Dynamic Exercises – Above Knee Amputation with Prosthesis

These exercises help you improve your balance and strengthen the muscles to best use your prosthetic leg.

- Do the exercises as directed by your therapist or doctor.
- You may use a walker, table or sturdy chair for support, if needed.
- Do the exercises slowly and with smooth motions to avoid injury to the muscles.
- Be sure to keep breathing while exercising. Do not hold your breath because it may cause your blood pressure to rise.

Exercise Plan

- Do the checked (✓) exercises below.
- Do these exercises _____ times each week.
- Repeat each exercise _____ times.

Exercises

- **Standing balance**

  For this exercise, you will change your head and feet positions. Be sure to keep your eyes open during these exercises.

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Learn more about your health care.
1. Start with your feet apart. Look side to side.

2. Look up to the side and then down to the side.

3. Look down and look up.

Repeat with your feet together.
Then repeat with your prosthetic foot in front of your other foot.

Then repeat with your prosthetic foot crossed over in front of your other foot.

**Side to Side Weight Shift**

1. Stand up straight with your head up and look straight ahead.

2. Slowly shift your weight to your side as far as you can go without moving your feet. When you shift onto your prosthetic leg, focus on squeezing your buttocks and tightening or contracting the muscles in the socket. You will feel the pressure change in your socket when you shift your weight.

3. Return to the center.

4. Then shift your weight back to your other side as far as you can.

**Weight Shift Front to Back**

1. Stand and slowly shift your weight forward by moving your hips forward over your toes until your heels come off the floor slightly. Then return to your starting position. Keep your hands close to a chair to use for support as needed.
2. Shift your weight onto your heels and press your thigh or upper leg back in the socket until your toes come off the floor slightly. Keep your hands close to the chair to use for support as needed.

- **Weight Shift with Stool**
  
  For support, use:
  
  - Your right hand
  - Your left hand
  - Both hands

1. Stand near a stool or step and shift your weight onto your prosthetic leg, tightening the hip muscles on that side.
2. Slowly raise your sound foot up on the stool. Relax the muscles of your amputated leg.
3. Tighten your muscles in your amputated leg again and slowly bring your foot back down off the stool. Try to keep the rest of your body still and relaxed.

- **Leg Circle Roll**
  
  For support, use:
  
  - Your right hand
  - Your left hand
  - Both hands

  Repeat ____ times in each direction.
  
1. Stand up straight and place your foot on a tennis ball with your knee slightly bent.
2. Keeping your balance on your prosthetic leg, roll the tennis ball with your foot back and forth, side to side and in circles.

3. As your balance improves, use a soccer ball or basketball under your foot.

- **Single Leg Balance**
  1. Stand behind a sturdy chair or by a counter or table that you can use for support if needed.
  2. Lift your sound leg and stand on your prosthetic leg, keeping your back straight and your head up and looking forward. Focus on tightening your muscles in your buttocks to keep your hips level.
  3. Repeat with your sound leg.

- **Heel Strikes**
  1. Stand up straight with your prosthetic foot slightly behind your other foot. Select a target spot where you will strike your heel. Start with larger targets and then work toward smaller targets to make it more difficult.
  2. Step forward with your prosthetic leg and be sure the knee bends, tapping your heel on the target.
  3. Your prosthetic knee should have a slight bend as your heel hits the ground. Shift your weight onto your prosthetic leg and pull back on the socket to straighten knee.
If you have the hydraulic knee:

1. Stand up straight with your prosthetic foot slightly behind your other foot. Select a target spot where you will strike your heel. Start with larger targets and then work toward smaller targets to make it more difficult.

2. Step forward with your prosthetic leg and be sure the knee bends, tapping your heel on the target.

3. Your prosthetic knee should straighten as your heel hits the ground. Shift your weight onto your prosthetic leg.

Talk to your doctor or others on your health care team if you have questions. You may request more written information from the Library for Health Information at (614) 293-3707 or email: health-info@osu.edu.