Adolescent Alcohol & Drug Use: Epidemiology, Prevention, Early Intervention, & Treatment

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Educational Objectives:
As a result of viewing this videoconference, clinicians will be able to:
1. Counsel patients and parents to delay or decline initiation of use of marijuana, alcohol and tobacco;
2. Screen, intervene, and/or refer appropriately for chemical use
3. Connect patients who may not be eligible for internal services to resources in the community

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Resources:
- National Institute on Drug Abuse (NIDA) “Marijuana Teens” brochure
Management of Migraine and Tension Headaches in Adults

Featuring:
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Educational Objectives:
As a result of viewing this videoconference, clinicians will be able to:

1. Follow the Headache Treatment Guidelines for Adults and effectively communicate goals of headache treatment with patients.
2. Use first line abortive and preventive treatment for headaches effectively.
3. Refer, prescribe, and/or monitor erenumab treatment according to the inclusion and exclusion criteria.

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Included in this Handout:
- Headache Treatment Algorithm for Adults

Resources:
- https://tinyurl.com/HeadacheAlgorithm2018
**HEADACHE TREATMENT ALGORITHM FOR ADULTS**

**Imaging:** Typical tension / migraine headaches do **not** need imaging in the absence of red flags (chance of finding abnormality is less than incidental rate of abnormalities in asymptomatic patients).

**Red Flag Symptoms – call Neurology P- phone for advice / consider imaging**

<table>
<thead>
<tr>
<th>S</th>
<th>Systemic symptoms (fever, weight loss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Neuro symptoms (confusion, altered level of consciousness/ abnormal neuro exam)</td>
</tr>
<tr>
<td>O</td>
<td>Onset (sudden, abrupt or split second, time to peak 1 minute or less)</td>
</tr>
<tr>
<td>O</td>
<td>Older patient (new onset or progressive especially if &gt;50 yrs)</td>
</tr>
<tr>
<td>P</td>
<td>Previous history of headache different? (Change in clinical features or abrupt changes frequency or severity with new symptoms that are not typical for the person)</td>
</tr>
<tr>
<td>P</td>
<td>Positional or postural (headache only when supine or only when standing)</td>
</tr>
<tr>
<td>P</td>
<td>Precipitated by cough, sneeze or Valsalva (Exercise, Sexual Activity in first instance of headache)</td>
</tr>
<tr>
<td>P</td>
<td>Papilledema</td>
</tr>
<tr>
<td>S</td>
<td>Secondary risk factors (HIV, systemic cancer)</td>
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</tbody>
</table>

**Abortive Treatment – Refer to Smart Rx: Headache Treatment, Adult**

**General principles**
- Treat early in the attack
- Treatment of no more 2-3 days per week, no more than 9 days a month to avoid rebound
  - If more, needs prophylactic treatment as well
- Try to re-dose if needed for relief within 2 hours
- Combo treatment may be more effective (eg. NSAID + triptan or triptan + antiemetic)
- Do not use narcotics, barbiturates, benzodiazepines
- Consider tempo of **time to peak headache** in choosing medication
  - Rapid onset headache = consider injectable or nasal spray over oral

**Abortive Drug and Dose**

<table>
<thead>
<tr>
<th>NSAIDS</th>
<th>Ibuprofen 800 mg – 1 tab TID with food as needed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drinking a caffeinated beverage can be effective</td>
</tr>
<tr>
<td></td>
<td>Naproxen 500 mg- 1 tab BID with food prn pain</td>
</tr>
<tr>
<td></td>
<td>Nabumetone 500 mg- 1 tab BID with food prn pain</td>
</tr>
<tr>
<td>Triptans</td>
<td>Sumatriptan 50-100 mg PO (max 200 mg daily), 5-20 mg nasal spray, or 6 mg injections (may repeat in 2 hours)</td>
</tr>
<tr>
<td></td>
<td>Rizatriptan 10 mg PO (may repeat in 2 hours - max 30 mg daily) (5mg if on propranolol)</td>
</tr>
<tr>
<td></td>
<td>Naratriptan 2.5 mg (may repeat in 4 hours - max daily 5 mg)</td>
</tr>
<tr>
<td>Antiemetics</td>
<td>Prochlorperazine 10 mg PO, 10-25 mg PR</td>
</tr>
<tr>
<td></td>
<td>Metoclopramide 10-20 mg PO</td>
</tr>
</tbody>
</table>

