

Fact Sheet
Opiates and Opioids

About this fact sheet:

This fact sheet is about opiates and opioids that may be encountered by drug users and workers. HEROIN and METHADONE are considered in their own sheets. So this Fact Sheet doesn't consider these compounds. Most of the compounds here are used medicinally, but may also be the subject of non-medical use.

For the sake of completeness, OPIUM is included in this section.

Opiate or opioid?

Semantically, OPIATES are compounds present in the OPIUM POPPY (*Papaver Somniferum*) extracted and refined. OPIOIDS are synthetic or semi-synthetic compounds which have similar chemical or pharmacological effects.

So morphine is an opiate, because it is a compound present in the opium poppy. Diamorphine is an opioid, as it is a semi-synthetic compound derived from morphine; methadone is an opioid and is wholly synthetic.

The term opiates and opioids are often used interchangeably. For convenience the term opioids will be used throughout this paper.

The compounds are presented alphabetically.

Names	Class/Schedule	Description/Primary Uses
ALFENTANIL	CD: POM Class A, Sch.2	Mainly used in surgery
Rapifen		
<p>Notes: <i>Powerful analogue of fentanyl; strong respiratory suppression. Not known as a street drug.</i></p>		
Names	Class/Schedule	Description/Primary Uses
BUPRENORPHINE	CD: POM Class C, Sch.3	Moderate to severe pain Treatment for heroin dependency
Temgesic, Subutex <i>temmies, subbies, bupe</i>		

Notes:

Buprenorphine is a partial opiate agonist; it is a potent pain-killer. It binds powerfully to specific opiate receptors, but only partially activates these receptors hence the "partial agonist" name. This characteristic means that doses of buprenorphine can be given to fill opiate receptors, blocking other opiates (such as heroin) from working at them but with less risk of an opiate overdose.

The net result for the user is that, if buprenorphine is taken correctly at a sufficiently high dose, other opiates used "on top" won't work, and so such use on top should be reduced. In practice, "use on top" may take the form of drinking or use of benzos, neither of which is blocked by burprenorphine.

Buprenorphine will compete with other opiates, such as heroin and methadone, and if these compounds are present at receptor sites, buprenorphine is likely to displace them. This can mean that a user with heroin in their system may experience withdrawal effects when they take buprenorphine as the full agonist (heroin, methadone) is displaced by the partial agonist.

However, if someone who has no opiates in their system takes buprenorphine, they can and do get a significant level of opiate reward – less intense than heroin, but sufficient to warrant buprenorphine having a street value as a drug of misuse.

Buprenorphine causes less respiratory suppression than heroin or methadone and so the risk of overdose is lower. However people can and do overdose on buprenorphine. Naloxone is not wholly effective at reversing buprenorphine overdoses. Overdose is more likely where burprenorphine has been snorted or injected.

Buprenorphine is still an opiate with attendant issues of addiction and withdrawal. It is also constipating. Some users find that it provides a better level of clarity of thought than methadone; while some people find this aspect beneficial, others don't like the new clear-headedness that buprenorphine provides.

Buprenorphine is generally prescribed and dispensed for sublingual administration. It is powerfully broken down by the liver so swallowing buprenorphine is highly ineffective. However, even when taken sublingually, it is likely that bioavailability is only around 33%.

This level of availability goes up if the drug is crushed and snorted, and goes up higher still if injected. This has seen a huge increase in the administration of buprenorphine by these routes.

Buprenorphine tablets, under the brand-name Temgesic were widely used as an illicit drug, especially in Scotland. They were typically crushed and injected. At this time it was primarily marketed as a low dose tablet for pain relief.

However, it was when it was reformulated and rebranded as Subutex that interest in the drug really took off. It has been used extensively in France since 1996, and became a lynchpin of the US prescribing system, being the only opiate-substitute that can be dispensed away from specialist clinics.

