

Amplified musculoskeletal pain

Information for patients, parents and guardians

Children with amplified musculoskeletal pain experience more pain after a minor injury than is normally expected. Your child may complain of continued pain. This is the result of the body's nervous system reacting to the injury and then failing to switch off, causing pain signals to be continuously sent to the brain.

Although the exact cause of this is still unknown, studies have shown that in many cases psychological factors or anxiety have contributed to how the child experiences pain and how they cope with it. This also means that normal healing of the original injury may be delayed. Talking with a trained counsellor may help. Speak to your child's nurse for more information about accessing counselling services.

Who and what is affected?

Any part of the body can be affected, although it is most often a limb (foot, ankle, arm or hand). The pain can occur after an injury such as a sprain, fracture, surgery or other trauma. Children of any age can be affected. Studies have shown that it is more common in females.

Symptoms

Pain is the main symptom. The pain signals which were switched on by the injury continue to tell the brain that the limb is still painful after the injury has healed.

Types of pain

There are several different types of pain that may be experienced:

Nerve pain: means there is extreme hypersensitivity to touch (called allodynia). Sometimes even putting a sock on the foot is painful.

Vascular pain: when the blood circulation is disrupted. There is throbbing, swelling and discolouration. The skin may be mottled, pale, blue or red, or have a shiny appearance. The limb may be stiff and feel cool. This is caused by reduced circulation of the blood, because the limb is not being used. Because the limb is painful the child is reluctant to move it. For example, if a foot is affected the child will not want to walk on it.

Muscle pain: the muscle deteriorates from not being used, causing spasm and pain. In the worst cases the muscle can become contracted and is therefore unable to be used.

Diagnosis

Diagnosis will usually be based on the symptoms your child has (mainly that they are experiencing

worse pain that would usually be expected for their injury, or pain that is still present after the injury itself has healed). Some investigations or tests may be required, as explained over the page. Your child's healthcare professional will be able to discuss these with you if you have any questions.

It can be difficult to detect and diagnose cases of amplified musculoskeletal pain, because initially the pain symptoms the child is experiencing may be similar to what is expected for their injury, and the results of x-rays and blood tests for children with the condition are usually normal.

It's possible that in some cases, a diagnosis of amplified musculoskeletal pain can be delayed or missed to begin with, especially if the healthcare professionals treating your child are not experienced in treating patients with the condition.

Investigations needed

Investigations such as blood tests and further x-rays or scans may be done to exclude any other problems.

Treatment

Treatment will usually involve intensive rehabilitation therapy, including physiotherapy. This should be started as soon as possible as it's very important that any deterioration or loss of muscle function is prevented, so that your child can get back to normal movement and mobility.

Pain relief – is important so your child can begin their rehabilitation therapy. If admitted to the ward, the pain team will work with you and your child on a programme of pain management.

Rehabilitation therapy – working with the physiotherapist and the nursing team will help your child get back the use of their limb. You will be given more information about what this is likely to involve, but if you have any questions please ask your child's healthcare professional.

Other factors – it's important to identify any causes of anxiety or stress that your child may have, such as problems with school, or issues with family and friends. Research has shown that finding ways to deal with anxiety and stress can help.

Outcomes

Mild forms of amplified pain usually get better fairly quickly, but if your child's case is severe they will need to be admitted to hospital. It's very important that your child, with the support of their family, works with their healthcare professionals to stop the condition becoming a long-term problem.

Most children will be back to normal within one to two months, providing they follow the rehabilitation advice recommended by their healthcare team.

Further information

About Amplified Musculoskeletal Pain Syndrome – Children's Hospital of Philadelphia

Web: www.chop.edu/conditions-diseases/amplified-musculoskeletal-pain-syndrome/about

Useful contacts for counselling

No Limits (for children aged over 13)

Telephone: 023 8022 4224

Web: www.nolimits-southampton.org.uk

If you have any questions or concerns please contact:

The nurse practitioners: **023 8120 4991** or mobile: **07584 402438**

Ward G3: **023 8120 6486**

For a translation of this document, or a version in another format such as easy read, large print, Braille or audio, please telephone **023 8120 4688**.

For help preparing for your visit, arranging an interpreter or accessing the hospital please visit **www.uhs.nhs.uk/additionalneeds**

www.uhs.nhs.uk/childrenshospital

Version 4. Published July 2020. Due for review July 2023. 1117