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# Headaches

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# What are headaches?

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Headaches are common in children and adolescents. A study found that by 18 years of age, more than 90 percent of children reported having had a headache, with 20 percent of children having frequent or severe headaches over a one-year period.

Headaches are rarely caused by a serious underlying medical condition.

Common causes of childhood headaches include primary headaches (which are triggered by psychosocial factors such as school or family stress), secondary headaches, as well as infections. Secondary headaches are usually related to an underlying medical problem such as a virus infection with fever, but may rarely be due to brain infection, tumour or bleeding.

## Primary headaches

### 1. Tension type headaches

Tension type headaches are classically described as pain that feels like a tight band around the head. The pain is diffused, bilateral, squeezing in nature, of mild to moderate intensity, and lasts for 30 minutes to several days. Tension type headaches may worsen due to a lack of sleep but are not associated with nausea or vomiting.

### 2. Migraine

Migraine is the most frequent recurrent headache syndrome in children. It is characterised by headaches associated with nausea, vomiting, abdominal pain and desire to sleep. The headaches are usually one-sided, throbbing in nature and lasts for hours to days. In younger children, the pain may be bilateral, over the forehead or sides of the head, and lasts for a shorter period of time. In some cases, there may be light sensitivity or visual symptoms including flashes of light or blurring of vision prior to the headaches.

### 3. Cluster headaches

Cluster headaches are always one-sided, and usually over the forehead or around the eye. The pain is severe and lasts for less than three hours. Cluster headaches are usually associated with increased eye tearing, red eyes and increased nasal secretions. They are rare in children less than 10 years of age.

### 4. Chronic daily headache

Chronic daily headache is diagnosed in children who have headaches for more than 15 days in a month. These may be due to primary headaches or medication overuse. Psychosocial evaluation and support are useful in treatment.

## How are primary headaches treated?



Medications for primary headaches can be easily bought off the counter. Bring your child to see a doctor if the headache is persistent despite medication.

### 1. Acute treatment for tension and migraine headaches

- a. Analgesics such as paracetamol and non-steroidal anti-inflammatory drugs (NSAIDs) (e.g. ibuprofen or naproxen) can be used for acute severe headache.
- b. Analgesic agents should not be consumed more than two days per week to avoid the risk of medication overuse.

### 2. Preventive treatment for migraine headaches

- a. Prophylactic treatment is used when headaches occur frequently or have significant adverse impact on your child's life.
- b. The medications include flunarizine, propranolol, topiramate and valproic acid.
- c. Before starting prophylactic treatment, your child's doctor will discuss the effectiveness and possible complications of the medications with you.

## Secondary headaches

Secondary headaches are usually caused by an underlying medical problem. In some cases, secondary headaches may provide a clue to a serious underlying condition that requires prompt intervention. Children with these conditions usually have other symptoms or signs that are worrying.

Secondary headaches in children could indicate the following conditions:

- Acute febrile illness (upper respiratory tract infection, sinusitis)
  - Head trauma
  - Acute and severe hypertension (high blood pressure)
  - Acute or chronic meningitis (brain infection)
  - Brain tumour
  - Hydrocephalus (increased fluid in the brain)
  - Intracranial haemorrhage (bleeding in the brain)
  - Idiopathic intracranial hypertension (high brain pressure)
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## Managing chronic headaches

The aim of treatment for children with chronic headaches is to help them return to their normal, everyday life. Treatment may take several months and the following measures are recommended:

1. Give headache medication only as directed by your child's doctor. Excessive use of painkillers can lead to rebound headaches (medication-overuse headaches).

2. Identify and avoid headache triggers, address sources of stress (including exams and menstrual cycle), mood or anxiety problems. Counselling or psychotherapy sessions may be required.



3. Maintain a regular sleep/wake cycle. Ensure that your child gets at least eight to 10 hours of undisturbed sleep at night.

4. Eat regular and nutritious meals that includes carbohydrates, protein, fruit and vegetables. Avoid MSG as it can trigger headaches.
5. Drink plenty of water as dehydration can lead to headaches.
6. Avoid caffeine and alcohol. Caffeine is a stimulant, so when the level of caffeine in the blood decreases, there is an increased chance of having a headache. Alcohol can be a trigger of headaches.

7. Exercise regularly. It can increase blood flow and release endorphins in your child's brain. An active lifestyle helps to reduce stress and keeps your child physically fit.



8. Keep a headache diary. This will help you and your child's doctor to track your child's progress.
9. Relax. Make space in your child's busy school schedule and encourage him or her to pursue a hobby or do a relaxing activity.
10. Have realistic expectations as the frequency and severity of the headaches may decrease over weeks to months of treatment, but may not completely disappear.



