

Headache Pathways

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Exeter

With aura

Without aura



To a man with a hammer
Everything is a nail



All headache
is migraine

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Cephalalgia

An International Journal of Headache



www.cephalalgia.org

The International Classification of Headache Disorders

2nd Edition



**Blackwell
Publishing**

Classifying headache

IHS Headache classification

Primary

- Migraine
- Tension type
- Cluster

Secondary

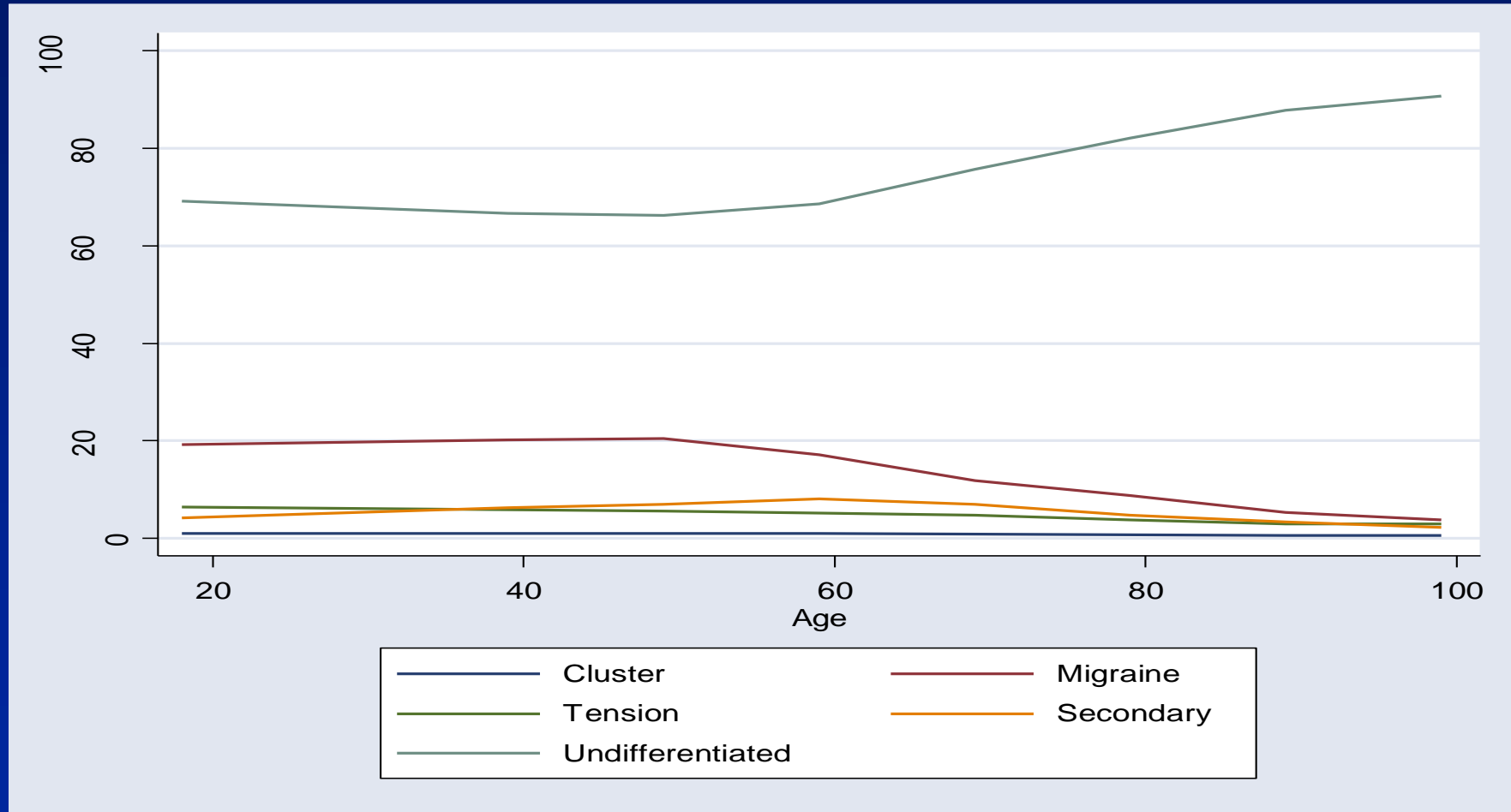
- Traumatic
- Vascular
- Non-vascular
- Substance induced
- Infection
- Metabolic
- Facial structures

What do people think when they present with headache?

- I need glasses (<1% headache due to undiagnosed refractive errors)
- Its my blood pressure
- I have a tumour

What do GPs think patients have?

Kernick 2009



What do patients have when they present to GP with headache?

- 80% migraine
- 15% Tension type headache
- 5% secondary headache

Is it a tumour?



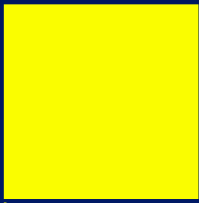
Red Flags

Probability of significant pathology $>1\%$.
Need urgent investigation



Orange Flags

Headache presentations where probability is likely to be 0.1% and 1%. Need careful monitoring



Yellow Flags

Probability of underlying pathology is $<0.1\%$ but above background.

