



New daily persistent headache

New daily persistent headache (NDPH) is a type of persistent headache that starts suddenly and happens on a daily basis with migraine-like or tension-like features. This information sheet from Great Ormond Street Hospital (GOSH) explains the causes, symptoms and treatment of NDPH and where to get help.

What is NDPH?

NDPH was previously referred to as 'de novo' chronic headache that is, chronic headache with acute (sudden) onset from 'out of the blue'. NDPH is unique in that the headache occurs every day after it starts, and very soon becomes unremitting, often occurring in children without a prior history of headaches. Older children and teenagers can normally recall and accurately describe the exact onset of the headache, which is often abrupt or sudden. People often remember the date, circumstance and, occasionally, the time of headache onset. NDPH can mimic chronic migraine and chronic tension-type headache in its features.

The headache is often described as a pressure-like or tightening sensation. The pain is often on both sides of the head, but can also be on one side or localised to one specific area. It can fluctuate (improve and worsen) in intensity, duration and lasts more than three consecutive months. It is normally mild or moderate in severity and does not interfere with daily activities. The headaches last for more than four hours a day. Other important conditions (such as bleeding or brain tumours) can also mimic NDPH and present with a new-onset persisting headache. Therefore, these must be excluded before making a diagnosis of a primary headache disorder like NDPH. In order to help exclude other conditions, certain investigations such as magnetic resonance imaging (MRI) of the brain and lumbar puncture may need to be performed.

How common is it and who does it affect?

NDPH can begin in childhood with age of onset ranging from six years to adulthood, with an average of 35 years of age. In children and adults, it is more common in females. The literature suggests that it affects two to four per cent of adolescent females and up to two per cent of adolescent males. NDPH, like other primary headaches, may be also linked to mental health conditions such as anxiety and panic disorders. In fact, a third of children with chronic headaches will have associated problems like anxiety disorders or depression.

What causes it?

We do not fully understand the exact cause of NDPH. Some, but not all, reports suggest that the onset of NDPH can be triggered by certain events. The underlying cause of NDPH is poorly understood, with some research indicating either inflammation or the body's immune system being involved in triggering NDPH. Other studies suggest that viruses or upper respiratory infections (rhinitis, pharyngitis) may occur before the headache starts. However, understanding the potential role of viral or other infection in NDPH requires further research.



What are the symptoms?

People with NDPH will frequently have sleep disturbance, pain at other sites, dizziness, worsening anxiety and mood, and school absence. Other frequent symptoms include non-specific abdominal pain, back pain, neck pain, and diffuse muscle and joint pain. It can resemble chronic migraine in its features, with days when there is light or sound sensitivity, nausea, throbbing, or pain on just one side of the head. Sometimes, it may resemble a tension-type milder headache without any of those features.

How is it treated?

NDPH is treated like the headache it resembles, generally chronic migraine or chronic tension-type headache. There is no specific treatment for NDPH - it is difficult to control, and often these types of headaches are treated like migraines. Some common medications have been shown to be effective in studies of adult and children, including amitriptyline, gabapentin, pregabalin, propranolol and topiramate.

There are no controlled trials of preventative treatment and in those who display migraine-like features, it may be worth using migraine prophylactic treatment to reduce the risk of attacks occurring. We tend to avoid using opioid drugs like morphine due to their side effects and the possibility of causing medication overuse headaches. In those patients with NDPH as well as mental health symptoms, treatment of both conditions may lead to good outcomes. There are a number of medicines and other interventions currently in experimental trials such as occipital nerve blocks and tetracycline medications. Nevertheless, the current cornerstones of therapy are lifestyle modification, education, preventative medication, avoiding daily painkillers and attention to routine.

What is the long term outcome of NDPH?

Most adult patients with NDPH will have persistent headaches, although around 15 per cent will remit (improve) and eight per cent will have a type that comes and goes (relapsing-remitting). The outcome in children is not well studied. Unfortunately, some children will have NDPH that is unresponsive to standard headache therapies. As NDPH is often difficult to treat, it often requires a multi-faceted approach.

The headache clinic at GOSH

There is a headache clinic at GOSH, which aims to help children and young people when the diagnosis of headache is not certain and treatment has failed. Referrals need to be made by your local paediatrician to Dr Prabhakar – Consultant in Paediatric Neurology. We encourage family doctors (GPs) to make referrals via their local paediatric team. If you would like to know more about the headache clinic at GOSH, please visit www.gosh.nhs.uk/medical-information/clinical-specialties/neurology-information-parents-and-visitors/clinics-and-wards/headache-clinic or call us on 020 7405 9200 ext 0182.

Further information and support

The Migraine Trust offers support and advice to anyone affected by migraine or headaches. Call them on 020 7462 6602 or visit their website at www.migrainetrust.org. They offer specific information for children and young people.

Migraine Action also offers support and advice, and also has separate sections for children and young people. Their helpline number is 0116 275 8317 and their main website is at www.migraine.org.uk. The section for 8 to 10 year olds is at www.migraineadventure.org.uk, the section for 11 to 13 year olds at www.migraineexplorers.org.uk and the section for young people aged 14 to 17 years is at www.migrainenetwork.org.uk.