**Precautions**
- Avoid in anticoagulation
- Avoid in hx of stroke or MI, uncontrolled HTN, hemiplegic or basilar migraine, pregnancy. Triptan overuse >10 days per month.
- Rare risk serotonin syndrome with SSRI.
- Hx of Parkinsonism, dyskinesia
Criteria for Migraine Prophylaxis: (see suggested visual “step-by-step” that follows)

- Explain goals of therapy:
  - At least 50% reduction of headache (not elimination); benefit takes time at adequate dose
  - Self-care is key; connect with resources to make lifestyle changes and identify personal triggers

- Generally, >4 headaches per month and/or headaches lasting > 12 hours and/or headaches causing poor quality of life, disability and/or missed days of work; hemiplegia migraine, migraine with brainstem aura, migraine with prolonged aura consider prophylaxis even if less frequent

- **Prophylaxis options should all be tried for 3 months on a therapeutic dose.** Recommend using each medication at an effective dose for >4 weeks before assessing benefit

- If patient having rebound headache from daily or near daily use of abortive medication, start prophylaxis and advise patient they must reduce abortive use to no more than 2 times/week or prophylaxis will not help.

- Consider discontinuing estrogen-containing birth control before initiating preventive treatment; especially consider discontinuing estrogen-containing birth control in women with aura-associated migraine (neurologic deficits) and other stroke risk factors. In women with no other stroke risk factors and migraine with aura, who find birth control helpful in controlling menstrual related migraine, OCPs containing less than 20 μg of ethinyl estradiol can be continued.

<table>
<thead>
<tr>
<th>Prophylactic Drug</th>
<th>Starting Dose</th>
<th>Rate of titration</th>
<th>TARGET daily dose</th>
<th>Monitoring or Counseling</th>
<th>Adverse Drug Reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riboflavin (vitamin B2) (usually with Magnesium)</td>
<td>200 mg BID NA 400 mg</td>
<td>Avoid in renal impairment.</td>
<td>Yellow-orange discoloration of urine; urinary frequency, diarrhea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium oxide</td>
<td>400 mg daily NA 400 mg daily</td>
<td>Avoid in renal failure</td>
<td>Diarrhea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nortriptyline</td>
<td>10 mg QHS 10-25 mg q7-14 days 30-100mg</td>
<td>Avoid in ages &gt;=65 yo, closed angle glaucoma, may lower seizure threshold</td>
<td>Weight gain, constipation, confusion, dry mouth, blurred vision, Qtc prolongation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propranolol</td>
<td>10mg bid or 80mg LA daily 20-40 mg qWeek 120-240mg</td>
<td>Avoid in asthma, diabetes type 1, heart failure, Raynaud’s. Use with caution in depression. Monitor heart rate at baseline and with dose changes</td>
<td>Exercise intolerance, hypotension, bradycardia, decreased libido</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topiramate</td>
<td>25 mg QHS 25 mg qWeek 100 mg</td>
<td>Preconceptual counseling. Makes estrogen contraceptives less effective. Add prenatal vitamin, with folic acid. Advise hydration. Baseline and periodic bicarb; routine weight. Requires renal dosing</td>
<td>Cognitive impairment, sedation, weight loss, paresthesias, kidney stones, glaucoma, teratogenic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valproate</td>
<td>250 mg BID 500 mg Q1-2 weeks 500-1000 mg</td>
<td>Avoid in women of child-bearing age. Baseline and initially every 2 months x 6, then annually: LFT, CBC with diff and plt; VPA level with dose changes and annually; routine weight</td>
<td>Sedation, weight gain, PCOS, alopecia, hepatotoxicity, pancreatitis. Is teratogenic.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Venlafaxine&lt;sup&gt;4&lt;/sup&gt;</td>
<td>37.5 mg SR daily</td>
<td>37.5 mg q week</td>
<td>75-150 mg</td>
<td>Lowers seizure threshold</td>
<td>Drowsiness, nervousness, nausea, mydriasis, increased blood pressure/heart rate, decreased libido</td>
</tr>
</tbody>
</table>

<sup>1</sup>Safe for use in pregnancy  
<sup>2</sup>Can be used for tension headache prophylaxis  
<sup>3</sup>Contraindicated in women of child bearing age not on contraception  
<sup>4</sup>2nd line prophylactics  
<sup>5</sup>Ideal target dose is 600 mg daily. 200 mg formulations are available OTC as Mag oxide or Mag citrate

**Late-line options:**
- **Botulinum toxin** is only indicated in patients with chronic migraine (>15 headache days) with inadequate response to ≥3 prescription prophylactics.
- **CGRP antibody medication** is costly and is only indicated in chronic or severe episodic migraine after 3 prophylactics (2 of which are considered first line) have been tried. Botox should usually be considered in these patients.
  - **CGRP antibody medication exclusions:** patients with HTN; CV disease; pregnant or intend to be; BMI < 18 or > 40; elevated LFTs; opiate, barbiturate use

**Criteria for Referral to Specialty Care**
- Patient failed adequate trial of three first line preventive medications
- Unusual headache syndrome (example: cluster, hemicrania continua) for diagnosis and treatment plan
- Patient needs reassurance and/or support of treatment plan

Note: expectation is for one-time consultation with return to PCP for ongoing management – please explain to patient when making referral.