Buprenorphine started to gain acceptance in the UK as a treatment from around 1999, and has become an increasingly popular alternative to methadone.

In some parts of the UK, cost of branded Subutex has meant it was less widely available than its cheaper rival, Methadone. However, with the patent for Subutex now over, there is scope for cheaper generics to hit the market.

In an effort to discourage diversion and non-intended use, Schering Plough is marketing "Suboxone," its new, licensed product. See separate entry on Suboxone.

Names	Class/Schedule	Description/Primary Uses
CO-CODAMOL	OTC – low dose POM – higher dose	Mixture of codeine phosphate and paracetamol. Treatment of mild to moderate pain
Paracodol, Solpadol		

Notes:

Available in a variety of strengths, ranging from 8:500 (8mg codeine to 500mg paracetamol) through to 30:500. Small quantities of 8:500mg formulations are available as an OTC but high strength formulations require a prescription.

Tolerance and dependency on codeine can develop with constant use, and there is a risk that people will escalate their dose. Codeine can also cause severe constipation.

The key risk of abuse of co-codamol is liver damage stemming from the high intake of paracetamol, and so people taking excessive quantities of co-codamol expose themselves to risk of liver damage.

Some preparations contain methionine which may prevent paracetamol-induced liver toxicity.

Names	Class/Schedule	Description/Primary Uses
CO-DYDRAMOL	OTC - low dose POM – higher dose	Mixture of dihydrocodeine and paracetamol Mild to moderate pain
Paramol		

Comments: A compound analgesic combining the opiate pain killer dihydrocodeine tartrate with the analgesic paracetamol. Available in a range of strengths; the weakest is mixed at a strength of 7.46mg dihydrocodeine to 500mg paracetamol. In this form it is available as an OTC medicine sold as Paramol. Stronger versions, mixed at 10, 20 and 30mg dihydrocodeine to 500mg paracetamol are POMs.

As with cocodamol, excessive doses of co-dydramol bring with it significant risk of liver damage through paracetamol toxicity.

Names	Class/Schedule	Description/Primary Uses
CO-PHENOTROPE	OTC – low dose POM – higher dose	Diarrhoea treatment: Mixture of diphenoxylate hydrochloride and atropine
Lomotil; Dymotil		

Notes: *The opiate part, which is structurally similar to pethidine and slows down gut movement. It has the potential for dependency and misuse. To reduce these risks, it is sold in combination with atropine which in higher doses can cause severe negative side-effects such as irregular heart beat, double vision, nausea and agitation.*

Names	Class/Schedule	Description/Primary Uses
CO-PROXAMOL	POM	Mixture of dextropropoxyphene

Distalgesics		hydrochloride and paracetamol Mild to moderate pain
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Notes: *The opioid analgesic dextropropoxyphene is a relatively weak painkiller but can be dangerous in overdose, and can cause mood-swings and arrhythmias, and is especially dangerous in combination with alcohol.*

Due to these risks, and its relatively low therapeutic index some argue that it is no more effective than the paracetamol with which it is combined its legal status in the UK was reviewed in 2004. It was decided to stage a staggered withdrawal of the drug with a view to it being removed from the market. At the time of writing it is still available but on a limited basis, typically on a 'named patient basis.'

Names	Class/Schedule	Description/Primary Uses
CODEINE PHOSPHATE	CD; Class A; Sch 2 in injectable form	Pain relief – used alone or in compounds with other analgesics Cough relief
Found in: Feminax, Solpadeine, Panadol Ultra as a compound analgesic	Class B: Sch 5 in non injectable form	

Notes: *effective in the treatment of mild to moderate pain relief but causes significant constipation. Has the potential to cause dependency and is subject to non-medical use.*

Names	Class/Schedule	Description/Primary Uses
DEXTROMORPHAN HYDROBROMIDE	OTCs	Used in many cough-relief preparations.
In: Actifed, benylin:		

Notes: *Dextromethorphan is used in many cough medicines for its anti-tussive effects. It is derived from an opioid leverpharnol, but doesn't exhibit opiate type effects such as euphoria or sedation. Indeed it may inhibit the action of other opiates.*

However, in high doses, Dextromethorphan can cause dissociative hallucinations and when misused in this way has similar effects to Ketamine.

