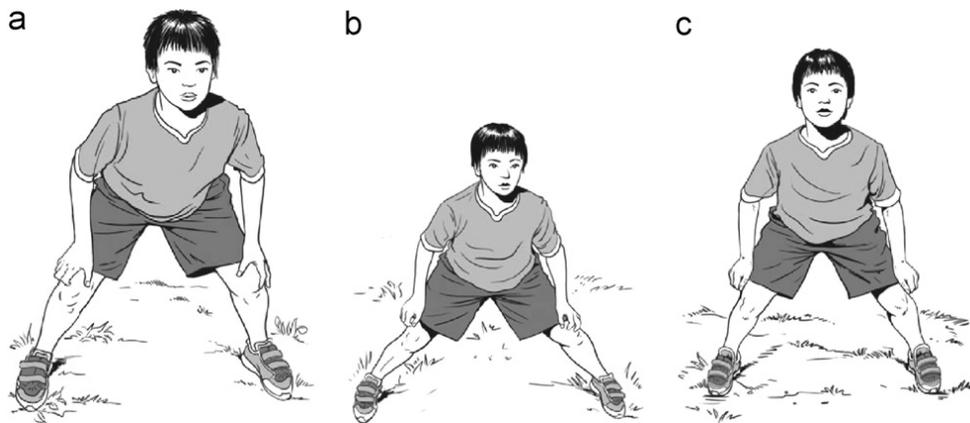
**Figure 2** The baseball infielder squat—side view: (a) correct position, (b) incorrect: knees and back too far forward.



**Figure 3** Dynamic back lunge: (a) proper standing posture, (b) stepping back to knee on one knee, (c) raising arms and leaning forward, (d) leaning away from the leg being stretched.



**Figure 4** Dynamic back lunge—side view: (a) correct position, (b) incorrect position with the knee passing forward of the toes.



**Figure 5** Side steps.

- This can be progressed by adding a resistance band around the ankles or by performing quickly like a football linebacker.
- Perform 10–20 side steps slowly while maintaining good form. Then reverse direction.
- Progress by increasing the speed.

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