Disturbed behaviour. Buspirone has been tried in various disorders for the control of symptoms such as agitation, aggression, and disruptive behaviour (see Disturbed Behaviour, p.954) but evidence of efficacy is limited. Nonetheless, in the management of dementia, some[1] consider that it might be worth trying in nonpsychotic patients with disturbed behaviour, especially those with mild symptoms or those intolerant or unresponsive to antipsychotics.

1. Rabins PV, *et al.* APA Work Group on Alzheimer's Disease and other Dementias. Steering Committee on Practice Guidelines. American Psychiatric Association practice guideline for the treatment of patients with Alzheimer's disease and other dementias. Second edition. *Am J Psychiatry* 2007; **164** (12 suppl): 5–56. Also available at: http://www.psychiatryonline.com/pracGuide/loadGuidelinePdf.aspx?file=AlzPG101007 (accessed 23/07/08)

Extrapyramidal disorders. Although there have been reports[1,2] that buspirone may improve symptoms of drug-induced dyskinesia (p.971), drugs with dopaminergic actions have mostly exacerbated symptoms and there are a few reports of extrapyramidal disorders with buspirone (see under Adverse Effects, above).

1. Moss LE, *et al.* Buspirone in the treatment of tardive dyskinesia. *J Clin Psychopharmacol* 1993; **13:** 204–9.
2. Bonifati V, *et al.* Buspirone in levodopa-induced dyskinesias. *Clin Neuropharmacol* 1994; **17:** 73–82.

Substance dependence. ***ALCOHOL.*** Despite an early study[1] suggesting that buspirone could reduce alcohol craving in alcohol dependent patients, later studies[2-4] have overall failed to confirm that buspirone improves abstinence or reduces alcohol consumption. Although some studies[4,5] have found that buspirone may improve certain psychopathological symptoms in these patients, others[2] have found no such benefit; a meta-analysis[6] of 5 studies favoured the former interpretation.

The management of alcohol withdrawal and abstinence is discussed on p.1626.

1. Bruno F. Buspirone in the treatment of alcoholic patients. *Psychopathology* 1989; **22** (suppl 1): 49–59.
2. Malcolm R, *et al.* A placebo-controlled trial of buspirone in anxious inpatient alcoholics. *Alcohol Clin Exp Res* 1992; **16:** 1007–13.
3. George DT, *et al.* Buspirone does not promote long term abstinence in alcoholics. *Clin Pharmacol Ther* 1995; **57:** 161.
4. Malec E, *et al.* Buspirone in the treatment of alcohol dependence: a placebo-controlled trial. *Alcohol Clin Exp Res* 1996; **20:** 307–12.
5. Kranzler HR, *et al.* Buspirone treatment of anxious alcoholics: a placebo-controlled trial. *Arch Gen Psychiatry* 1994; **51:** 720–31.
6. Malec TS, *et al.* Efficacy of buspirone in alcohol dependence: a review. *Alcohol Clin Exp Res* 1996; **20:** 853–8.

NICOTINE. Buspirone has produced conflicting results[1-5] in the management of smoking cessation (p.2354). Although some studies suggest that in the short-term buspirone can increase the numbers of patients who are able to cease smoking, it does not necessarily decrease withdrawal symptoms.

1. West R, *et al.* Effect of buspirone on cigarette withdrawal symptoms and short-term abstinence rates in a smokers clinic. *Psychopharmacology (Berl)* 1991; **104:** 91–6.
2. Hilleman DE, *et al.* Effect of buspirone on withdrawal symptoms associated with smoking cessation. *Arch Intern Med* 1992; **152:** 350–2.
3. Hilleman DE, *et al.* Comparison of fixed-dose transdermal nicotine, tapered-dose transdermal nicotine, and buspirone in smoking cessation. *J Clin Pharmacol* 1994; **34:** 222–4.
4. Schneider NG, *et al.* Efficacy of buspirone in smoking cessation: a placebo-controlled trial. *Clin Pharmacol Ther* 1996; **60:** 568–75.
5. Farid P, Abate MA. Buspirone use for smoking cessation. *Ann Pharmacother* 1998; **32:** 1362–4.

OPIOIDS. Buspirone has been investigated in the management of opioid withdrawal (p.101) in dependent patients.[1,2]

1. Rose JS, *et al.* Effects of buspirone in withdrawal from opiates. *Am J Addict* 2003; **12:** 253–9.
2. Buydens-Branchey L, *et al.* Efficacy of buspirone in the treatment of opioid withdrawal. *J Clin Psychopharmacol* 2005; **25:** 230–6.