Misuse in this way has been uncommon in the UK, but has been a significant cause of concern in the USA, where access to compounds containing dextromorphan has been restricted to reduce abuse.

Names	Class/Schedule	Description/Primary Uses
DIAMORPHINE HYDROCHLORIDE	CD: Class A, Sch.2	Pharmaceutically pure heroin hydrochloride:
Diagesil, Diaphine		Severe pain relief; treatment of dependency

Notes: Pharmaceutical grade heroin, produced from morphine through reaction with acetic anhydride. In the sixties this drug was prescribed quite widely to opiate dependent people, but following review of drug laws and prescribing practice, prescribing for addiction is now much less common. Contrary to media confusion on the subject, it has always been lawful to "prescribe heroin on the NHS." It is most commonly used for severe pain relief in hospital settings. However, GPs can undertake additional training and seek a Home Office licence to prescribe diamorphine for the treatment of addiction.

It is prescribed in injectable form, either pre-dissolved ('wet amps') or for dissolving in sterile water ('dry amps.') Currently, prescribing takes place across the UK to a number of individuals. A small number of clinical trials have been established to assess how effective this model of treatment is and early reports (November 1997) are encouraging.

However, due to its relatively short period of effect, risks of diversion, and the need to continue injecting, it remains the least widely used opiate substitute treatment.

Names	Class/Schedule	Description/Primary Uses
DEXTROMORAMIDE	CD: Class A , Sch.2 (discontinued in UK 2003)	For severe and intractable pain-relief:
Palfium <i>Peach Palfs</i>		

Notes: Dextromoramide is a powerful pain killer with a high potential for overdose and misuse. It is the subject of control internationally. It is no longer prescribed in the UK though this was because of difficulty sourcing the precursors and the drug reliably rather than due to misuse.

Historically, 5mg and 10mg Palfium (*Peach Palfs*) were a highly-sought opiate, often injected.

Names	Class/Schedule	Description/Primary Uses
DEXTROPROPOXYPHENE HYDROCHLORIDE	POM	Mild to moderate pain relief
Constituent of: co-proxamol, costalgescic, distalgescic, dolxene		

Notes: The opioid analgesic dextropropoxyphene is a relatively weak painkiller but can be dangerous in overdose, and can cause mood-swings and arrhythmias, and is especially dangerous in combination with alcohol. See entry on **Co-proxamol**

Names	Class/Schedule	Description/Primary Uses
DIHYDROCODEINE TARTRATE	CD: Class B, Sch.2/5 Depends on formulation	Moderate to severe pain relief
DF118, <i>DFs</i> DHC Continue		

Notes: Dihydrocodeine is a relatively popular opiate in the UK; it is not as potent as morphine or heroin, but can provide good pain relief. It has often been considered a reasonably good “standby” for opiate users self-medicating through withdrawal or as a street drug if stronger opiates weren’t available. It is available as an OTC as co-drydamol. Stronger preparations are a Schedule 2 drug, and in injectable form it is a Class A, Schedule 2 drug.

Internationally, especially on mainland Europe, tablets containing dihydrocodeine are available as a wax-bound sustained-release tablet. These are currently not common in the UK. Attempts to inject such wax-based tablets are likely to result in severe injecting complications.

Names	Class/Schedule	Description/Primary Uses
DIPIPANONE	CD: Class A, Sch.2	Moderate to severe pain relief
Diconal – dipipanone and Cyclizine <i>Dikes, Pinks, Strawberry Milkshake</i>		

Notes: Structurally similar to methadone, dipinanone is a powerful opiate. It tends to cause a high level of nausea so it was combined in tablet form with the anti-emetic (anti-nausea) drug cyclizine. The snag was that the two drugs, crushed and injected, provided a powerful and intense rush, leading to the drug being highly popular on the illicit market.

