

Information about

# Patella (Kneecap) Dislocation

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## **What has happened?**

Patella (Kneecap) dislocation is common in children and adolescents. It is usually caused by a twisting injury or direct trauma.

The kneecap normally sits at the front of knee and glides when you bend or straighten your leg. When the kneecap dislocates, it comes out the groove and slides to the side of the knee.

This can cause stretching of the soft tissues around the kneecap resulting in pain and swelling.

## **What to expect?**

After a patella dislocation your child can expect to feel pain and see swelling around the joint.

Due to the pain and swelling it may be difficult for your child to take weight through that leg, bend or straighten the knee to start with but this should ease off within a few days. In some cases it may take longer and therefore it's important to follow the advice and exercises provided.

After your child's injury, they may be given a knee brace, however, removing the brace as soon as possible leads to the quickest recovery. The brace must be removed at bedtime and whilst undertaking the exercises.

If your child has been given crutches try to use them only when needed, they can try just using one before trying without any if they find that easier.

Its is expected that your child will be able to walk normally within 1 week.

Normal walking means that your child's heel touches the ground first and they roll off of their toes before they lift the foot from the floor.

Sometimes it can take a little longer for swelling and bruising to settle, this is normal.

## What should I do?

**In the first 48-72 hours after their injury your child should:**

**Rest** - Avoid any running or jumping activities, they should continue to walk as able to.

**Ice** - Apply an ice pack (or a bag of frozen vegetables wrapped in a tea towel) to the injury for up to 20 minutes up to every hour.

**Elevate** - Keep the injured leg raised on a pillow to reduce swelling.

**Painkillers** - Use painkillers as advised by a pharmacist or doctor to manage the pain.

**Gentle movement** - Moving your child's knee the first few times can be uncomfortable, however restoring normal movement and walking as soon as possible is very important to avoid stiffness, weakness and dislocating their kneecap again.

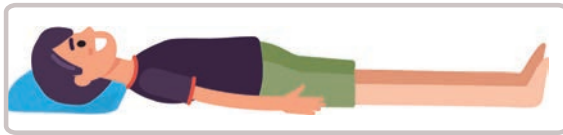
Normal movement will also help to reduce any swelling.

### **Your child should do the following exercises:**

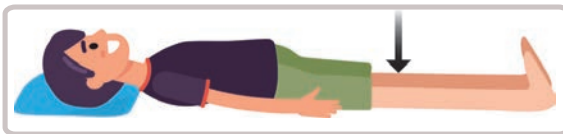
**Stage 1** - Start these exercises immediately, try to do them 3-4 times a day.

#### **1) Static Quads**

- Lie on your back or sitting up with your knees straight.



- Bend your ankles and press the back of your knees against the floor by using your front thigh muscles.

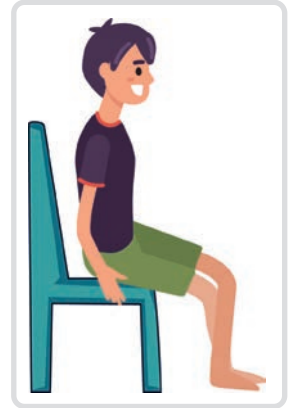


- Hold the tension for **5 seconds**.

**Repeat 8-12 times.**

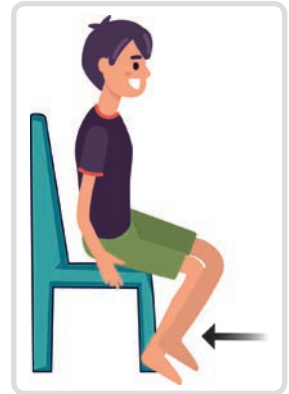
## 2) Self-assisted Knee Flexion in Sitting

- Sit up straight on a sturdy chair. Cross your ankles, with the assisting leg on top of the other.



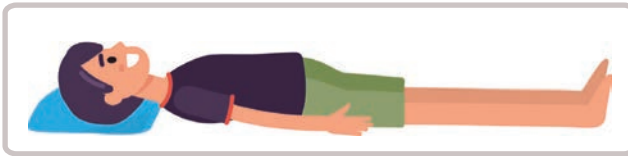
- Move the training foot backwards by bending your knee, assisting the movement with the other leg.
- Hold for **3-5 seconds**. Return to the starting position.

**Repeat 8-12 times.**



## 3) Active Knee Flexion in Supine

- Lie on your back, with legs straight.



