



SELF-MANAGEMENT: PATIENT SECTION

## Functional fitness training—Part 2 <sup>☆</sup>

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### Introduction

If your goal is to perform at a high level in sports and both lower your injury risk and enhance your performance then traditional exercise training may not be enough. Exercises on the floor or with Nautilus-type machine do not mimic the actual activities you are performing and so will have a limited value for you. Newer approaches focus on training you in positions that more closely resemble the actual postures, activities, and balance challenges that you face in your sport (e.g. tennis, volleyball, running, etc.).

What follows are a number of advanced functional “core” stability exercises. For each exercise follow the following progression:

- Master correct form first.
- Practice daily with supervision until you can perform one set of 8–12 repetitions with good form.
- Then, follow the Russian Reverse Pyramid endurance/power/strength system as follows:
  - Add a second set with 20% fewer repetitions.
  - If you can maintain good form then continue adding additional sets up to 5 total with each subsequent set using approximately 20% fewer repetitions.
  - This program should be followed 3–4 days/week for up to 3 months.
  - For example,
    - Set one—12 reps.
    - Set two—10 reps.

- Set three—8 reps.
- Set four—6 reps.
- Set five—4 reps.

### Plyometric side step (see Fig. 1)

#### Purpose

- Speed, power and endurance training of the gluteus maximus/medius and quadriceps.

#### Procedure

- Stand next to a step.
- Step onto the step and then jump up with maximum speed.
- After landing on the step repeat the cycle.

#### Progressions

- Add hand weights.

#### Common errors

- Inability to jump dynamically.
- Bending forward at your waist.
- Unleveling of your shoulders.

#### What you should feel

- Fatiguing contractions of the buttock and thigh muscles.

<sup>☆</sup>This paper may be photocopied for educational use.

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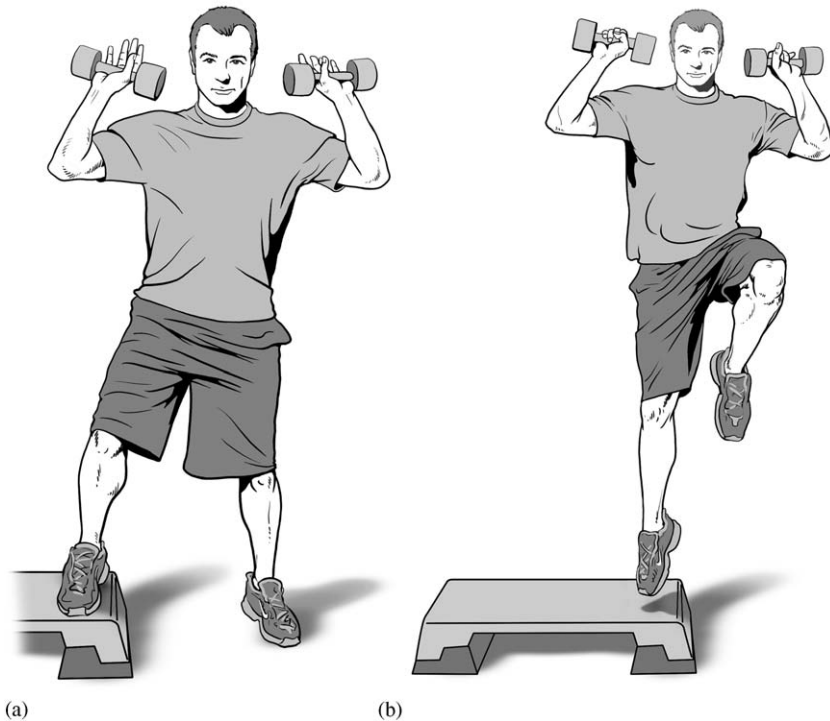


Figure 1 Plyometric side step.



Figure 2 Lateral squat.

## Lateral squat (see Fig. 2)

### Purpose

- Activate buttock and thigh muscles on the stepping leg while simultaneously stretching the buttock on the same leg and groin or inner thigh on support leg.

### Procedure

- Perform a lateral squat by stepping to the side while squatting.
- The stepping leg squats until the thigh is horizontal.
- The knee should be maintained over the foot (or laces).
- The opposite leg should be nearly straight at the knee in the final stretch position.

### Progressions

- Add hand weights, a stick or weighted bar.
- Add one or two balance pads under the foot or feet.

### Common errors

- Inability to keep the knee over the foot.
- Failure to feel a stretch in the buttock of the stepping leg.
- Unlevel hips or shoulders.

### What you should feel

- Buttock stretch on side of the stepping leg and inner thigh/groin stretching on the support leg.
- Thigh and buttock effort on the stepping leg.

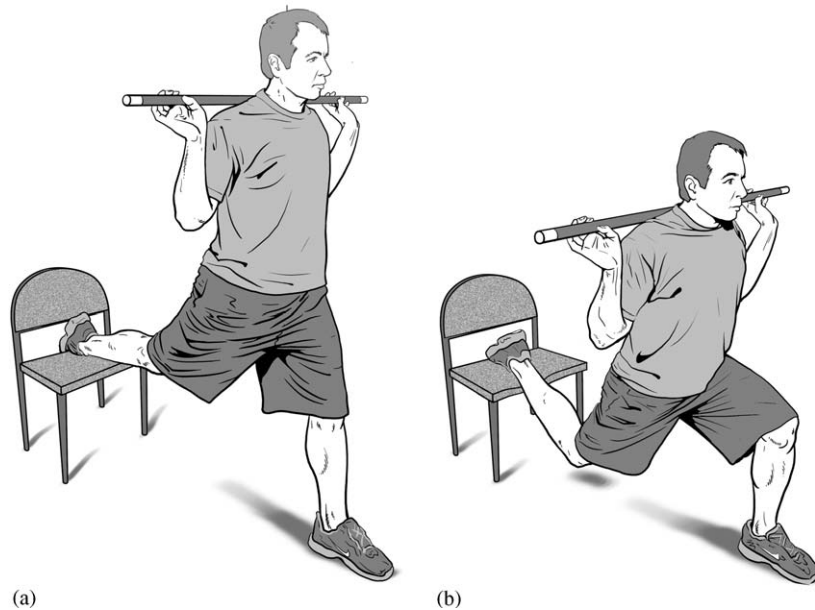


Figure 3 Lunge dip.

### Lunge dip (see Fig. 3)

#### Purpose

- Power and endurance training of the thigh, buttock and calf muscles while stretching the buttock on the support leg and front of the hip on the other leg.

#### Procedure

- Stand in front of a chair or step.
- While using a stick or bar for balance raise one leg by placing a foot on the chair or step.
- Still balancing with the stick/bar move the other leg forward until a slight stretch of the back leg is felt.
- Move the stick so it is held across the front of the chest and perform lunges up and down.
- At the lowest depth the front thigh should become horizontal.

#### Progressions

- Add weight to the bar.

- Perform with greater depth and longer hold times.
- Add a balance pad under the foot.
- Add a wedge under the foot (heel high) to reduce calf muscle activity and increase activation in thigh and buttock muscles.

#### Common errors

- Not using a stick or bar to comfortably find the right initial position.
- Not keeping the knee over the foot (laces).
- Bending forward at your waist.

#### What you should feel

- Fatiguing contractions in the buttock and thigh muscles.
- Buttock stretch (support leg—front).
- Front of the hip muscle stretch (back leg).

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