Needs appropriate management and follow up
there are no green flags

Headache and tumour

- Headache prevalence with tumour 70%+
- Headache at presentation 50%
- Headache alone at presentation 10%

(Iverson 1987)

Population 100,000 adults each year:

□ 220,000 population headaches

□ 4000 GP headaches

□ 1 tumour will present as isolated headache

Risk of brain tumour and headache presenting to primary care (Kernick 2008)

Headache overall – 0.09%

Non headache - 0.02%

	Risk %	
	Undifferentiated headache	Primary headache
All ages	0.15%	0.045%

Risk of brain tumour and headache presenting to primary care (Kernick 2008)

	Risk %	
	Undifferentiated headache	
Overall	0.15%	
Under 50	0.08%	
Over 50	0.28%	

Scan when advantages over weigh disadvantages

The advantages:

- Better management - improved quantity and quality of life if positive
- Allay anxiety - reassurance if negative

The disadvantages

- Resource implications
- Exposure radiation with CAT scan
- Exposes incidental abnormalities

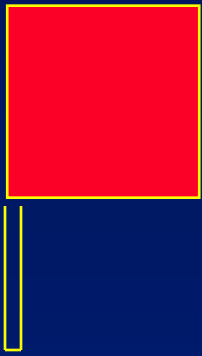
Population 0.6- 6% average 2.7% (Morris 2009)
GP requests 10% (Thomas 2010)

Luftwaffe pilots (n-2370) Weber 2006

- 93% normal (25% variations of norm)
- 6.7% abnormalities
- 56 cysts; 13 vascular abnormalities; 4 adenomas; 4 tumours

In reality the inputs are complex

- Limited poor quality evidence base
- Expert opinion
- Medico-legal case law
- Patient-doctor characteristics and approach to uncertainty
- Organisational factors



Do something now

- Meningitis
- Thunderclap headache
- Temporal arteritis
- Carbon monoxide
- Malignant hypertension

Se: 2 +c
Volume Rendering No cut

M 70 294803
Mar 16 2004

DFOV 20,5 cm
STANDARD
433/7

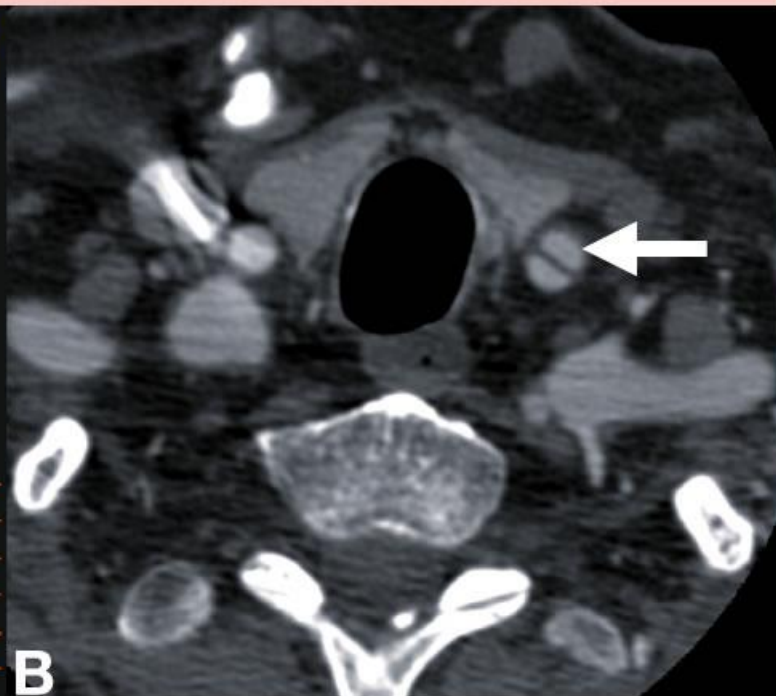
L
A
S



No VOI
kv 120
mA 315
1,4
1,2 mm 0,75; 1/0,8 sp
Tilt: -18,5
11:43:18 AM
W = 644 L = 324