To add to the problems, diconal was formulated with tiny silicon particles that would block veins leading to tissue loss, and amputations. A significant number of older injectors lost digits or limbs through the injection of diconal.

Although still licensed in the UK, diconal rarely appears as a street drug now.

Names	Class/Schedule	Description/Primary Uses
FENTANYL	CD: Class A, Sch.2	Severe pain; Breakthrough-pain in opiate dependent patients; anaesthesia
Durogesic		

Notes: Fentanyl is a powerful opiate analgesic, some 80 times more potent than morphine. It’s main use is on hospital settings for severe and chronic pain. It is also used in anaesthesia.

There are a number of analogues of Fentanyl, including:

Alfentanil (short acting 5-10 mins), Sufentanil (10x potency of Fentanyl), Remifentanil (shortest acting) and Carfentanil (10,000x potency of methadone: can quite literally put down an elephant and indeed is used to do so).

Fentanyl crops up as a significant street drug in the States, where it is diverted from medical supplies or, less commonly manufactured in underground labs.

Fentanyl comes in Transdermal patches, and also in lollipops or lozenges for oral consumption. It may be extracted from patches and injected, or sold in powder form for snorting or injection.

Reports suggest that Fentanyl offers a less euphoric high but is a more potent respiratory suppressant and so is a key risk in overdose. It is comparatively short acting, leading to more frequent use. Tolerance to heroin does not equate to tolerance to fentanyl and this, combined with the increased potency of

fentanyl, means that even opiate-dependent users are at risk of fentanyl overdoses. At present, use in the UK is not widespread, and the extraction of fentanyl from patches can be a messy and wasteful process. However, there is every chance that misuse of Fentanyl will increase in the UK, and bring with it an increase in overdoses.

Names	Class/Schedule	Description/Primary Uses
HYDROMORPHONE	Class A, Sch 2	Moderate to severe pain
Palladone, Dilaudid <i>Dillies</i>		

An increasingly (medically) popular opiate painkiller, it offers good solubility with fewer troubling side-effects than morphine, and better pain management than methadone, according to some patients. Sustained release formulations are subject to misuse, through crushing and either snorting or injecting the contents. This is a powerful, intense opiate which on source suggests is more euphoric and less sedating than morphine. There are overdose risks, especially when combined with alcohol. It is currently not widely prescribed in the UK, and not widely misused.

Names	Class/Schedule	Description/Primary Uses
LOPERAMIDE HYDROCHLORIDE	OTC	Diarrhoea treatment
Found in: Arret and Immodium		

Notes : *Opioid working on the large intestine to reduce gut action; does not work on the CNS and does not offer opiate-type euphoria or pain relief. There is little potential for abuse of this substance.*

Names	Class/Schedule	Description/Primary Uses
MEPTAZINOL	POM	Moderate to severe pain relief post-operative and obstetric pain
Meptid		

Notes: *opiate analgesic; has a mixed agonist/antagonist effect at opiate receptors, reducing risks of dependence or non-medical use*

Names	Class/Schedule	Description/Primary Uses
METHADONE HYDROCHLORIDE	CD: Class A, Sch2	Heroin substitute to treat addiction and for pain relief
Physeptone		

Notes: *See separate Methadone Fact Sheet*

Names	Class/Schedule	Description/Primary Uses
MORPHINE SULPHATE:	CD, Class A, Sch.2 but also in Sch.5 products.	Uses range from relief of severe and terminal pain; weaker preparations used in preparations such as Kaolin and Morphine mixture.
Oramorph, MST Continus, Zomorph, Cyclimorph		

Notes: Considered in medicine to be the “standard against which other opioid analgesics are compared. It provides pain relief, euphoria and mental detachment. However, it is likely to cause nausea, risk of respiratory depression and is addictive.

