



Substance Abuse

Many addictions have long-lasting, life-destroying effects. There are treatments available and under development to help individuals to free themselves from these dependencies, intoxications and addictions.

Ethylene Glycol Poisoning

Ethylene glycol is an alcohol mainly used as automotive antifreeze. In a pure form, it is odorless, colorless, and syrupy in consistency, with a sweet taste. It is toxic, and accidental ingestion is considered a medical emergency. Because of its sweet taste, children and animals will sometimes consume large quantities of the liquid. Symptoms of poisoning include dizziness, slurred speech, and confusion followed by heartbeat and breathing irregularities. This eventually may lead to kidney failure.

| Indication | Company | Product | Phase |
|---------------------------|-----------------------------|----------------------|-------|
| Ethylene Glycol Poisoning | Jazz Pharmaceuticals | Antizol (fomepizole) | M |

Methanol Poisoning

Methanol is a sweet alcohol which is often used as an antifreeze, solvent, fuel, and denaturant for ethyl alcohol. It becomes toxic as the liver breaks it down into formaldehyde, which causes destruction of the optic nerve and blindness. Poisoning can also be fatal due to its depressant properties. Methanol can enter the body by ingestion, inhalation or absorption. Symptoms include depression, headache, dizziness, nausea, confusion, unconsciousness and eventually death. It takes, however, several hours for toxic effects to begin so medical treatment should be sought immediately to receive an antidote.

| Indication | Company | Product | Phase |
|--------------------|-----------------------------|----------------------|-------|
| Methanol Poisoning | Jazz Pharmaceuticals | Antizol (fomepizole) | M |

Opium Addiction

Opium is a narcotic derived from the unripe seed of the opium poppy. It is usually smoked or ingested and produces general sedative, painkilling effects. Opium derivatives are pharmacologically used as strong pain killers, such as in cancer therapy. Opium has been used since the time of the Assyrians and was brought to Europe in the early 17th century by Asian traders along the Silk Road. It has since been banned in most parts of the world, though it is still illegally cultivated around the world in places like Afghanistan. Interestingly enough, opium poppies are often grown for their beautiful flowers and the seeds are dried out and often sweetened for use on breads and pastries.

| Indication | Company | Product | Phase |
|-----------------|----------------------------------|----------------------------|-------|
| Opium Addiction | Titan Pharmaceuticals Inc | Probuphine (buprenorphine) | III |

Phencyclidine Abuse

PCP or Phencyclidine, is a single drug that forms a distinct category of its own because the effects it produces are unlike those of any category. The formal chemical name for this drug is Phenyl Cyclohexyl Piperidine, from which the initials PCP are derived. PCP was first developed as an anesthetic for humans in 1959. Its use was discontinued a few years later due to its extreme side effects which included delirium and confusion. In the early 1960's PCP was brought back to medical use as a veterinary anesthetic under the trade name Sernylan. Among PCP's least desirable side effects are delirium, visual disturbances and hallucinations and, occasionally, violence. Some evidence of long term memory disorders and psychological disturbances resembling schizophrenia has also been linked to PCP.

| Company | Product | Phase | Indication |
|--------------------------|----------------|-------|---------------------|
| InterveXion Therapeutics | InterveXin PCP | II | Phencyclidine abuse |

Poisoning

Accidentally or intentionally, poisoning oneself by taking a substance is injurious to health and can cause death. Poisoning is still a major hazard to children despite child-resistant packaging and dose-limits per container.

| Company | Product | Phase | Indication |
|---------|-----------------------------|-------|------------|
| DEY LP | Cyanokit (hydroxocobalamin) | M | Poisoning |

Smoking Cessation

The chemical compound nicotine, found in tobacco, is highly addictive and once a person begins smoking cigarettes they cannot stop and often continue the unhealthy habit for years. Not only is the nicotine unhealthy, the tar from the cigarettes gets stuck in the lungs, building up over the years and often leads to lung cancer. Additionally, inhaling massive quantities of smoke negatively affects the mouth, throat and lungs. Many long-time smokers will develop some form of cancer in their lifetime. Because of the many harmful effects of smoking cigarettes, it is imperative that smoking cease as soon as possible. Unfortunately, quitting is usually quite difficult due to the addictive properties of nicotine and requires devotion and perseverance. Many treatments and therapies exist to help smokers quit their habit.

| Company | Product | Phase | Indication |
|------------------------|--|-------|-------------------|
| Impax Laboratories Inc | Bupropion hydrochloride Controlled Release Tablets | M | Smoking Cessation |

Weight Management

Every person has their own “healthy weight.” A combination of medical conditions, unhealthy eating habits, as well as either too much or too little physical activity will lead to deviations from our optimal weight. Unfortunately, most of us in the western world are overweight due to the pressures and constraints our lifestyle places on us. We are becoming increasingly obese but we are also working hard to counteract our increasing waistlines. Sometimes, after years of unhealthy habits, exercise and diet changes are not enough to return to a healthy weight. Many treatments and diets exist to help individuals reach their target weights.

| Indication | Company | Product | Phase |
|-------------------|---------------------------------|-----------------------|-------|
| Weight Management | Corcept Therapeutics Inc | Corlux (mifepristone) | II |

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