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Opioid Dependence vs Addiction Distinction without a Difference?

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Biologically, opioid addiction can be understood in terms of neuroadaptations that arise when exogenous opioids are taken continuously and long-term.¹ Tolerance and dependence are 2 such central adaptations. Tolerance is the need to increase dose to achieve the same effect, and dependence is the physiologic response either to an uncompensated increase in tolerance or to the withdrawal of a drug.² Tolerance may develop for both the euphoric and the analgesic effects of opioids and can be produced by psychological as well as pharmacological factors. Dependence is manifest as withdrawal symptoms (e.g., sweating, anxiety, and insomnia) that are caused by rebound at central noradrenergic nuclei, and the less well-understood effects of hyperalgesia (increased pain sensation) and anhedonia (inability to feel pleasure).^{3,4} Withdrawal hyperalgesia and anhedonia may explain the worsening of pain and mood that is seen during an opioid taper or after detoxification. Withdrawal symptoms are powerful drivers of opioid seeking, which in turn can be induced by factors that change tolerance (Figure). Addiction is further defined by aberrant opioid-seeking behaviors that, when persistent, result in irreversible changes in the brain.¹