Preparations

USP 31: Buspirone Hydrochloride Tablets.

Proprietary Preparations (details are given in Part 3)

Arg.: Ansial†; ***Austral.:*** Buspar; ***Austria:*** Buspar; ***Belg.:*** Buspar; ***Braz.:*** Ansienon†; Ansitec; Buspanil†; Buspar; ***Canad.:*** Buspar; Buspirex†; ***Chile:*** Paxon; ***Cz.:*** Anxiron†; Buspar†; ***Denm.:*** Buspar; Stesiron†; ***Fin.:*** Buspar; Stesiron†; ***Fr.:*** Buspar; ***Ger.:*** Anxut; Bespar; Busp; ***Gr.:*** Anchocalm; Antipsichos; Bergamol; Bespar; Boronex; Epsilat; Hiremon; Hobatstress; Komasin; Lanamont; Lebilon; Ledion; Loxapin; Nadrifor; Nervostal; Nevrorestol; Norbal; Pendium; Stressigal; Svitalark; Tendan†; Tensispes; Trafuril†; Umolit; ***Hong Kong:*** Buspar; Kalmiren; ***Hung.:*** Anxiron; Spitomin; ***India:*** Buscalm; ***Indon.:*** Tran-Q; Xiety; ***Irl.:*** Buspar; ***Israel:*** Buspirol†; Sorbon; ***Ital.:*** Axoren†; Buspar; Buspimen†; ***Mex.:*** Buspar; ***Norw.:*** Buspar; Stesiron†; ***NZ:*** Biron; Buspar; ***Pol.:*** Mabuson; Spamilan; ***Port.:*** Ansiten; Busansil; Buscalma; Buspar; Buspium; Establix†; Itagil; Psibeter; ***S.Afr.:*** Buspar; Pasrin; ***Spain:*** Buspar; Effiplen†; ***Swed.:*** Buspar; ***Switz.:*** Buspar; ***Thai.:*** Anxiolan; ***Turk.:*** Buspon; ***UK:*** Buspar; ***USA:*** Buspar; ***Venez.:*** Dalpas.

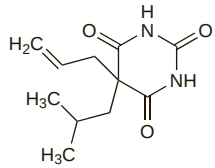
Butalbital *(USAN, rINN)*

Alisobumalum; Allylbarbital; Allylbarbituric Acid; Butalbitaali; Butalbitalum; Itobarbital; Tetrallobarbital. 5-Allyl-5-isobutylbarbituric acid.

Буталбитал

$C_{11}H_{16}N_2O_3$ = 224.3.

CAS — 77-26-9.



NOTE. The name Butalbital has also been applied to talbutal, the *S*-butyl analogue, which was formerly used as a hypnotic and sedative.

Compounded preparations of butalbital may be represented by the following names:

• Co-bucafAPAP (*PEN*)—butalbital, paracetamol, and caffeine

Pharmacopoeias. In *US*.

USP 31 (Butalbital). A white odourless crystalline powder. Slightly soluble in cold water; soluble in boiling water; freely soluble in alcohol, in chloroform, and in ether; soluble in solutions of fixed alkalis and alkali carbonates. A saturated solution is acid to litmus.

Profile

Butalbital is a barbiturate with general properties similar to those of amobarbital (p.961). It has been used mainly in combination preparations with analgesics in the treatment of occasional tension-type headaches, but other treatments are generally preferred.

Preparations

USP 31: Butalbital and Aspirin Tablets; Butalbital, Acetaminophen, and Caffeine Capsules; Butalbital, Acetaminophen, and Caffeine Tablets; Butalbital, Aspirin, and Caffeine Capsules; Butalbital, Aspirin, and Caffeine Tablets; Butalbital, Aspirin, Caffeine, and Codeine Phosphate Capsules.

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: ***Canad.:*** Fiorinal; Fiorinal C; ratio-Tecnal; ratio-Tecnal C; Trianal; Trianal C; ***Chile:*** Cafergot-PB†; ***Denm.:*** Gynergen Comp; ***Ital.:*** Optalidon; ***S.Afr.:*** Cafergot-PB†; ***Spain:*** Cafergot-PB†; ***Switz.:*** Cafergot-PB; ***USA:*** Amaphen with Codeine; Americet; Anolor; Ascomp with Codeine; Bupap; Butex; Dolgic; Dolgic LQ; Dolgic Plus; Endolor; Esgic; Esgic-Plus; Fioricet; Fioricet with Codeine; Fiorinal; Fiorinal with Codeine; Margesic; Marten-Tab; Medigesic; Pacaps; Phrenilin; Phrenilin w Caffeine and Codeine; Promacet; Prominol; Pyridium Plus; Repan; Repan CF†; Sedapap; Tencet; Tencon; Trellium Plus; Triad.