A

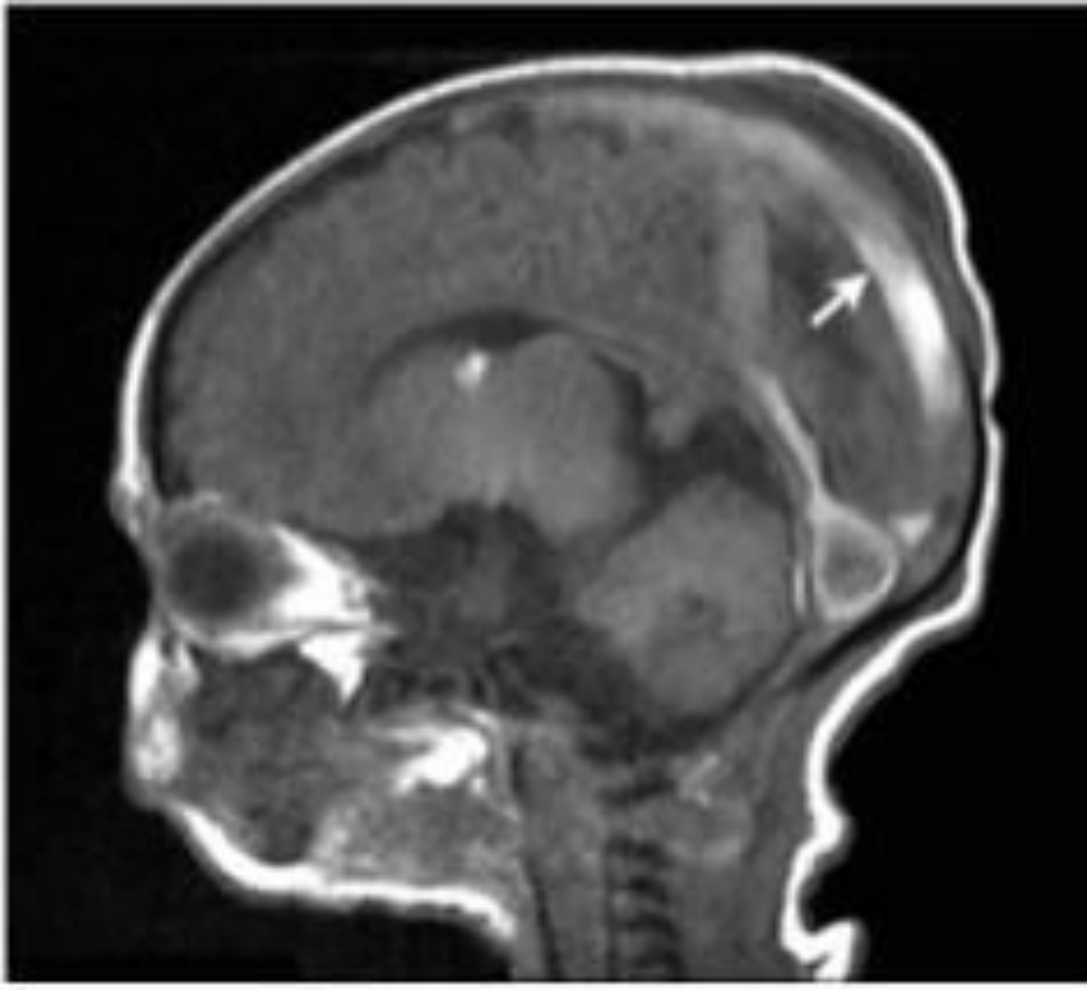
IA

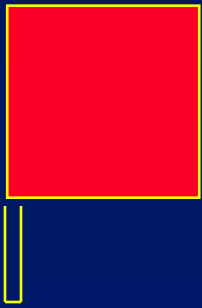


B



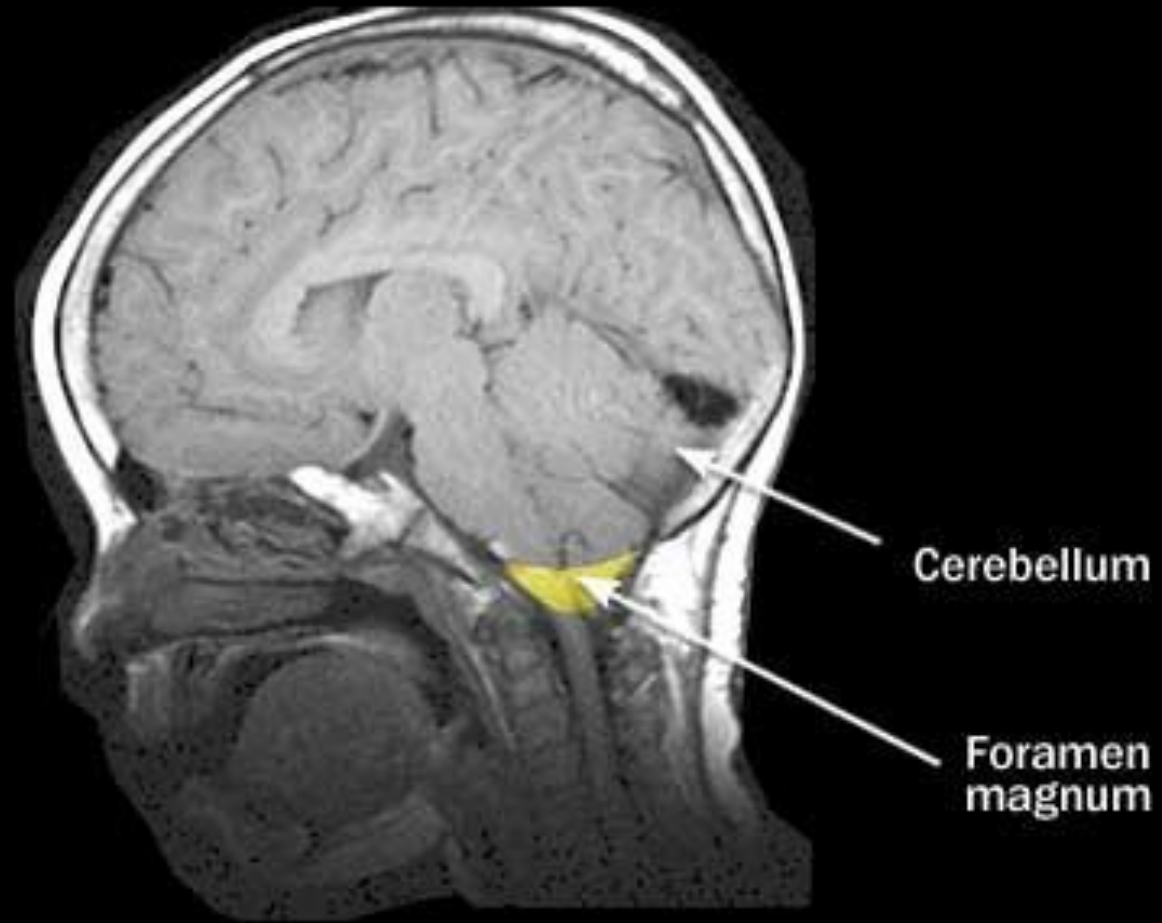
C





Do something soon

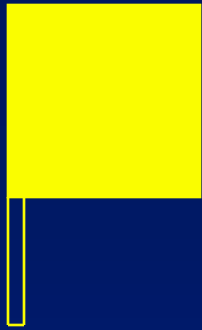
- Headache with abnormal neurological examination
- Headache with recent history of fits
- Headache with orgasm (first presentation – now)
- History of cancer elsewhere or or HIV
