Neurocardiogenic Syncope, Pediatric
(Fainting)

Neurocardiogenic syncope (NCS) is the most common cause of fainting in children. It is not dangerous. It is a response to a sudden and brief loss of consciousness due to decreased blood flow to the brain. It is uncommon before 10-12 years of age.

CAUSES

NCS is caused by a decrease in the blood pressure and heart rate due to a series of events in the nervous and cardiac systems. This may run in families. Many things can trigger an episode of NCS. Some of these include:

- Pain.
- Fear.
- The sight of blood.
- Common activities like:
  - Cough.
  - Swallowing.
  - Stretching.
  - Watching TV.
  - Going to the bathroom.
  - Combing the hair.
- Emotional stress.
- Prolonged standing (especially in warm environment).

Situations that can increase the risk of fainting include:

- Lack of sleep or rest.
- Not having eaten for a longtime.
- Not drinking enough liquids.
- Recent illness.

SYMPTOMS

Before the fainting episode, your child may:

- Feel dizzy or light-headed.
- Sense that he or she is going to faint.
- Feel like the room is spinning.
- Be sick to their stomach (*nausea*).
- See spots or slow loss of vision.
- Hear ringing in the ears.
- Have a headache.
- Feel hot and sweaty.
- Have no warnings at all.

During the fainting, your child will fall down and lose consciousness for a few seconds. There may be:

- Stiffening or twitching of the arms and legs
- Eyes rolling up

After the fainting, your child:

- Recover within a few seconds.
- May recall feeling dizzy.
- May feel tired.

DIAGNOSIS

The diagnosis of NCS is made based on the story and by doing some tests to rule out other causes for fainting. Testing may include the following:

- Blood tests.
- A test of the electrical function of the heart (*electrocardiogram* [ECG or EKG]).
- A test used check response to change in position (*tilt table test*).
- A test to get a picture of the heart using sound waves (*echocardiogram*).

TREATMENT

Treatment of NCS is usually limited to reassurance and home remedies. Remember that even though these spells are scary to watch, they do not harm the child.

If home treatments do not work, your child's caregiver may prescribe medicines to help prevent fainting.

HOME CARE INSTRUCTIONS

Have your child:

- Learn the warning signs of NCS.
- Sit or lie down at the first warning sign of a fainting spell. If sitting, put the head down between the legs.
- Avoid or sit down in situations that may trigger syncope. Common situations to avoid include:
  - Hot tubs and saunas.
  - Prolonged standing still.
  - Not drinking enough fluids – especially when exercising or in hot weather.
- Drink plenty of fluids. Avoid caffeine. Let your child have a bottle of water in school.
- Increase the salt in the diet if recommended by your child's caregiver:
  - Drink sports drinks.
  - Add salt to foods at the table.
- When standing for a long time:
  - Cross the legs.
  - Flex and stretch the leg muscles.
  - Squat.
  - Move the legs.
  - Bend over.
- Avoid stopping suddenly any medicines prescribed for NCS

SEEK MEDICAL CARE IF:

- You have any questions about NCS or its treatment.
- Fainting spells continue in spite of the treatment.
- Fainting spells are more frequent.
- Loss of consciousness lasts more than a few seconds
- Fainting spells occur:
  - With exercise.
  - Right after exercise.
  - After being startled or suddenly frightened.
- New symptoms occur with the fainting spells such as:
  - Shortness of breath.
  - Chest pain.
  - Irregular heart beats.
- Injuries happen from fainting.
- Twitching or stiffening spells:
  - Happen without obvious fainting.
  - Last longer than a few seconds.
  - Take longer than a few seconds to recover from.

SEEK IMMEDIATE MEDICAL CARE IF YOUR CHILD:

- Is injured or bleeding after a fainting spell.
- Has prolonged twitching and stiffening spells (more than 5 minutes).
- One twitching and stiffening spell follows another without a return of consciousness.

Document Released: 09/26/2009 Document Re-Released: 10/20/2009
ExitCare® Patient Information ©2011 ExitCare, LLC.