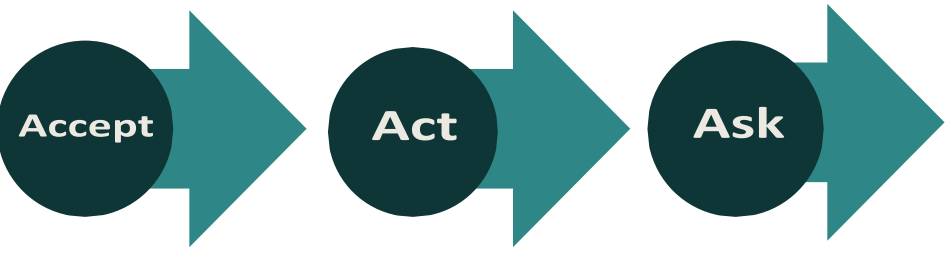
Heads up – It's time to get to grips with Headache in schools

Support for GPs



Ted Wragg TRUST

This is part of the "Heads Up" project (Ted Wragg Trust and Exeter Headache Clinic) that seeks to address the unmet need of headache in young people. See appendix.

Background

Headache disorders are second in the world in terms of impact on wellbeing in the 10–24 year age group. Up to 30% of students have problematic headache two or more times a week with impact on quality of life and school performance. The needs of young people with headache are largely unmet.

Management

1. Exclude a secondary headache.

A secondary headache is where there is an underlying identifying cause. Secondary headache is rare in children.

•	Features of cerebellar dysfunction
o	Ataxia
o	Nystagmus
o	Intention tremor
•	Features of increased intracranial pressure
o	Papilloedema
o	Night time or early morning headache and vomiting
o	Large head
•	New focal neurological deficits including recent squint
•	Seizures, especially focal
•	Personality change
•	Unexplained deterioration of school work

Fig. 1.Some indications for neuroimaging in children with chronic headache

2. Diagnose a primary headache

A primary headache is where there is no underlying identifying cause. Diagnosis is made on pattern recognition.

- Cluster headache is very rare in young people. Attacks of severe periorbital pain ¼-2 hours with agitation and autonomic features.
- Tension type headache. (17% annual prevalence). Pain is usually dull and can be anywhere in the head. Hours to days. No other features.
- Migraine is more problematic. (11% annual prevalence). May include aura 10%. Nausea/vomiting, light, sound, movement sensitivity. Mid-teens is most common age of onset of all migraine. Strong family history. Headache can be mixed.

- 0.5-1% of young people have medication overuse headache. (analgesics> 15 days/month; Triptans > 10 days/month.
- Migraine and tension headache sit within a complex biopsychosocial framework. Co morbid mental health is common. Always explore mental health, family, stress factors, school.

	Childhood migraine	**Migraine in adults**
Duration of attacks	1–72h	4–72h
Frequency of attacks	Increases with age	Higher than in children
Quality of headache	Often vague or not able to describe	Throbbing is common
Site of maximum pain	Frontal in at least 50%	Unilateral in the majority
Severity of pain	Best assessed by effect of pain on the child's behaviour	Well described
Associated abdominal pain	Common	Rare
Adverse impact on	Schoolwork/attendance	Employment and work

Fig. 2. Distinguishing features of childhood migraine compared with migraine in adults.

3. Offer Practical advice for tension headache and migraine.

- Try and keep things constant. Of particular importance is regular hydration and to drink water regularly during the day. Meals shouldn't be skipped, particularly breakfast.
- Regular sleep patterns are important – go to bed and get up at the same time every day.
- Try to avoid too much screen time and certainly not within an hour of bedtime as this can disturb sleep.
- Eat healthily. Avoid fizzy drinks and drinks with artificial colouring.
- A diary may be helpful to make a note of any headache triggers, particularly for migraine.
- Encourage plenty of exercise.
- Explore anything the child may be worrying about.
- Consider asking school for a health care plan when headache is problematic.

4. Treatment

Tension type headache

Analgesia/NSAI. Warn about medication overuse headache. Amitriptyline for prevention. See below for dosage.

Migraine

Consider antiemetic if nausea is present. Gastric stasis can inhibit drug absorption.

Drug	Dose	
	Under 12 years	**12–18 years**
Paracetamol	10–20mg/kg, Max 4 times/day	500–1000mg, Max 4 times/day
Ibuprofen	7.5-10mg/kg, Max 4 times/day	400mg, Max 4 times/day
Cyclizine (oral or Rectal)	25 mg, Max 3 times per day	50 mg, Max 3 times per day
Metoclopramide	100mcg/kg, Max 3 times/day	2.5–10mg, Max 4 times/day
Sumatriptan nasal spray (licenced)		10mg, Max twice/day
Childrens BNF lists oral Sumatriptan 6 years and above and oral zolmitriptan 12 years and above. Large safety data but both not licensed due to large placebo effect.		

Fig. 3. Medication used in acute migraine.

Drug	Dose	
	Under 12 years	**12–18 years**
Pizotifen	0.5–1.0mg/day Single dose at night	1.5–3.0mg/day Single dose at night
Propranolol	0.5–1.0mg/kg Max 4.0mg/kg/day	2–3mg/kg/day Max 160mg/day
Amitriptyline	0.25-1.0 mg/kg/day	Up to 50mg/night
Topiramate	1-2 mg/kg/day	2–3mg/kg/day Gradual increase to target dose

Fig. 4. Medication used in preventative treatment of migraine.

- Preventative treatment should be used for at least 6-8 weeks in optimum dose before it can be judged as effective or unhelpful.
- If helpful, the course of preventive is usually 6-12 months, but can be repeated if needed.

5. Other associated conditions

Cyclic vomiting

- Usually a family history of migraine.
- Symptoms often begin in the middle of the night. Girls are more affected than boys.
- Begins at approximately 5 years of age and resolves by puberty.
- Recurrent stereotyped attacks (>5) of severe nausea and vomiting associated with pallor, lethargy +/- autonomic symptoms.
- Explosive, frequent attacks of nausea and vomiting lasting hours to days.
- Symptom free between attacks.
- History and examination do not show signs of gastrointestinal disease.
- Conventional migraine preventative effective in reducing attacks frequency.

Abdominal migraine

- Also known as cyclic abdominal pain but is less common and less severe than cyclic vomiting.
- More common in children aged 7 to 13 years with a family history of migraine.
- Recurrent, episodic, attacks (>5) of abdominal pain lasting 1 hour up to 3 days.
- Abdominal pain has a dull character usually in a midline peri-umbilical location but can be more diffuse. Pain is sufficiently severe to affect daily activities.
- Symptoms of anorexia, nausea, vomiting or pallor are present.
- Treatment is with conventional migraine preventative medication.

Benign paroxysmal vertigo of childhood

- More commonly affects young children. Attacks begin suddenly, last minutes only and may occur in clusters lasting days to weeks. Investigation needs to rule out a secondary cause.
- Paroxysmal, recurrent, untriggered, attacks of severe vertigo +/- gait unsteadiness without warning.
- During attacks the child may:
  - Appear frightened and find difficulty maintaining balance.
  - Have nystagmus during the attack but normal neurological examination between attacks.
- Have associated pallor, nausea and vomiting.

Further resources

A video to support this document https://www.youtube.com/watch?v=5rnlwhO12mg

The Migraine Trust is the patient's organisation with useful advice - www.migrainetrust.org

The Exeter headache clinic contains guidelines and patient information sheets - http://www.exeterheadacheclinic.org.uk