

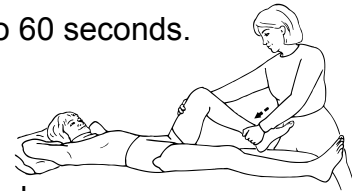
Arthritis: Knee Exercises

How do knee exercises help arthritis?

Knee exercises can help strengthen leg muscles. Exercises will reduce stiffness and strengthen your child's legs. Exercises improve your child's mobility and function. Below are activities that you can do at home with your child. The physical therapist will tell you which ones are best for your child. The therapist will teach you how to do the exercises.

Activities to reduce stiffness and increase knee motion

- To help with morning stiffness and warm up joints:
 - Have your child sleep in footy pajamas or in a sleeping bag.
 - Turn a heating blanket or mattress pad on 20 minutes before your child gets out of bed. Be sure to follow safety instructions for the heating blanket or mattress pad.
 - Have your child take a warm bath for 15 to 20 minutes first thing in the morning.
- Gently bend and straighten your child's knee while in the bathtub. Some children may be able to do this on their own.
- Straighten your child's leg fully at least three times a day for 30 to 60 seconds. To stretch the knee:
 - Put one hand above the knee but not on the knee cap. Put the other hand under the ankle.
 - Gently push down with the hand above the knee as you slowly straighten your child's leg. Stop when you feel slight resistance. Hold for 20 to 30 seconds. Your child will feel a stretch behind the knee. Stop if it is hurting your child. Don't bounce while stretching.
- Bend your child's knee fully until you feel slight resistance. Hold the stretch for 20 to 30 seconds. Do this three times.
- During quiet time have your child lie on their stomach with their legs straight. To help stretch the leg, put a small towel under the thigh of the affected leg, just above the knee cap. Gravity will help stretch the leg.



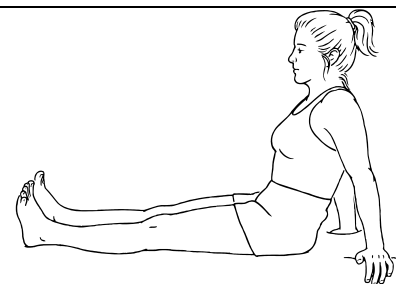
Activities to strengthen the knee

These exercises can help to build muscles that make the knee bend and straighten. This will help your child to walk, play and move around better.

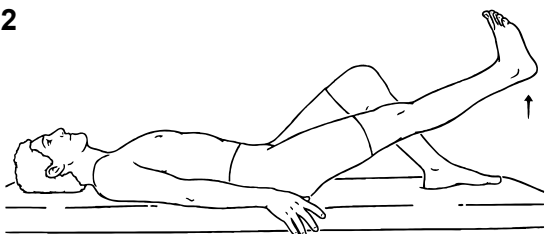

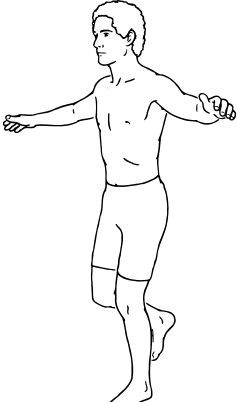
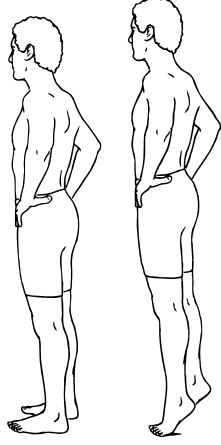
While sitting on the floor, have your child try to straighten their knee like they are trying to push the knee flat to the ground (**figure 1**). Hold for 5 to 10 seconds and repeat.

Have your child straighten both legs. Put a small soft ball or stuffed animal between their knees. Ask your child to squeeze knees together and hold for 5 to 10 seconds.

figure 1

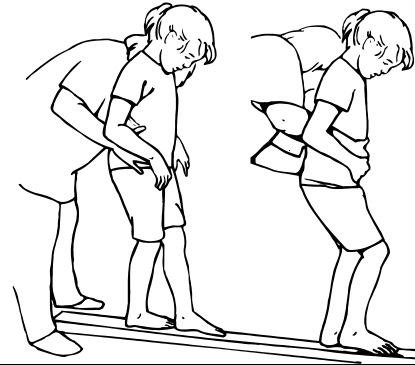


Activities (continued)

<p>Have your child lie on their back and bend the unaffected leg. Keep the affected leg straight. Tighten the muscle at the knee and lift the leg about 6 to 8 inches off the ground. Hold for 2 to 3 seconds. Slowly lower the leg back to the ground and repeat (figure 2).</p>	<p>figure 2</p> 
<p>Have your child walk up the steps using the affected leg first. Walk down the steps using the unaffected leg first (figure 3). A fun way to do this is to play a game with puzzles, Mr. Potato Head, blocks etc. Have your child walk up the steps to get the pieces. Have them bring the pieces back down to put the game together.</p> <p>Play games where your child has to sit down and stand back up. Use a low chair or have your child sit in your lap while you are sitting on the floor. Play at a low table so they can pull up to stand if needed. Help your child's knees stay lined up under their hips and keep their weight even on both legs.</p>	<p>figure 3</p> 
<p>You and your child can stand on a single leg and count, play catch or sing a song (figure 4). See who can stand on one foot the longest. Start with 5 to 10 seconds and work up to 60 seconds.</p>	<p>figure 4</p> 
<p>Have your child push up on tip toes to reach for toys or snacks (figure 5). Dance on tip toes.</p> <p>While standing up, shift weight onto the affected leg and reach for things such as toys or markers off to that side.</p> <p>Ride a bicycle, tricycle, big wheel or scooter to help strengthen legs while pushing.</p> <p>Push heavy objects. This makes your child use more leg muscles.</p> <p>Walk up hills to get leg muscles working harder.</p>	<p>figure 5</p> 

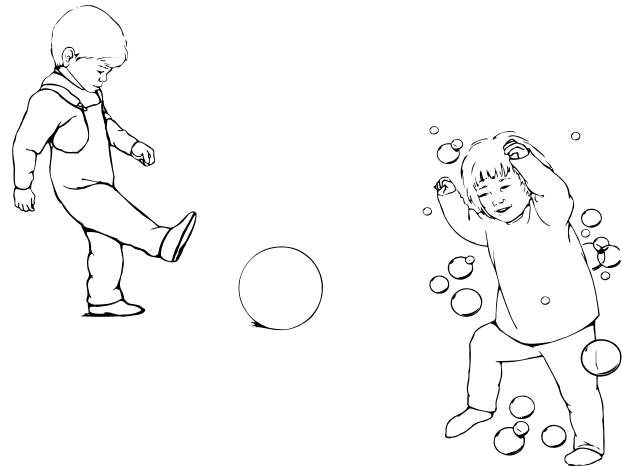
Knee Strengthening Activities (continued)

Have your child walk on a balance beam or a curb. Hold your child's hand while doing this if needed (figure 6).

figure 6

Play games where your child kicks something like a ball or bubbles (figure 7). Work on kicking with each leg. This will strengthen the affected leg while balancing on the opposite leg. Then switch legs and repeat.

Swimming and water play are great ways to strengthen muscles.

figure 7

ALERT: Call your child's doctor, nurse, or clinic if you have any questions or concerns or if your child has special health care needs that were not covered by this information.

This teaching sheet is meant to help you care for your child. It does not take the place of medical care. Talk with your healthcare provider for diagnosis, treatment, and follow-up.