### Why naloxone?

Naloxone’s presence in Suboxone discourages diversion by reducing the effect of buprenorphine when injected, and perhaps promoting acute opioid withdrawal. Naloxone is an opioid antagonist, and as such, will displace opioids from the mu opioid receptor. The only reason that naloxone is included with buprenorphine in a combination tablet is to reduce diversion. If taken correctly, the patient taking Suboxone will not feel the effects of the naloxone.

Buprenorphine is absorbed sublingually and has poor oral bioavailability and good intravenous bioavailability. In contrast, naloxone has poor sublingual and oral bioavailability and good intravenous bioavailability. Therefore, if a patient takes Suboxone correctly, in sublingual fashion, the buprenorphine is absorbed and the naloxone is not. If the patient takes Suboxone orally, both the buprenorphine and naloxone are ill-absorbed and there are little clinical effects—neither the buprenorphine nor the naloxone produce a clinical response. However, if a patient attempts to inject Suboxone, the naloxone will reduce the effect of the buprenorphine and potentially displace any opiates already on the mu opioid receptor (e.g., heroin), therefore precipitating opioid withdrawal syndrome. Based on the diversion reduction potential of Suboxone versus Subutex, the manufacturer has priced the combination product less than the mono-product.

### Web resources for patients and their loved ones

- naabt.org — The National Alliance of Advocates for Buprenorphine Treatment — Patient stories, message boards, and literature.
- TurnToHelp.com — owned by Reckitt Benckiser Pharmaceuticals — Patient story videos, email support program, literature.

### Quiz yourself!

1) Induction should take place when the patient: a) has abstained from opioids for at least 24 hours b) is subjectively uncomfortable c) scores at least a 6 on the COWS scale d) scores at least a 13 on the COWS scale.

### Research update


### Quiz answer

1) Induction should take place when the patient: d) scores at least a 13 on the COWS scale. Waiting for moderate withdrawal ensures that the buprenorphine will not cause precipitated withdrawal. Caveat: patients who are not currently using (e.g., those recently incarcerated) will not be in withdrawal.

Next month’s newsletter will feature the COWS scale.