- Exercise induced headache (not pre orgasmic)
- Precipitated by Valsalva manoeuvre, cough





Keep close eye and think carefully

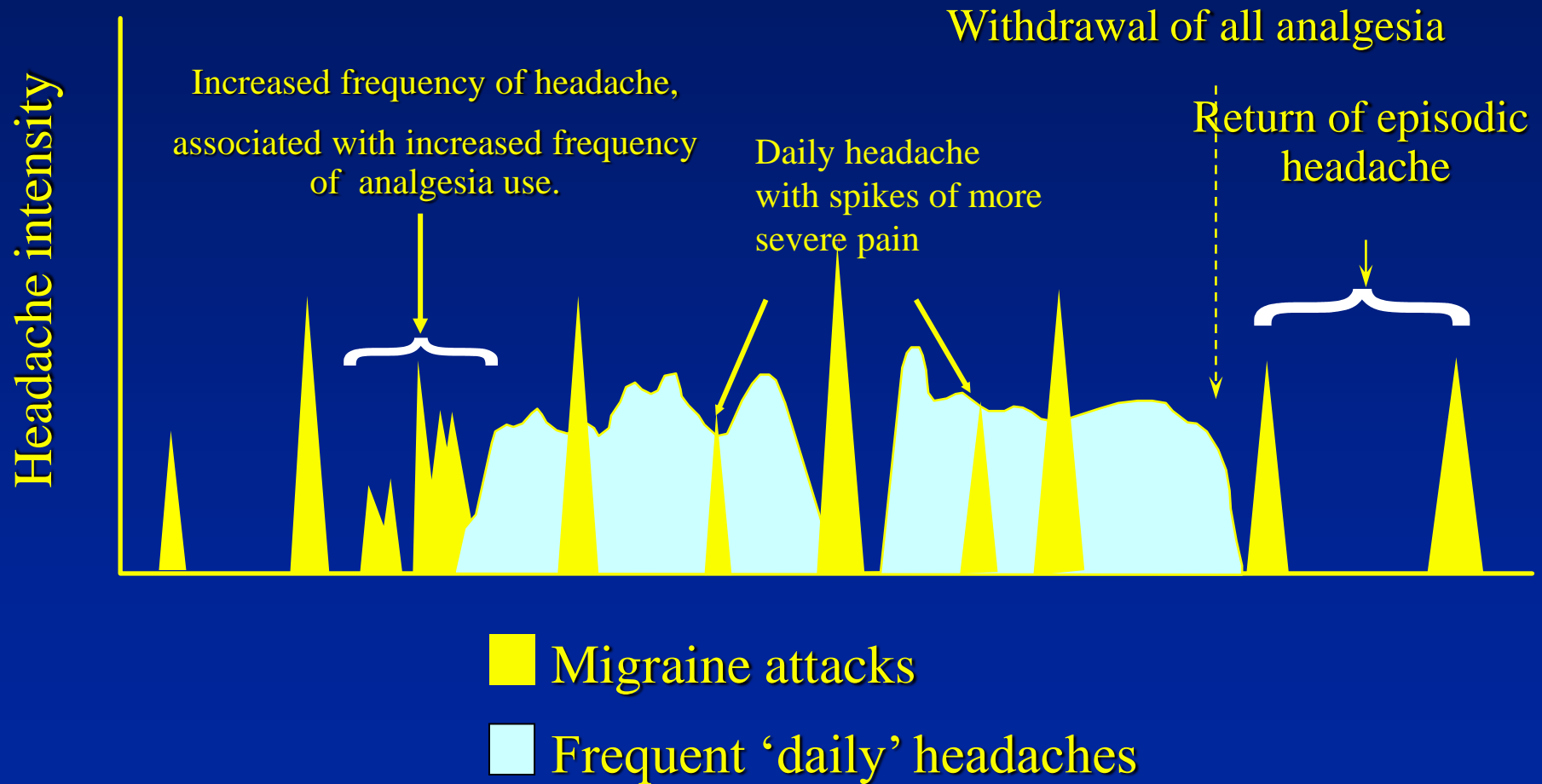
- Headache with significant change in pattern
- Awakes from sleep
- New headache over 50 years
- New Cluster headache
- Worse on standing
- *If a primary headache diagnosis has not emerged in an isolated headache after 6-8 weeks*