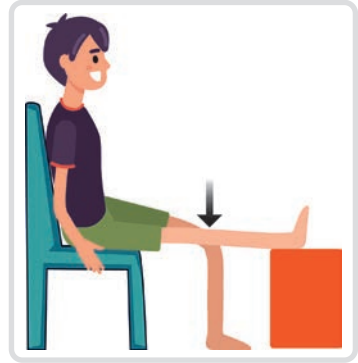
- Bend your knee by sliding your heel towards your buttocks, hold for **3-5 seconds** and return to the starting position.



**Repeat 8-12 times.**

#### 4) Knee Extension

- Sitting on a chair, with the leg to be exercised supported on a chair as shown.
- Let your leg straighten in this position.
- Gravity will help to straighten your knee.
- Stay in this position for around **10-15 minutes**.



**Stage 2** - When it becomes easier to bend and straighten your knee and you are happy with the stage 1 exercises, you can now move onto the stage 2 exercises. Aim for 2-3 times a day.

#### 1) Inner-Range Quads

- Lie on your back with one leg bent and the other leg straight. Place a towel roll under the straight knee.



- Bend your ankle and straighten the knee using your front thigh muscles. Keep the back of your knee against the towel roll.



- Keep the tension for **5 seconds** and then relax.

**Repeat 8-12 times.**

## 2) Straight Leg Raise

- Lying on your back with the affected leg straight.



- Exercise your straight leg by pulling the toes up, straightening the knee and lifting the leg off the bed.



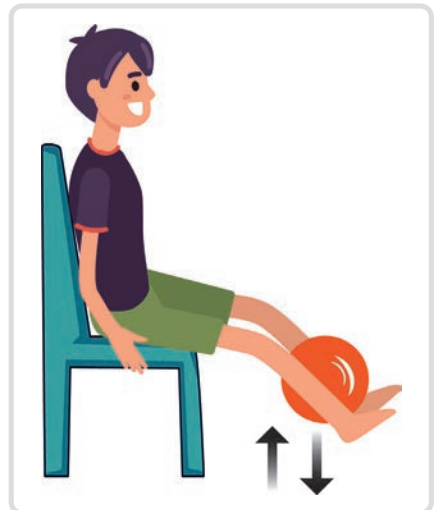
- Hold for **5 seconds** and slowly relax.

**Repeat 8-12 times.**

## 3) Sit on a chair.

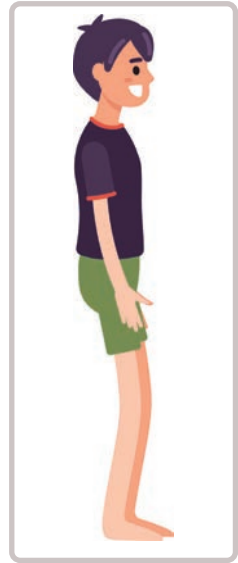
- Hold a ball between ankles and lift legs whilst maintain ball in same position.
- Hold for **3-5 seconds** and then in a controlled manner slowly lower.

**Repeat 8-12 times.**



**Stage 3** - When it becomes easier to contract your Quads and you are happy with the stage 2 exercises, you can now move onto the stage 3 exercises. Aim for 2-3 times a day.

- 1)
- Stand with feet slightly apart and your weight spread evenly on both feet. Straighten your hips and your body. Move your shoulders slightly back, relax your shoulders and lengthen the back of your neck. Concentrate on feeling the surface under your feet.
  - Shift your weight from the balls of your feet onto your heels and back a few times whilst keeping your feet flat on the floor.



- Then move your weight onto one foot and lift the other foot. Repeat with the other foot. You can close your eyes to increase difficulty. Try to challenge yourself each time and hold the position for as long as you can. **Repeat 3 times. Try on both legs.**

## 2) Mini Squat with Hip Adduction



- Stand tall with feet hip-width apart and as small ball placed between your knees.



- Bend your knees and hips and push your pelvis backwards to squat down.
- Hold for **5 seconds** and squeeze ball at same time.

### Note:

- Keep hips, knees and toes aligned.
- Don't let your knees go over your toes; keep weight evenly distributed between forefeet and heels.
- Hold onto back of chair if you require support for balance.

Repeat **8-12 times**.

## 3) Bridge

- Lie on your back with legs bent.





- Squeeze your buttocks, roll your pelvis off the floor and straighten your hips.



- Hold for **5 seconds** and in a controlled manner return to the starting position.

