TABLE 5-10

Approximate Dose Ratios for Switching between Parenteral and Oral Dosage Forms

Medicine	Dosage Ratio (Parenteral : Oral)
Morphine	1 : 2 to 1 : 3
Hydromorphone	1 : 2 to 1 : 5*
Methadone	1 : 1 to 1 : 2

*Hydromorphone is a potent opioid and significant differences exist between oral and intravenous (IV) dosing. Use extreme caution when converting from one route to another. In converting from parenteral hydromorphone to oral hydromorphone, doses may need to be titrated up to 5 times the IV dose.

World Health Organization: *WHO guidelines on the pharmacological treatment of persisting pain in children with medical illnesses,* Geneva, 2012, World Health Organization.

Choosing the Timing of Analgesia

The right timing for administering analgesics depends on the type of pain. For continuous pain control, such as for postoperative or cancer pain, a preventive schedule of medication around the clock (ATC) is effective. The ATC schedule avoids the low plasma concentrations that permit breakthrough pain. If analgesics are administered only when pain returns (a typical use of the prn, or "as needed," order), pain relief may take several hours. This may require higher doses, leading to a cycle of undermedication of pain alternating with periods of overmedication and drug toxicity. This cycle of erratic pain control also promotes "clock watching," which may be erroneously equated with addiction. Nurses can effectively use prn orders by giving the drug at regular intervals, because "as needed" should be interpreted as "as needed to prevent pain," not "as little as possible."

Choosing the Method of Administration

Several routes of analgesic administration can be used (Box 5-3), and the most effective and least traumatic route of administration should be selected. Continuous analgesia is not always appropriate, because not all pain is continuous. Frequently, temporary pain control or conscious sedation is needed to provide analgesia before a scheduled procedure. When pain can be predicted, the drug's peak effect should be timed to coincide with the painful event. For