Butobarbital *(BAN)*

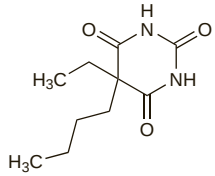
Butethal; Butobarbitaali; Butobarbitalum; Butobarbitone. 5-Butyl-5-ethylbarbituric acid.

$C_{10}H_{16}N_2O_3$ = 212.2.

CAS — 77-28-1.

ATC — N05CA03.

ATC Vet — QN05CA03.



NOTE. Butobarbital should be distinguished from Butabarbital, which is Secbutabarbital (p.1027).

Dependence and Withdrawal

As for Amobarbital, p.962.

Adverse Effects, Treatment, and Precautions

As for Amobarbital, p.962.

Interactions

As for Amobarbital, p.962.

Antibacterials. The metabolism of butobarbital may be altered by *metronidazole*.[1]

1. Al Sharifi MA, *et al.* The effect of anti-amoebic drug therapy on the metabolism of butobarbitone. *J Pharm Pharmacol* 1982; **34:** 126–7.

Pharmacokinetics

Butobarbital is metabolised in the liver mainly by hydroxylation; small amounts are excreted in the urine as unchanged drug. It has been reported to have a half-life of about 40 to 55 hours and to be about 26% bound to plasma proteins.

Uses and Administration

Butobarbital is a barbiturate with general properties similar to those of amobarbital (p.962). Its use can no longer be recommended because of the risk of its adverse effects and of dependence, although continued use may occasionally be considered necessary for severe intractable insomnia (p.957) in patients already taking it. It is given in usual oral doses of 100 to 200 mg at night.

Preparations

Proprietary Preparations (details are given in Part 3)

UK: Soneryl.

Multi-ingredient: ***Cz.:*** Dinyl†; ***Fr.:*** Hypnasmine†.

Calcium Bromolactobionate

Bromolactobionato de calcio; Calcium Galactogluconate Bromide. Calcium bromide lactobionate hexahydrate.

$Ca(C_{12}H_{21}O_{12})_2,CaBr_2,6H_2O$ = 1062.6.

CAS — 33659-28-8 (anhydrous calcium bromolactobionate).

Profile

Calcium bromolactobionate has sedative properties and has been given orally in the treatment of insomnia and anxiety disorders. The use of bromides is generally deprecated.

Overdosage. Bromide intoxication has been reported[1] in a patient after overdosage with calcium bromolactobionate tablets.

1. Danel VC, *et al.* Bromide intoxication and pseudohyperchloremia. *Ann Pharmacother* 2001; **35:** 386–7.

Preparations

Proprietary Preparations (details are given in Part 3)

Chile: Bromocalcio; Nervolta; Sedofantil; ***Cz.:*** Calabron†; ***Ital.:*** Calcibronat; ***Mex.:*** Calcibronat†; ***Mon.:*** Calcibronat; ***Venez.:*** Sedabron†.

Captodiame Hydrochloride *(BANM, pINNM)*

Captodiame, Chlorhydrate de; Captodiami Hydrochloridum; Captodiamine Hydrochloride; Hidrocloruro de captodiamo. 2-(4-Butylthiobenzhydrylthio)ethyldimethylamine hydrochloride.

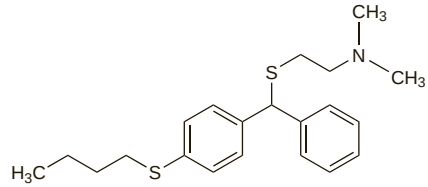
Каптодиама Гидрохлорид

$C_{21}H_{29}NS_2,HCl$ = 396.1.

CAS — 486-17-9 (captodiame); 904-04-1 (captodiame hydrochloride).

ATC — N05BB02.

ATC Vet — QN05BB02.



(captodiame)

Profile

Captodiame hydrochloride has been given in oral doses of 50 mg three times daily for the treatment of anxiety disorders (p.952).

Preparations

Proprietary Preparations (details are given in Part 3)

Fr.: Covatine.

Carbromal *(BAN, rINN)*

Bromodiethylacetylurea; Carbromalum; Karbromaali; Karbromal. *N*-(2-Bromo-2-ethylbutyryl)urea.