Diagnose a primary headache

- Exclude medication overuse headache
- Diagnose migraine, Tension type or Cluster

Medication overuse headache



Simple Diagnostic aid

- Migraine – *have to lie down*
- Tension headache – *can keep going*
- Cluster Headache – *have to bang head*

Im:1 (1/1)

S

Im:1
DERIVED\SECONDARY
512x512

EX: 000001
2005/10/16
14:22

Ex:000001
2005/10/16
14:22



A

P

100 mm

W:185 L:28
kVp:140 mA:111 ms:2890

Loc:172.50mm ST:2.00mm
Original 512x512 (1.00x1.00mm)
Deriv: DCM_WEB: PEG lib Lossy_Quality=80;

CT
Pos:HFS
Individually captured images

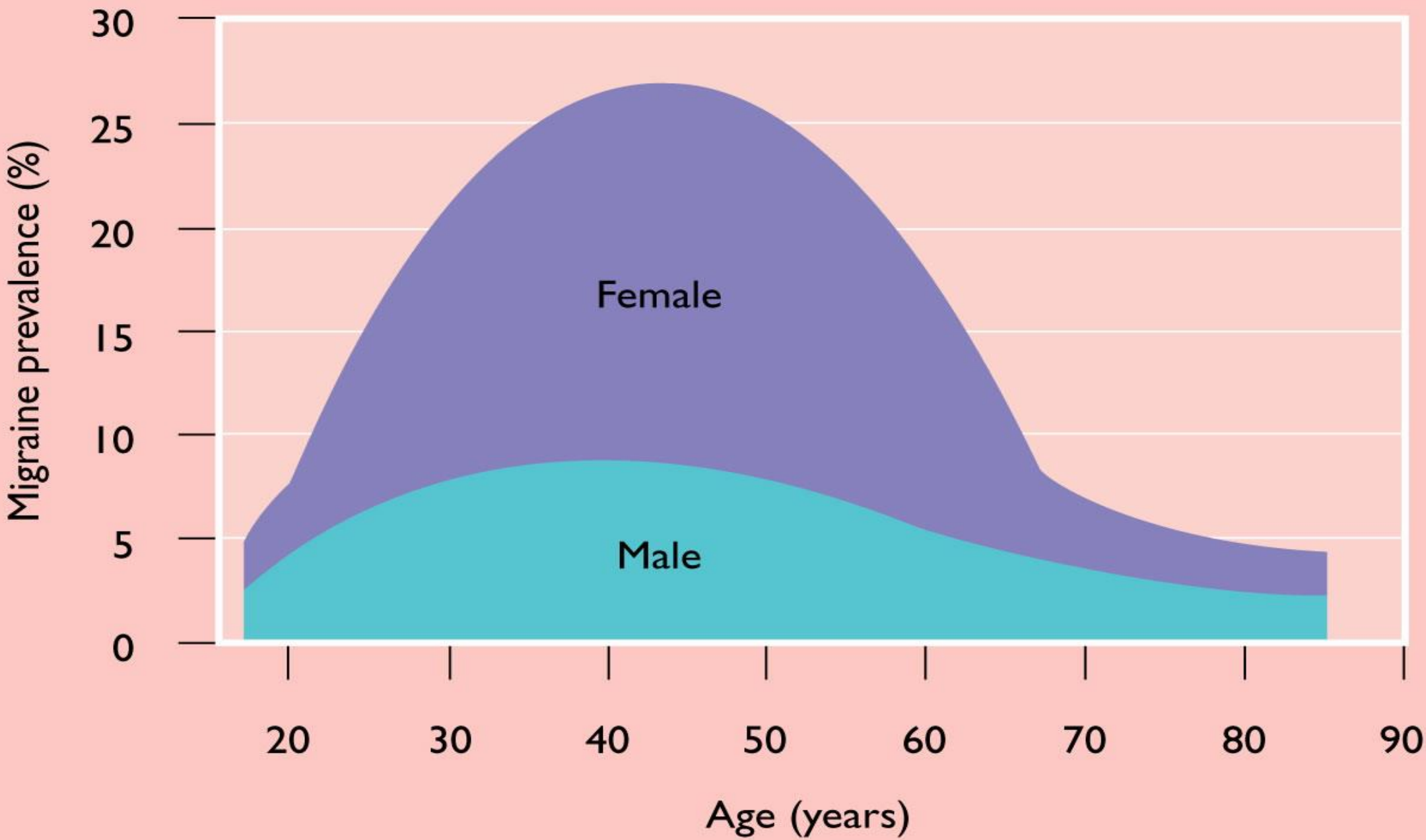
Voxar 3D

Formal Migraine

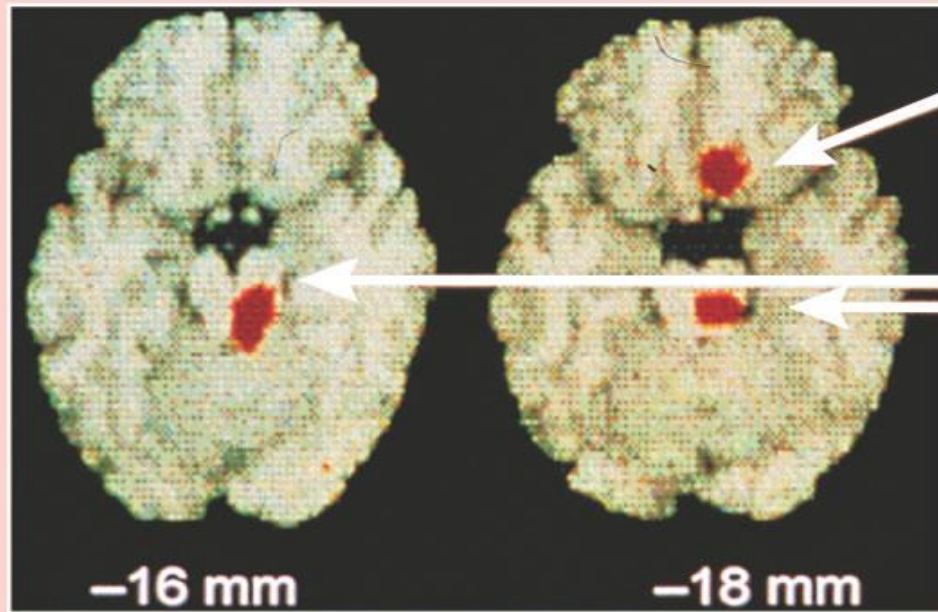
- 4-72 hours
- Two of : unilateral, pulsating, moderate or severe pain, aggregation by physical activity.
- At least one of: nausea/vomiting, photophobia, phonophobia.