Various preparations are available in the UK. Weaker forms, like Kaolin and Morphine mixture are available as an OTC while stronger forms are Controlled Drugs.

Non-medical use of morphine salts is not uncommon – medical diversion of supplies, people selling or stealing pain-killers is the main source of morphine based drugs.

Some forms of morphine are intended for sustained release (such as MST). Injecting products such as MSTs, which contain wax to buffer the release of the morphine. Poor injecting technique with these is likely to cause vein blockages.

Names	Class/Schedule	Description/Primary Uses
NALBUPHINE HYDROCHLORIDE	No longer listed in BNF	Moderate to severe pain
Nubain		

Notes: Similar in strength to morphine, it is a mixed agonist/antagonist providing pain relief but may also cause dysphoria. This appears to be more likely in men than women. It briefly enjoyed some popularity amongst body-builders as an adjunct during training. It is no longer listed in the BNF.

Names	Class/Schedule	Description/Primary Uses
NALOXONE HYDROCHLORIDE	POM	Used to treat Opiate overdose
Narcan		

Notes: Full opiate antagonist, that is used to rapidly reverse opiate overdose. It has no potential for abuse. Usually administered by injection,

Names	Class/Schedule	Description/Primary Uses
NALTREXONE HYDROCHLORIDE	POM	Used for Opiate- detoxification, and to prevent relapse

Nalorex		
<p>Notes: <i>Opiate antagonist used post-detox to blockade opiate receptors and reduce effectiveness of opiates used during lapses. It can be used as an oral medication, or as implants for sustained effect. Some ex-users swear by the effectiveness of naltrexone, and argue that it helps them through difficult periods by either reducing temptation, or making it unrewarding if they did dabble. However, others have simply come off treatment in order to lapse, or have risked overdose through taking huge opiate doses to overcome the blocking effect.</i></p>		
Names	Class/Schedule	Description/Primary Uses
OPIUM	Class A; Sch 1	Not used medically in raw state; used in preparation of many drugs
<p>Notes: <i>Raw opium is made by extracting opium sap from the poppy and letting it evaporate and harden in contact with air. The resultant soft brown material is raw opium. With further processing refinement it can be made in to morphine or heroin but, internationally it is widely used in this crude state.</i></p> <p><i>It can be smoked in a pipe, eaten or made in to drinks. Decoction of poppy straw is widely used in opium-growing countries as a child-soporific.</i></p> <p><i>Either poppy heads or opium is sometimes cooked up with a solvent and the resultant opiate extract drawn in to a syringe for injection. Being thick and non-sterile, such an injecting process can result in serious infection and vein damage.</i></p> <p><i>Opium is a relatively weak compound, and risk of overdose is lower than with other compounds. However, it is still a powerfully addictive substance.</i></p>		
Names	Class/Schedule	Description/Primary Uses
Oxycodone	Class A, Sch 2	Moderate to severe pain
Oxycontin		
<p>Notes: <i>Originally popular as a medicine, then as a street drug in the U.S.A, Oxycodone is now available in the UK, but has not yet started to show up as a street drug. It is derived from thebaine, a minor constituent of opium. Immediate release tablets contained a relatively low dose but sustained release forms such as oxcontin contained up to 80mg and, when crushed and snorted or injected, brought with them a significant risk of overdose.</i></p> <p><i>Some back-street chemists convert Oxycodone in to oxymorphone (10x potency of morphine) or other forms of oxycodone with even higher potencies. These drugs would have a high potential for abuse, but also for fatal overdoses.</i></p>		
Names	Class/Schedule	Description/Primary Uses
PAPAVERETUM	CD:Class A, Sch.2	Mixture of morphine hydrochloride, papaverine hydrochloride and codeine hydrochloride. Used in severe pain relief, especially in surgery
Omnopon		