**Treatment in Other Situations**

**Treatment of Menstrual Migraine:**
- Start 2 days before anticipated period
- Naproxen 500 mg BID x 10 days (can start 5 days before period)
- Sumatriptan 25 mg TID x 5 days
- Naratriptan 1 mg BID x 5 days

**Treatment of Migraine Lasting >72 hours:**
- Prednisone 40-60 mg, tapered by 10mg per day for 6 days until discontinued, with omeprazole for side effect acid reflux

**Treatment of Headache in Pregnancy:**
- Acetaminophen, metoclopramide, codeine can be used
- Sumatriptan can be used in 1<sup>st</sup> trimester

**Treatment of Insomnia:**
- Melatonin 3 mg QHS has been found to reduce headache frequency >50% in one study

**Medication Overuse Headache**

The above non-triptan methods (Naproxen for 10 days, prednisone taper) can also be used to bridge people from medication overuse to recommended usage of abortive medication to <9 days per month.
ADULT HEADACHE CARE – STEP-BY-STEP APPROACH

Red Flags?
- Yes → Image
- No

Discuss & Educate
- Rebound risk if ≥ 2 days out of 7 using Abortive Tx
- Self-Care: Identify triggers; make lifestyle changes

# Headache Days / Month?
- Less than 4 days / month
- Greater than 4 days / month

Start Abortive Therapy
- Treat early in attack
- Re-dose if needed within 2 hrs
- Combo Tx may be more effective (eg. NSAID + Triptan OR triptan + antiemetic)
- If rapid onset, consider nasal spray or injectable
- No narcotics, barbiturates, benzodiazepines

Start Preventive Therapy
- Goal: ≥ 50% headache reduction — takes time
- Abortive Tx no more than 2 days/week to prevent rebound
- Use Tx for at least 3 months at effective dose (highest evidence level)
- Use each Tx at effective dose for > 4 weeks before assessing benefit
- Select Rx based on other medical conditions

Abortive Therapy Recommendations
- NSAID
- Triptan
- Refer to detailed table for dose, cautions OR Refer to SmartRx: Headache Treatment, Adult

Preventive Therapy Recommendations
- See high-level table below for general recommendations.
  Refer to detailed table for titration, cautions OR Refer to SmartRx: Headache Prevention, Adult

<table>
<thead>
<tr>
<th>Patient Characteristics</th>
<th>Recommended Rx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety / Depression</td>
<td>Nortriptyline (Tension Headache)</td>
</tr>
<tr>
<td>Has HTN and / or Pregnant</td>
<td>Propranolol</td>
</tr>
<tr>
<td>Weight: Normal to Obese No Hx Renal Calculi</td>
<td>Topiramate</td>
</tr>
<tr>
<td>Weight: Normal Only; Beyond Child Bearing Age; Bipolar</td>
<td>Valproate</td>
</tr>
</tbody>
</table>

If refuse Rx: Consider Class B Evidence OTC
- Magnesium
- Vitamin B2
In patient presenting to the outpatient clinic with acute severe headache that cannot effectively be treated with oral agents, the following injectable medications are available in injection clinic and should be considered in combination. No Narcotics.

<table>
<thead>
<tr>
<th>Drug and Dose</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>#1</strong> Ketorolac 30 – 60 mg IM</td>
<td></td>
</tr>
<tr>
<td><strong>#2 Add an antiemetic:</strong></td>
<td></td>
</tr>
</tbody>
</table>
| Metoclopramide 10 mg IM x 1 | • Risk of use in the elderly  
• Hx of dystonic or dyskinetic reaction, or Parkinsonism |
| OR Promethazine 25- 50 mg IM |  |
| OR If patient has Hx of dystonic or dyskinetic reaction, or Parkinsonism: Ondansetron 8 mg IV | • Use sparingly, risk of severe tissue injury  
• Hx of dystonic or dyskinetic reaction, or Parkinsonism |