Other diagnostic pointers for migraine

- I feel nauseated
- I don't like light or sound
- Movement makes things worse



Dysfunction of brain stem pain and vascular control centers



Pain perception*

■ Anterior cingulate cortex

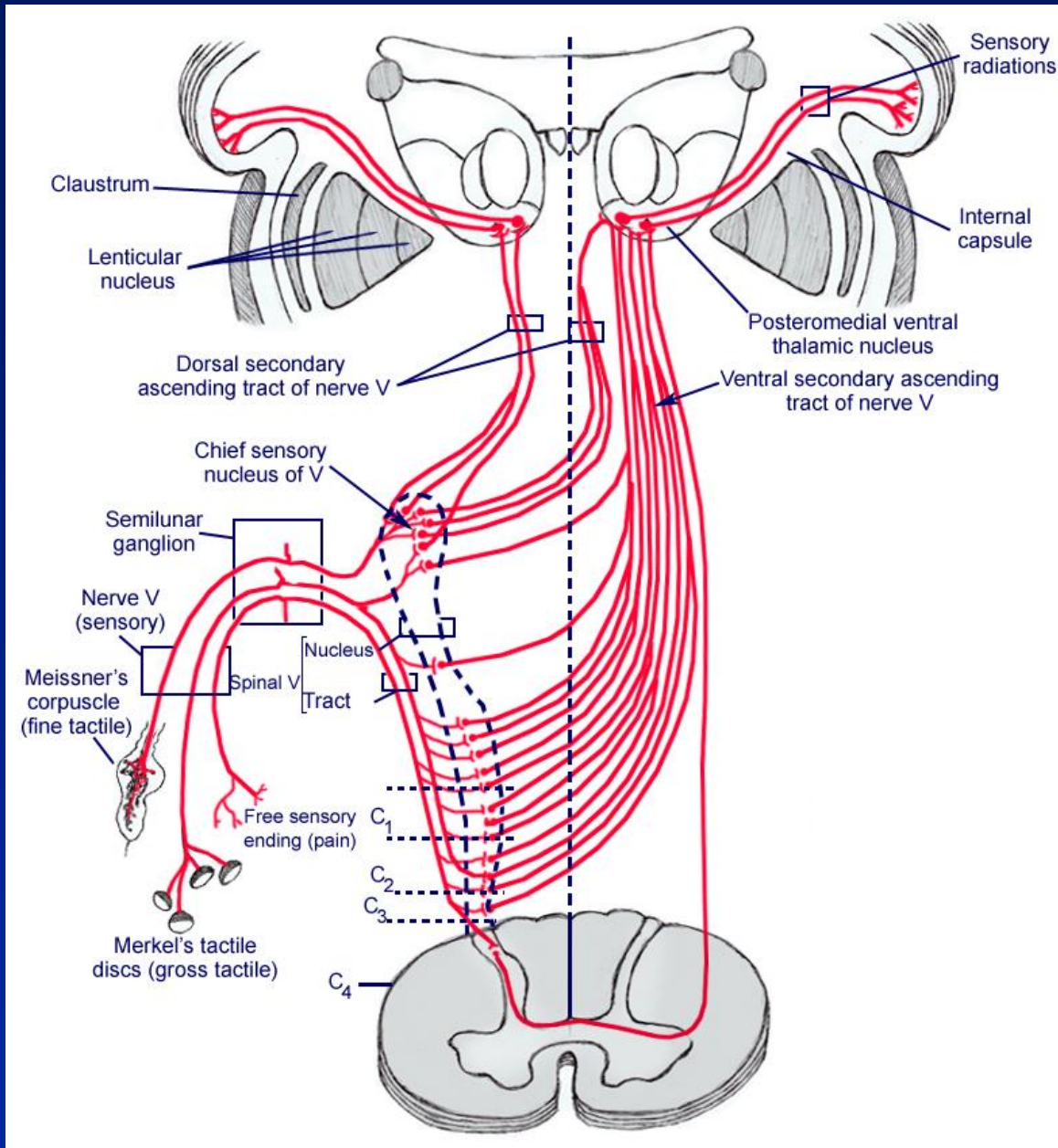
'Migraine generator'*

■ Raphe nuclei

■ Locus coeruleus

■ Periaqueductal gray