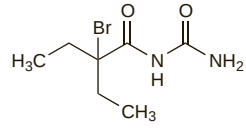
Карбромал

$C_7H_{13}BrN_2O_2$ = 237.1.

CAS — 77-65-6.

ATC — N05CM04.

ATC Vet — QN05CM04.



Profile

Carbromal is a bromureide with general properties similar to those of the barbiturates (see Amobarbital, p.961). It was formerly used for its hypnotic and sedative properties. Chronic use of carbromal could result in bromide accumulation and symptoms resembling bromism (see Bromides, p.2269). The use of bromides is generally deprecated.

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

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: ***Hung.:*** Demalgon.

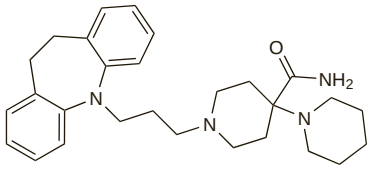
Carpipramine Hydrochloride *(rINNM)*

Carpipramine, Chlorhydrate de; Carpipramini Hydrochloridum; Hidrocloruro de carpipramina; PZ-1511. 1-[3-(10,11-Dihydro-5*H*-dibenz[*b,f*]azepin-5-yl)propyl]-4-piperidinopiperidine-4-carboxamide dihydrochloride monohydrate.

Карпипрамина Гидрохлорид

$C_{28}H_{38}N_4O,2HCl,H_2O$ = 537.6.

CAS — 5942-95-0 (carpipramine); 7075-03-8 (anhydrous carpipramine hydrochloride).



(carpipramine)

Profile

Carpipramine is structurally related both to imipramine (p.400) and to butyrophenones such as haloperidol (p.1000). It has been used in the management of anxiety disorders (p.952) and psychoses such as schizophrenia (p.955). Carpipramine is given as the hydrochloride although doses are expressed in terms of the base; carpipramine hydrochloride 60.2 mg is equivalent to about 50 mg of carpipramine. A usual oral dose is equivalent to 150 mg of the base daily in 2 or 3 divided doses, with a range of 50 to 400 mg daily.

Porphyria. Carpipramine is considered to be unsafe in patients with porphyria although there is conflicting experimental evidence of porphyrinogenicity.

Preparations

Proprietary Preparations (details are given in Part 3)

Fr.: Prazinil.

Chlordiazepoxide *(BAN, rINN)*

Chlordiazepoksidas; Chlordiazepoxid; Chlordiazépoxide; Chlordiazepoxidum; Chlorodiazepoksyd; Clordiazepóxido; Klooridiatsepoksidi; Klordiazepoksit; Klórdiazepoxid; Klordiazepoxid; Methaminodiazepoxide. 7-Chloro-2-methylamino-5-phenyl-3*H*-1,4-benzodiazepine 4-oxide.

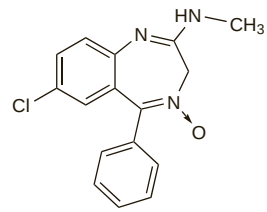
Хлордиазепоксид

$C_{16}H_{14}ClN_3O$ = 299.8.

CAS — 58-25-3.

ATC — N05BA02.

ATC Vet — QN05BA02.



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

Pharmacopoeias. In *Chin., Eur.* (see p.vii), *Jpn*, and *US*.
Ph. Eur. 6.2 (Chlordiazepoxide). An almost white or light yellow, crystalline powder. It exhibits polymorphism. Practically insoluble in water; sparingly soluble in alcohol. Protect from light.
USP 31 (Chlordiazepoxide). A yellow, practically odourless, crystalline powder. Insoluble in water; soluble 1 in 50 of alcohol, 1 in 6250 of chloroform, and 1 in 130 of ether. Store in airtight containers. Protect from light.

Chlordiazepoxide Hydrochloride *(BANM, USAN, rINNM)*

Chlordiazepoksido hidrochloridas; Chlordiazepoksydu chlorowodorek; Chlordiazépoxide, chlorhydrate de; Chlordiazepoxidhydrochlorid; Chlordiazepoxidi hydrochloridum; Hidrocloruro de clordiazepóxido; Klooridiatsepoksidihydrokloridi; Klordiazepoksit Hidroklorür; Klórdiazepoxid-hidroklorid; Klordiazepoxidhydroklorid; Methaminodiazepoxide Hydrochloride; NSC-115748; Ro-5-0690.

Хлордиазепоксида Гидрохлорид

$C_{16}H_{14}ClN_3O,HCl$ = 336.2.
CAS — 438-41-5.
ATC — N05BA02.
ATC Vet — QN05BA02.

