

# Pain Relief Connection

Issue #10 November 15, 2007

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**Preventing  
pain  
is easier than  
treating pain**

*Pain ... The 5th Vital Sign*

## 1. Clinical Focus: Pharmacologic Interventions for Pain

(Note: This series is intended to provide general information and context about medications for the treatment of pain. Clinical experience and judgement, individualization of treatment, and consultation with experts and standard references should guide the treatment of specific patients)

### **WORLD HEALTH ORGANIZATION ANALGESIC LADDER: Step 1- NON-OPIOID ANALGESICS- ACETAMINOPHEN**

Acetaminophen IS THE MOST WIDELY USED ANALGESIC AND ANTIPYRETIC IN Canada. It is indicated for the treatment of mild to moderate pain and fever. It is available for oral or rectal administration, and is commercially available without prescription in many doses, dosage forms, and combinations. While these factors make acetaminophen relatively inexpensive, easy to get and convenient to dose, it may also cause confusion, unintended overdose when multiple medications are taken, and create an unrealistically positive perception of the safety of acetaminophen

STEP 1 of the WHO Analgesic Ladder includes both acetaminophen and non-steroidal anti-inflammatory drugs (NSAIDs.) It should be understood that acetaminophen does not have significant anti-inflammatory properties. Its mechanism of action is poorly understood but recent research suggests that it acts both peripherally and centrally.

#### COMBINATION PRODUCTS:

Acetaminophen is a frequent component of over-the-counter analgesics and cold and flu symptom remedies. It is also available by prescription in combination with the opioids codeine, Oxycodone and tramadol. The acetaminophen dose varies fairly dramatically from product to product. The availability of combination analgesics, both opioid and non-opioid, illustrates the principle that combining analgesics with different mechanisms of action and different toxicity profiles may provide improved analgesic efficacy and decreased risk of certain toxicities. The corollary risk, however, is that suboptimal assessment, monitoring and management of patients on combination products can paradoxically lead to increased risk of acetaminophen toxicity. The prescriber must be mindful of components and doses of all prescription and non-prescription products that the patient is taking, especially chronically, and provide education and counselling to the patient on proper usage and dosing of these drugs.

#### DOSE:

- Children less than 12 years should be dosed by age or weight- consult standard references
- Children over age 12 and adults may take 325-650 mg every 4-6 hours; occasional use of up to 1000 mg. dose for analgesia is generally acceptable; chronic use of 100 mg 3-4 daily for osteoarthritis should be undertaken with clinician supervision; the adult daily maximum dose should not exceed 4 g (Latta et al 2000 indicates that in high risk populations the maximum daily dose should be 2.6 g)

#### CAUTIONS:

- Extended release dosage forms should not be cut, broken, crushed, chewed or dissolved
- Liquids should be measured using an oral medication syringe or other calibrated measuring device
- The adult daily dose should not exceed 4 g (see Latta et al 2000 regarding at risk populations chronic dosing)
- Patients may unintentionally take both acetaminophen as a single agent and acetaminophen-containing over-the-counter combination products; counsel patients to avoid combination products unless specifically instructed otherwise
- Chronic use of high doses of acetaminophen is associated with analgesic nephropathy
- Risk of nephropathy may be significantly increased when acetaminophen is chronically taken with other potentially nephrotoxic analgesics such as NSAIDs
- Patient who drink more than 3 alcoholic beverages per day are at increased risk of acetaminophen-induced hepatotoxicity when taking acetaminophen chronically or at high doses.
- Risk of hepatotoxicity is increased with prolonged use of acetaminophen-aspirin combinations
- At doses of greater than 2.6 g (2600 mg) / day, gastrointestinal toxicity from acetaminophen may approach that of comparable doses of NSAIDs, especially in people with a history of NSAID-induced GI problems

#### DRUG INTERACTIONS:

- Alcohol: significantly increases risk of hepatotoxicity
- Anticonvulsants: increased risk of hepatotoxicity when standard doses of acetaminophen are exceeded
- Anticoagulants: chronic concurrent use of acetaminophen and anticoagulants may require anticoagulant dose adjustment due to possible potentiation of anticoagulant effect
- Isoniazid (for tuberculosis); increased risk of hepatotoxicity, especially at higher acetaminophen doses

## 2. JOURNAL WATCH:

- Pain Treatment Topics-ebriefing-Vol 2. No 1: “ Time to Nix ‘Narcotics’ and Get Specific About Opioids: <http://pain-topics.org/pdf/e-Briefing-Vol2-No1-2007.pdf> “The public, news media, and a great many medical authors and healthcare providers use the term ‘narcotic’ when referring to opioid medications for the relief of pain. While this practice is so common that it seems harmless to many, this is far from true. Simply put, associations with ‘narcotics’ creates a stigmatized image surrounding opioid analgesics that is ultimately detrimental to the effective treatment of pain—it is time to expunge that term from the language of medicine”
- Craig DS. Is the word "narcotic" appropriate in patient care? *Journal of Pain and Palliative Care Pharmacotherapy*. 2006;20(1):33-5.

## 3. EDUCATION:

- **Managing Pain Before It Manages You.** This once-a-week for 9 weeks program is for individuals who are living with persistent (chronic) pain and who are interested in learning how to learn to manage their pain. The classes are one-hour long and are limited to 10 participants. For more information, please contact Bev More, Pain Management Resource Nurse at 578-4202 or to register, contact Pat Shaw, Clinics Clerk 578-4200. The next classes start Thursday, January 17<sup>th</sup> from 1000-1100. *Please do not register if you do not plan to attend.*

**References** used for the Pain Relief Connection Newsletter include among others, the following:

*Care Beyond Cure A Pharmacotherapeutic Guide to Palliative Care* 2000  
McCaffery M., Pasero C., *Pain Clinical Manual* 2<sup>nd</sup> Edition 1999 Mosby  
*Professional’s Handbook of Drug Therapy for Pain* Springhouse 2001  
Ballantyne Jane C., *The Massachusetts General Hospital Handbook of Pain Management* 3<sup>rd</sup> Edition  
*Principles of Analgesic Use in the Treatment of Acute Pain and Cancer Pain* 5<sup>th</sup> Edition American Pain Society 2005  
Pereira, J., Bruera e., *Alberta Palliative Care Resource Guide* Alberta Cancer Board 2001 2<sup>nd</sup> Edition  
Roman D. Jovey, MD editor *Managing Pain the Canadian Healthcare Professional’s Reference* 2002  
Quinn, Thomas: Pain Relief Connection: The Pain Information Newsletter MGH Cares About Pain Relief  
End-of-Life Physician Education Resource Center [www.eperc.mcw.edu](http://www.eperc.mcw.edu)

If you have a question that you would like answered or a case study that you would like to see profiled here, please send the information to Bev More, Pain Management Resource Nurse, CS1-200 BRHC or email to: [moreb@brandonrha.mb.ca](mailto:moreb@brandonrha.mb.ca)

Feedback about this newsletter is welcome. Please send comments to [moreb@brandonrha.mb.ca](mailto:moreb@brandonrha.mb.ca)