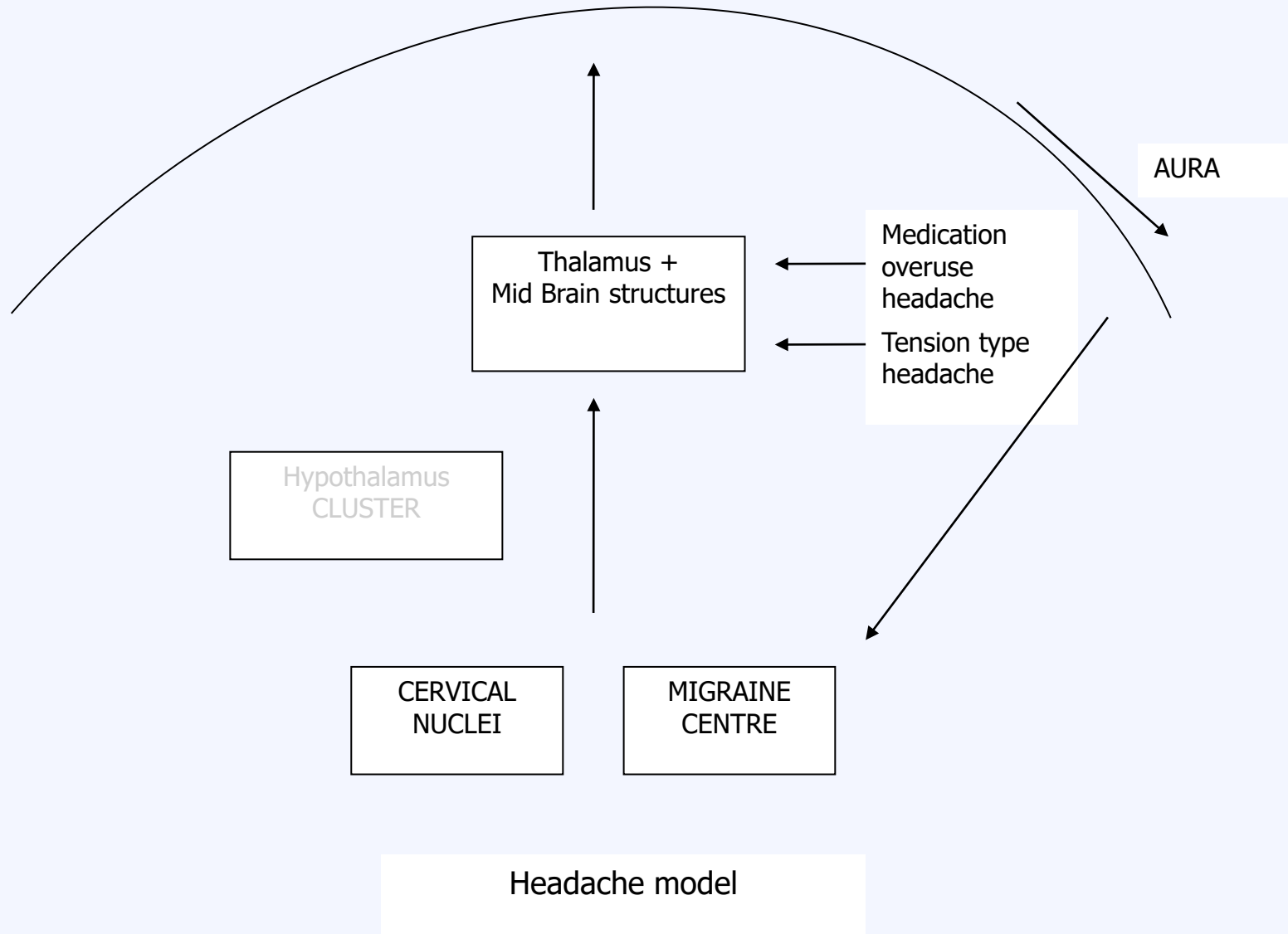
*Areas of red indicate cerebral blood flow increases ($p < 0.001$)



Activation anywhere in the system can lead to output in any other part of the system and vice versa

Formal Tension Type

- 30 minutes – 7 days.
- 2 of : bilateral, non-pulsating, mild/moderate, not aggravated by activity.
- No nausea, vomiting, photophobia, phonophobia.



