**PHARMACOLOGIC MANAGEMENT: OPIOIDS**

- Sore throat
- Procedure-associated pain
- Exacerbation of chronic pain, especially in those with preexisting serious illness

**PAIN SYNDROMES COMMONLY REPORTED DURING COVID-19**

- Arthralgias/myalgias due to infection, rigors
- Chest/thoracic/rib pain associated with persistent, severe cough
- Headache

**PHARMACOLOGIC MANAGEMENT: ACETAMINOPHEN**

- Antipyretic and analgesic but not anti-inflammatory
- Hepatic toxicity at doses ≥ 4000 mg per day or lower in elderly or those with liver disease

For patients quarantined at home, educate regarding acetaminophen content in many over-the-counter medications and the potential for overdose. Medications for a variety of conditions often contain acetaminophen:

- SLEEP
- COUGH
- LETHARGY
- ARTHRITIS
- COLD
- HEADACHE

**PHARMACOLOGIC MANAGEMENT: NSAIDS**

- NSAIDs are antipyretic, analgesic, and anti-inflammatory
- The NIH COVID-19 Treatment Guidelines recommend that “persons with COVID-19 who are taking NSAIDs for a co-morbid condition should continue therapy as previously directed by their physician.”

**THERE ARE RISKS IN TAKING NSAIDS FOR ANYONE WITH A SERIOUS ILLNESS:**

- Stroke/MI, particularly in people with pre-existing risk factors or a prior history
- Gi Bleed
- Acute Kidney Injury, a common occurrence in people with COVID-19

**PHARMACOLOGIC MANAGEMENT: OTHER AGENTS**

- Gabapentinoids - toxicity reported with chronic kidney disease or worsening acute renal failure, common in COVID-19
  - Renal dosing - If patient already on gabapentin or pregablin for existing pain, dose reduce if CrClc < 60
  - Hepatic dosing – no adjustments warranted
- Duloxetine
  - Renal dosing - If patient already on duloxetine, decrease dose if CrClc < 90, avoid use or stop if ≤ 30
  - Hepatic dosing – avoid if pt with liver disease (Child-Pugh Class A, B, C)
- Corticosteroids
  - For patients on oral corticosteroid therapy for other conditions (e.g. cancer pain) prior to COVID-19, these should not be discontinued

**NONPHARMACOLOGIC MANAGEMENT**

- Bracing with Pillow During Cough
- Distraction
- Heat
- Menthol topical
- Positioning
- Spiritual care

**REFERENCES**


**SLEEP COUGH LETHARGY ARTHRITIS**

**PAIN SINUS COLD HEADACHE**

**TIPS FOR MODERATE TO SEVERE PAIN:**

- Oral concentrated liquid (such as morphine or oxycodone) may be useful when dyspnea severe and swallowing tablets difficult
- Transdermal fentanyl or buprenorphine – limit use with fever due to rapid absorption, possible sedation/respiratory depression
- IV morphine, hydromorphone or fentanyl for inpatient/ICU use

**ROUTE CONVERSION:**

- When converting between opioids or from one route to another:

<table>
<thead>
<tr>
<th>DRUG</th>
<th>IV/SQ</th>
<th>ORAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fentanyl IV</td>
<td>0.1mg=100mcg</td>
<td>NA</td>
</tr>
<tr>
<td>Hydrocodone/Acetaminophen</td>
<td>NA</td>
<td>30</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>1.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Morphine</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>NA</td>
<td>20</td>
</tr>
<tr>
<td>Tramadol</td>
<td>NA</td>
<td>120</td>
</tr>
</tbody>
</table>

**PEAK EFFECT:** Helps guide re-dosing and time activity to maximum effect.