

**FAST FACT AND CONCEPT #80
CONTROLLED RELEASE OXYCODONE**

David E Weissman MD

Background Controlled release oxycodone (CRO) has received considerable attention in the lay press over the past several years. Much of the coverage has been negative, related to the illicit use of CRO due to diversion outside of legitimate medical practice. Within legitimate medical practice, CRO is an effective long-acting oral opioid product, very similar to controlled release morphine. This *Fast Fact* reviews CRO usage in palliative care.

Indication CRO is indicated for moderate to severe pain requiring continuous, around-the-clock analgesia for an extended period of time in patients ≥ 18 years of age. The Food and Drug Administration have not established the safety and effectiveness in pediatric patients, although it has been used successfully in select pediatric populations.

Pharmacology Oxycodone is a semi-synthetic opioid that interacts with both mu- and kappa-opioid receptors, but behaves in most respects identically to morphine. CRO has greater oral bioavailability than morphine, and a bi-phasic absorption pattern, with peaks at 37 minutes and 6.2 hours. Peak pain relief occurs in one hour. Unlike morphine, oxycodone has minimally active metabolites, demonstrating little to no analgesic or anti-analgesic properties. Oxycodone should be used with caution in patients with renal and liver impairment and avoided in hemodialysis patients. CRO can lead to all the traditional opioid side effects. Anecdotal reports suggest less nausea, hallucinosis, and nausea compared to morphine, although these observations have not been substantiated in controlled trials.

Equianalgesic Information Studies comparing round the clock immediate-release oxycodone to controlled-release oxycodone products demonstrate equivalent results. The conversion factor between morphine and oxycodone has been controversial, but the most commonly accepted data suggests that 30 mg of morphine is equivalent to 20 mg of oxycodone. Since all equianalgesic values are rough guidelines, prescribers need to use their clinical judgment in determining the most appropriate starting dose (see *Fast Fact #36*).

Dosage The starting dose of CRO in an opioid naïve patient is 10 mg q12 hours; it can be dose escalated every 24-48 hours (see *Fast Fact #20*). CRO must be taken intact; pills cannot be cut or crushed without risk of rapid absorption and subsequent overdose. CRO is not approved for rectal administration.

Cost CRO is more expensive than generic long-acting morphine; there is currently no generic CRO product on the market.

Diversion CRO has been associated with greater diversion to the illicit drug market than morphine. Illicit users will commonly crush the tablet and then chew, snort, or dissolve the product in water for intravenous injection. CRO can bring \$1-per-milligram or more on the illicit market.

Summary CRO oxycodone is an effective long-acting oral opioid. Due to cost and concerns about diversion, controlled release morphine is the drug of first choice for a long-acting oral opioid product. There are no data that CRO offers any analgesic benefit compared to morphine. Data for the use of CRO in the pediatric palliative population is lacking.

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