

Bemegrade (BAN, #INN)

Bemegrade; Bémégride; Bemegridum. 3-Ethyl-3-methylglutarimide; 4-Ethyl-4-methylpiperidine-2,6-dione.

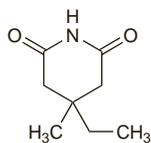
Бемегрида

$C_9H_{13}NO_2 = 155.2$.

CAS — 64-65-3.

ATC — R07AB05.

ATC Vet — QR07AB05.

**Profile**

Bemegrade has properties similar to those of doxapram (p.2155). It has been given intravenously as a respiratory stimulant.

Porphyria. Bemegrade has been associated with acute attacks of porphyria and is considered unsafe in porphyric patients.

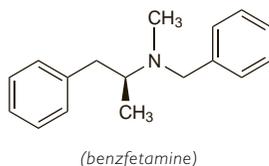
Benzfetamine Hydrochloride (BANM, #INN) ⊗

Benzfetamine, Chlorhydrate de; Benzfetamini Hydrochloridum; Benzphetamine Hydrochloride; Hidrocloruro de benzfetamina. (+)-N-Benzyl-N,α-dimethylphenethylamine hydrochloride.

Бензфетамин Гидрохлорид

$C_{17}H_{21}N, HCl = 275.8$.

CAS — 156-08-1 (benzfetamine); 5411-22-3 (benzfetamine hydrochloride).

**Profile**

Benzfetamine hydrochloride is a central stimulant and sympathomimetic with properties similar to those of dexamfetamine (below). It has been used as an anorectic in the treatment of obesity (p.2149), although amfetamines are no longer recommended for this indication. The usual initial oral dose is 25 to 50 mg given once daily, subsequently adjusted, according to requirements, to a dose of 25 to 50 mg up to three times daily.

Preparations

Proprietary Preparations (details are given in Part 3)

USA: Didrex.

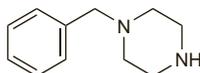
Benzylpiperazine ⊗

N-Benzylpiperazine; 1-Benzylpiperazine. 1-(Phenylmethyl)piperazine.

Бензилпиперазин

$C_{11}H_{16}N_2 = 176.3$.

CAS — 2759-28-6.



NOTE. The following terms have been used as 'street names' (see p.vi) or slang names for various forms of benzylpiperazine: A2; Blast; BZP; Charge; Charlie; Cosmic Kelly; ESP; Euphoria; Exodus; Frenzy; Legal E; Legal X; Nemesis; Pep; Pep Love; Pep Stoned; Pep Twisted; Rapture; The Good Stuff.

Profile

Benzylpiperazine is reported to produce CNS stimulant effects similar to those of the amfetamines (see Dexamfetamine, p.2153) and is subject to abuse.

Other piperazine derivatives subject to abuse include:

- 1-(3,4-methylenedioxybenzyl)piperazine (MDBP)
- 1-(3-trifluoromethylphenyl)piperazine (TFMPP)
- 1-(3-chlorophenyl)piperazine (mCPP)
- 1-(4-methoxyphenyl)piperazine (MeOPP)

◇ References.

1. Gee P, *et al.* Toxic effects of BZP-based herbal party pills in humans: a prospective study in Christchurch, New Zealand. *N Z Med J* 2005; **118**: U1784.
2. Staack RF. Piperazine designer drugs of abuse. *Lancet* 2007; **369**: 1411–13.
3. Johnstone AC, *et al.* Benzylpiperazine: a drug of abuse? *J Psychopharmacol* 2007; **21**: 888–94.
4. Wood DM, *et al.* Collapse, reported seizure—and an unexpected pill. *Lancet* 2007; **369**: 1490.

Catha ⊗

Abyssinian, African, or Arabian Tea; Kat; Kath; Khat; Miraa; Qat; Somali Tea.

Description. Catha consists of the leaves of *Catha edulis* (Celastraceae), and contains cathine, cathinone, celastrin, choline, tannins, and inorganic salts.

The following terms have been used as 'street names' (see p.vi) or slang names for various forms of catha:

Cat; Chat; Feline; Kat; Miraa; Pootie; Qat; Quaaadka.

Cathine (pINN) ⊗

Cathinum; Catina; (+)-Norpseudoephedrine. *threo*-2-Amino-1-phenylpropan-1-ol.

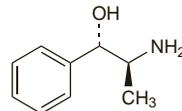
Катин

$C_9H_{13}NO = 151.2$.

CAS — 492-39-7; 36393-56-3.

ATC — A08AA07.

ATC Vet — QA08AA07.

**Cathinone** (pINN) ⊗

Cathinonum; Catinona. (S)-2-Aminopropiophenone.

Катинон

$C_9H_{11}NO = 149.2$.

CAS — 71031-15-7.

Profile

Catha, the leaves of *Catha edulis* (Celastraceae), is used for its stimulant properties among some cultures of Africa and the Middle East, usually by chewing the leaves. Its effects are reported to resemble those of the amfetamines (see Dexamfetamine Sulfate, below), and are thought to be largely due to the content of cathinone. Dependence and psychotic reactions have been reported. Cathine, another constituent, has been used as the hydrochloride as an anorectic.