Migraine treatment

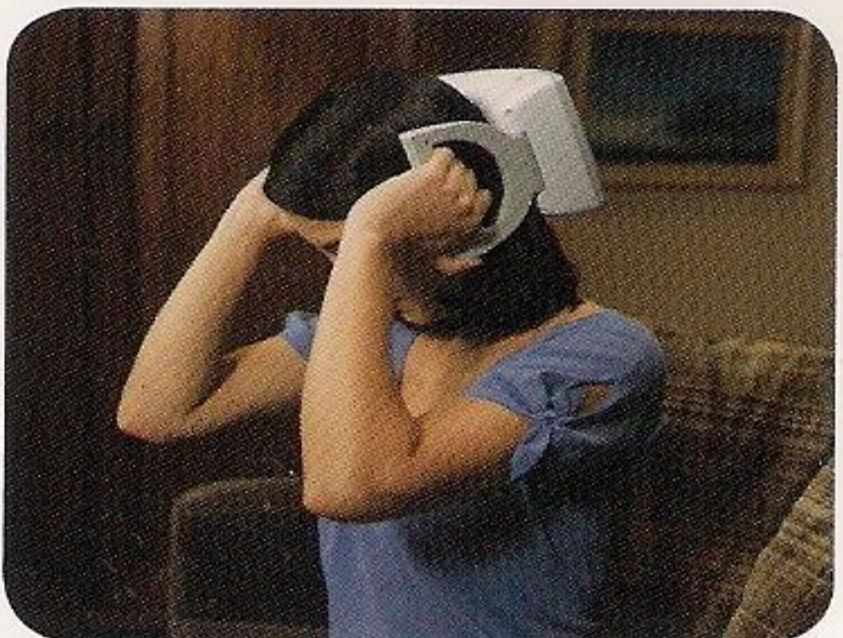
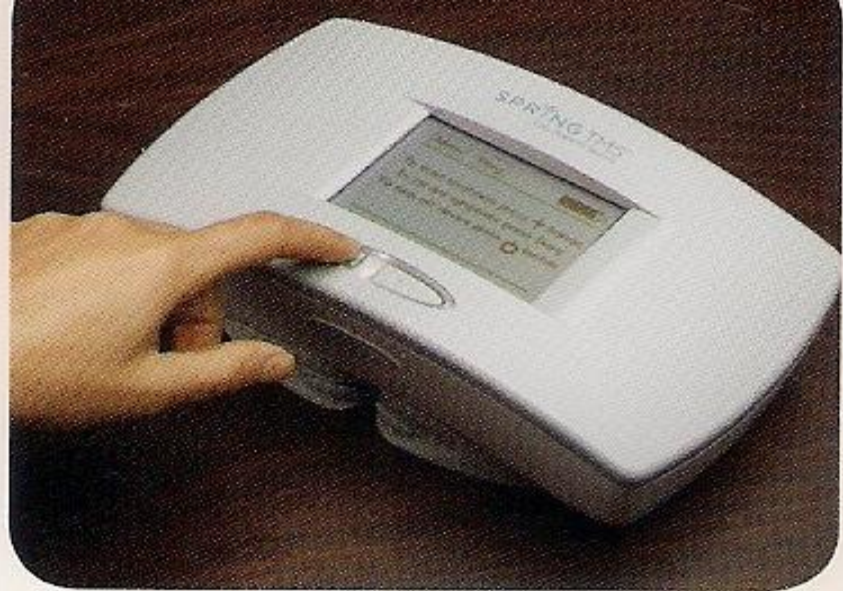
Acute

- Paracetamol/Asp/Domperidone
- Rectal NSAID/Domperidone
- Triptan



The Triptans

- Tablets, melts, nasal spray, injection.
- Side effects
- Failure response is not a class effect
- Treat onset of pain
- Over 65 years?



Migraine prevention

□ Beta blocker

□ Amitriptyline

□ Topiramate

GPwSI?

- Not secondary headache exception medication overuse headache
- Unsure of diagnosis if red flag excluded
- Primary headache difficult to treat
- ? New cluster

Five key questions

- How many types of headache do you get?
- Is there a family history of troublesome headache?
- What pain killers are you taking?
- What is the impact of your headache?
- What do you think is causing it?

Two key examinations

- Blood pressure

- Fundoscopy

One key delaying tactic

- Go away and keep a diary
- Make a double appointment next time