**Note:**

A small ball can be placed between your knees. Remember to squeeze the ball and your buttocks, when you lift.

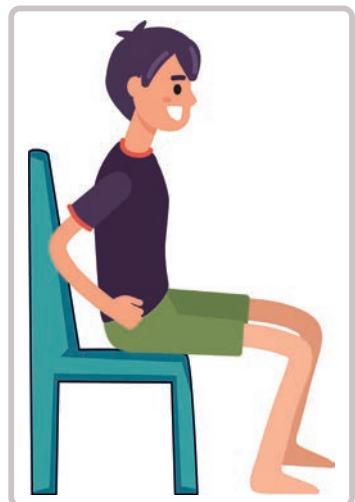
**Repeat 8 - 12 times.**

**Stage 4 -** When you are comfortable with stage 3 and weight bearing activities, you can now move onto Stage 4 exercises.

**Aim for 2-3 times a day. The following activities are more challenging and will focus on dynamic exercises.**

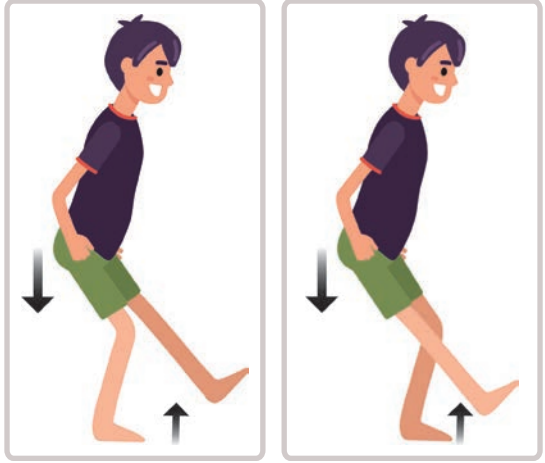
- 1) Stand up by tightening your buttock muscles and then slowly sit down.

**Repeat 8 - 12 times.**



## 2) Single-leg Mini Squat

- Stand tall on one leg with the other leg in front.
- Squat down keeping the forward leg in the air. Push back up to the starting position.

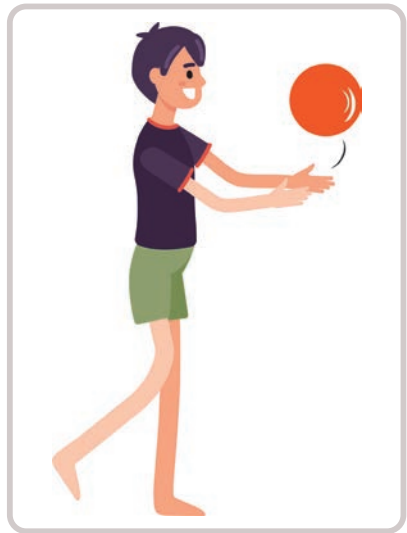


**Note:** Hip, knee and toes should be pointing in the same direction and pelvis should stay level.

**Repeat 8 - 12 times**

## 3) Single-leg Balance while Throwing a Ball

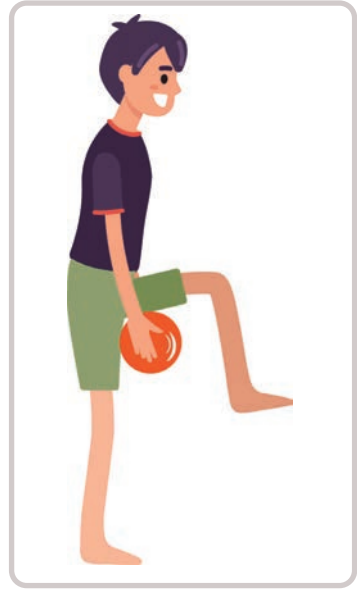
- Stand on a balance pad on one leg (if available).
- Try to keep your balance while throwing a ball with a partner or against a wall.
- How long can you go without dropping the ball?



#### 4) Stand on one leg

Pass a ball under your knee.

Repeat 8 - 12 times. Try each leg.



### When to get further help

**If your child has not already been seen by a health professional:**

You should contact **NHS 24** on 📞 **111** if:

- Your child is unable to take weight through their injured leg
- Has significant swelling or reduced movement at the knee

**If your child has already been assessed by physiotherapy:**

Please contact us again if:

- Your child is unable to take weight through their affected leg after 48 hours
- Your child has had more than one injury to the same knee in the past few months