◇ References to the pharmacology and pharmacokinetics of catha and its constituents¹⁻⁸ and reports of adverse effects.⁹⁻¹⁵

1. Brenneisen R, *et al.* Metabolism of cathinone to (–)-norephedrine and (–)-norpseudoephedrine. *J Pharm Pharmacol* 1986; **38**: 298–300.
2. Brenneisen R, *et al.* Amphetamine-like effects in humans of the khat alkaloid cathinone. *Br J Clin Pharmacol* 1990; **30**: 825–8.
3. Kalix P. Pharmacological properties of the stimulant khat. *Pharmacol Ther* 1990; **48**: 397–416.
4. Kalix P. Chewing khat, an old drug habit that is new in Europe. *Int J Risk Safety Med* 1992; **3**: 143–56.
5. Kalix P. Cathinone, a natural amphetamine. *Pharmacol Toxicol* 1992; **70**: 77–86.
6. Widler P, *et al.* Pharmacodynamics and pharmacokinetics of khat: a controlled study. *Clin Pharmacol Ther* 1994; **55**: 556–62.
7. Kalix P. *Catha edulis*, a plant that has amphetamine effects. *Pharm World Sci* 1996; **18**: 69–73.
8. Toennes SW, *et al.* Pharmacokinetics of cathinone, cathine and norephedrine after the chewing of khat leaves. *Br J Clin Pharmacol* 2003; **56**: 125–30.
9. Rumpf KW, *et al.* Rhabdomyolysis after ingestion of an appetite suppressant. *JAMA* 1983; **250**: 2112.
10. Gough SP, Cookson IB. Khat-induced schizophreniform psychosis in UK. *Lancet* 1984; **i**: 455.
11. Roper JP. The presumed neurotoxic effects of *Catha edulis*—an exotic plant now available in the United Kingdom. *Br J Ophthalmol* 1986; **70**: 779–81.
12. Zureikat N, *et al.* Chewing khat slows the oro-caecal transit time. *Gut* 1992; **33** (suppl): S23.
13. Yousef G, *et al.* Khat chewing as a cause of psychosis. *Br J Hosp Med* 1995; **54**: 322–6.
14. Al-Motarreb A, *et al.* Khat chewing and acute myocardial infarction. *Heart* 2002; **87**: 279–280.
15. Al-Motarreb A, *et al.* Khat chewing is a risk factor for acute myocardial infarction: a case-control study. *Br J Clin Pharmacol* 2005; **59**: 574–81.

Preparations

Proprietary Preparations (details are given in Part 3)

Ger.: Antidiposum X-112 T; **S.Afr.:** Dietene; Eetless; Leanor; Nobese No. 1; Slim 'n Trim; Thinz; **Switz.:** Antidiposum X-112; Belloform†; Limit-X†; Miniscap†; **Thai:** Mirapront N†.

Multi-ingredient. Mex.: Redotex; Redotex NF.

Clobenzorex Hydrochloride (#INN) ⊗

Clobenzorex, Chlorhydrate de; Clobenzorexi Hydrochloridum; Hidrocloruro de clobenzorex; SD-271-12. (+)-N-(2-Chlorobenzyl)-α-methylphenethylamine hydrochloride.

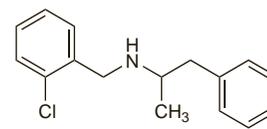
Клобензорекса Гидрохлорид

$C_{16}H_{18}ClN, HCl = 296.2$.

CAS — 13364-32-4 (clobenzorex); 5843-53-8 (clobenzorex hydrochloride).

ATC — A08AA08.

ATC Vet — QA08AA08.



(clobenzorex)

NOTE. The following terms have been used as 'street names' (see p.vi) or slang names for various forms of clobenzorex: Dinintels.

Profile

Clobenzorex hydrochloride is a central stimulant and sympathomimetic with properties similar to those of dexamfetamine (below). It has been used as an anorectic in the treatment of obesity (p.2149) but regulatory authorities in the EU have called for the withdrawal of all anorectics from the market (see under Effects on the Cardiovascular System in Fenfluramine, p.2156).

Preparations

Proprietary Preparations (details are given in Part 3)

Mex.: Asenlix; Itravil; Obeclox; Redicres.

Deanol (BAN) ⊗

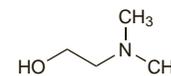
Démanol. 2-Dimethylaminoethanol.

$C_4H_{11}NO = 89.14$.

CAS — 108-01-0 (deanol); 3342-61-8 (deanol aceglumate); 3635-74-3 (deanol acetamidobenzoate); 968-46-7 (deanol benzilate); 71-79-4 (deanol benzilate hydrochloride); 15585-86-1 (deanol cyclohexylpropionate); 5988-51-2 (deanol tartrate).

ATC — N06BX04.

ATC Vet — QN06BX04.



NOTE. Deanol Aceglumate is pINN.

Profile

Deanol, a precursor of choline, may enhance central acetylcholine formation. It has been used as a central stimulant in the treatment of hyperactivity in children but its efficacy is not proven. It has been included in preparations used as tonics and for the management of impaired mental function.

It has been used as a variety of salts and esters including deanol aceglumate, deanol acetamidobenzoate, deanol bisorcate, deanol cyclohexylpropionate (cyrodenate; cyrodemanol), deanol hemisuccinate, deanol pidolate, and deanol tartrate. Deanol benzilate (deanol diphenylglycolate; benzacine) has been used as the hydrochloride in antispasmodic preparations.

Preparations

Proprietary Preparations (details are given in Part 3)

Arg.: DM Active; **Belg.:** Actebra†; **Fr.:** Astyl†; **Ger.:** Risatarun; **Ital.:** Rischian†; **Pol.:** Bimanol; **Port.:** Tonibral†; **Rus.:** Nooderin (Нюоклерин).

Multi-ingredient. Fr.: Acti 5; Debrumyl; **Ger.:** Rowachol comp†; **Port.:** Actilam; Debrumyl; Forticol; Tonic; **Spain:** Anti Anorex Triple; Denubil; **Switz.:** Vigoran†.