Notes: *not noted for use outside of medical settings*

Names	Class/Schedule	Description/Primary Uses
PENTAZOCINE CD:	Class A, Sch.3(Fortagesic is a POM)	Moderate to sever pain
Fortagesic (pentazocine and paracetamol)		

Notes: *Pentazocine was used as a street drug in the States, especially in combination with certain antihistamines, which gave a more opiate-type euphoria. On the back of this, naloxone was added to preparations containing pentazocine in the U.S reducing abuse. Not commonly misused in the UK*

Names	Class/Schedule	Description/Primary Uses
PETHIDINE HYDROCHLORIDE	CD: Class A, Sch.2	Primarily used for pain relief during or following surgery:
Parmegan		

Notes: *Once a "first choice opiate" and considered by some to be preferable to morphine. However, it has dropped from favour, in part because it appears to be no more effective than morphine, has a short duration of effect, and can cause seizures and delirium. Not common or popular as a street drug*

Names	Class/Schedule	Description/Primary Uses
PHOLCODINE	OTCs	Widely used in cough mixtures
In Tixylix and Galenphol		

Notes: *Depresses cough reflex, little or no pain-killing effect, mildly sedating. Very very little abuse potential*

Names	Class/Schedule	Description/Primary Uses
Suboxone	CD: Class C: Sch. 3	Combination of buprenorphine and naloxone
		Treatment of opiate dependency

Notes: *Suboxone is a combination tablet containing buprenorphine and naloxone. See separate entries for information on these drugs. Suboxone contains four parts buprenorphine to one part naloxone. The tablets are intended for sublingual administration. The idea behind suboxone is that, if used as directed, the low level of naloxone will be poorly absorbed sublingually and so will have no effect. If however, the tablet is used non-medically, the user will get a*

dose of naloxone which could have adverse effects. There are several reasons for the development of suboxone: one was to get a compound approved by the FDA in the States which was licensed for use at home, making it easier to prescribe to people in non-specialist clinics. Other key reasons were to reduce the diversion of medication and the injecting of tablets which had become widespread with Subutex. It may also be that, with the patent on Subutex expiring, Schering Plough were keen to get a new, patented opiate treatment to market.

The scope for misusing Suboxone is the subject of some debate. It will partly depend on how it is used, the user's recent opiate using history and the amount used.

Naloxone is not wholly effective at blocking buprenorphine. So if a user who was opiate naive injected Suboxone, the relatively low level of Naloxone may not effectively block the buprenorphine, meaning that the user would experience an effect of the buprenorphine. In addition, given Naloxone's relatively short period of effect, any blocking that it did initially would be likely to be shortlived. This means that Suboxone could still be used in non-medical ways provided the user had no other opiates in their system.

However, if a heroin (or methadone) user, who still had opiates in their system, injected suboxone, it is likely that the naloxone (and the buprenorphine for that matter) would precipitate them in to severe withdrawals. The naloxone would push the opiates off receptor sites, and though short-lived, the sites would then be occupied by buprenorphine, which would still block other opiates from working.

In essence, suboxone could be the subject of misuse by people who had not recently used opiates, or were drug free, or already experiencing severe withdrawal. However, the drug is not likely to be misused by current heroin or methadone users who still have opiates in their system.

It would, however, be overstating matters to say that Suboxone cannot be misused.

Names	Class/Schedule	Description/Primary Uses
TRAMADOL HYDROCHLORIDE	POM	Used for pain relief:
Zydol		

Notes: Unusual opiate painkiller. It is lower in potency than morphine, but in addition to acting as an opiate (mild euphoria and analgesia) it also acts as a serotonin-reuptake inhibitor. The dual opiate/serotonin effect gives it a greater mental lift than might be expected.

The downside is tolerance can develop rapidly, and its low opiate effect make it less appealing to people with a high tolerance to heroin.

It is currently not controlled under the MDA.