## Should I bring my child to the Urgent Care Clinic (UCC) or Children's Emergency?

Please bring your child to the UCC\* if he/she:

- Has headaches lasting two to three days despite consuming painkillers
- Is still able to interact normally with others despite his/her condition
- Has a history of migraine

\*UCC is a walk-in clinic in the community for children and adolescents up to 18 years old with urgent but non-life threatening conditions. It is open daily from 9am to 11pm (last registration at 10pm).



Please bring your child to the Children's Emergency immediately if he/she develops any of the symptoms below. Prompt evaluation by the doctor is needed to determine if there is a need for early intervention (e.g. brain scan):

- It is the worst headache ever experienced by child
- The headaches wake your child up from sleep
- Headaches are accompanied with:
  - Early morning vomiting
  - Fever with neck stiffness
  - Weakness, numbness or unsteady gait
  - Decreased consciousness or drowsiness
  - Visual disturbances (e.g. blurring of vision or double vision)



Your child's headaches can improve. Help your child live a headache-free life by encouraging him/her to lead a healthy lifestyle (i.e. exercising, sleeping and eating well) and avoiding triggers. It is also important to work closely with your child's doctor to ensure that he/she receives proper treatment.

The information provided in this publication is meant purely for educational purposes and may not be used as a substitute for medical diagnosis or treatment. You should seek the advice of your doctor or a qualified healthcare provider before starting any treatment or if you have any questions related to your health, physical fitness or medical condition.

# About the Khoo Teck Puat – National University Children’s Medical Institute (KTP-NUCMI)

The KTP-NUCMI is the paediatric arm of the National University Hospital and comprises the Departments of Paediatrics, Paediatric Surgery and Neonatology. We provide comprehensive and specialised medical and surgical services for newborns, children and adolescents, and are the only public hospital in Singapore that offers paediatric kidney and liver transplant programmes. Through a generous gift from the Estate of Khoo Teck Puat, we have set up an integrated outpatient facility with medical, diagnostic and rehabilitation services.

For more information about us, visit [www.nuh.com.sg/ktp-nucmi](http://www.nuh.com.sg/ktp-nucmi).

## Contact Us

### **24-hour Children’s Emergency**

Location: NUH Main Building, Zone F, Level 1  
General Enquiry: +65 6772 5000

### **KTP-NUCMI**

Location: NUH Main Building, Zone E, Level 2  
(Accessible via Kent Ridge Wing, Zone C, Level 2, Lift Lobby C)  
Operating Hours: 8.30am – 5.30pm (Mon to Fri), 8.30am – 12.30pm (Sat)  
General Enquiry: +65 6772 5736 Appointment Line: +65 6908 2222  
Email: [ktpnucmi\\_appt@nuhs.edu.sg](mailto:ktpnucmi_appt@nuhs.edu.sg)

### **9a Viva-University Children’s Cancer Centre**

Location: NUH Medical Centre, Zone B, Level 9  
Operating Hours: 8am – 5.30pm (Mon to Fri)  
Appointment Line: +65 6772 5030 Fax: +65 6872 4314  
Email: [cbccappt@nuhs.edu.sg](mailto:cbccappt@nuhs.edu.sg)

### **NUH Children’s Urgent Care Clinic @ Bukit Panjang**

Location: Junction 10, 1 Woodlands Road, #01-22, Singapore 677899  
Operating Hours: 9am – 11pm daily (including public holidays)  
General Enquiry: +65 6219 1538 Email: [childreucc@nuhs.edu.sg](mailto:childreucc@nuhs.edu.sg)  
Website: [www.nuh.com.sg/ucc](http://www.nuh.com.sg/ucc)

### **NUH Child Development Unit @ JMC**

Location: Jurong Medical Centre,  
60 Jurong West Central 3, Level 2, Singapore 648346  
Operating Hours: 8.30am – 5.30pm (Mon to Fri)  
Appointment Line: +65 6665 2530/2531 Fax: +65 6665 0158  
Email: [cdu@nuhs.edu.sg](mailto:cdu@nuhs.edu.sg) Website: [www.nuh.com.sg/cdu](http://www.nuh.com.sg/cdu)

### **NUH Child Development Unit @ Keat Hong**

Location: Keat Hong Community Club,  
2 Choa Chu Kang Loop, #03-01, Singapore 689687  
Operating Hours: 8.30am – 5.30pm (Mon to Fri)  
Appointment Line: +65 6769 4537/4637 Fax: +65 6665 0158  
Email: [cdu@nuhs.edu.sg](mailto:cdu@nuhs.edu.sg) Website: [www.nuh.com.sg/cdu](http://www.nuh.com.sg/cdu)

### **National University Hospital**

Location: 5 Lower Kent Ridge Road, Singapore 119074  
Tel: +65 6908 2222 Email: [contactus@nuhs.edu.sg](mailto:contactus@nuhs.edu.sg)  
Website: [www.nuh.com.sg](http://www.nuh.com.sg)



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