Pharmacopoeias. In *Eur.* (see p.vii) and *US*.
Ph. Eur. 6.2 (Chlordiazepoxide Hydrochloride). A white or slightly yellow, crystalline powder. It exhibits polymorphism. Soluble in water; sparingly soluble in alcohol. Protect from light.
USP 31 (Chlordiazepoxide Hydrochloride). A white or practically white, odourless, crystalline powder. Soluble in water; sparingly soluble in alcohol; insoluble in petroleum spirit. Store in airtight containers. Protect from light.

Dependence and Withdrawal

As for Diazepam, p.987.

◊ For the purpose of withdrawal regimens, 15 mg of chlordiazepoxide is considered equivalent to about 5 mg of diazepam.

Adverse Effects, Treatment, and Precautions

As for Diazepam, p.987.

Hepatic impairment. Progressive drowsiness began after 20 days of treatment with chlordiazepoxide in a woman with cirrhosis and hepatitis.[1] One week after stopping the drug the patient could not be roused, and full consciousness was not regained for another week. Accumulation of active metabolites of chlordiazepoxide may have been responsible for the prolonged stupor.

1. Barton K, *et al*. Chlordiazepoxide metabolite accumulation in liver disease. *Med Toxicol* 1989; **4:** 73–6.

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

Interactions

As for Diazepam, p.989.

Pharmacokinetics

Absorption of chlordiazepoxide is almost complete after oral doses; peak plasma concentrations are achieved after 1 to 2 hours. Absorption after intramuscular injection may be slow and erratic depending on the site of injection. Chlordiazepoxide is about 96% bound to plasma proteins. Reported values for the elimination half-life of chlordiazepoxide have ranged from about 5 to 30 hours, but its main active metabolite desmethyldiazepam (nordazepam, p.1012) has a half-life of several days. Other pharmacologically active metabolites of chlordiazepoxide include desmethylchlordiazepoxide, demoxepam, and oxazepam (p.1014). Chlordiazepoxide passes into the CSF and breast milk, and crosses the placenta. Unchanged drug and metabolites are excreted in the urine, mainly as conjugated metabolites.

◊ References.

1. Greenblatt DJ, *et al*. Clinical pharmacokinetics of chlordiazepoxide. *Clin Pharmacokinet* 1978; **3:** 381–94.

Uses and Administration

Chlordiazepoxide is a benzodiazepine with general properties similar to those of diazepam (p.992). It is used in the short-term treatment of anxiety disorders (p.952) and insomnia (p.957). Chlordiazepoxide is also used in muscle spasm (p.1887), in alcohol withdrawal syndrome (p.1626), and for premedication (p.1780).

Chlordiazepoxide is given orally as the hydrochloride or the base; the doses given refer equally to both. It may also be given by deep intramuscular or slow intravenous injection as the hydrochloride. Preparations formulated for intramuscular use are considered unsuitable for intravenous injection due to the formation of air bubbles in the solvent.

Elderly and debilitated patients should be given one-half or less of the usual adult dose.

The usual oral dose for the treatment of **anxiety** is up to 30 mg daily in divided doses; in severe conditions up to 100 mg daily has been given. For acute or severe anxiety an initial dose of 50 to 100 mg of the hydrochloride has been given by injection, followed if necessary by 25 to 50 mg three or four times daily.

For relief of **muscle spasm** a dose of 10 to 30 mg daily orally in divided doses is recommended, and 10 to 30 mg orally may be given before bedtime for insomnia associated with anxiety.

For the control of the acute symptoms of **alcohol withdrawal** chlordiazepoxide or chlordiazepoxide hydrochloride may be given in an oral dose of 25 to 100 mg repeated as needed up to a maximum of 300 mg daily. For severe symptoms treatment may be begun by injection of 50 to 100 mg, repeated if necessary after 2 to 4 hours.

Chlordiazepoxide hydrochloride has also been given for anaesthetic **premedication** in a dose of 50 to 100 mg intramuscularly one hour before surgery.

Preparations

BP 2008: Chlordiazepoxide Capsules; Chlordiazepoxide Hydrochloride Tablets;
USP 31: Chlordiazepoxide and Amitriptyline Hydrochloride Tablets; Chlordiazepoxide Hydrochloride and Clidinium Bromide Capsules; Chlordiazepoxide Hydrochloride Capsules; Chlordiazepoxide Hydrochloride for Injection; Chlordiazepoxide Tablets.

Proprietary Preparations (details are given in Part 3)
Arg.: OCM; ***Braz.:*** Psicosedin; ***Cz.:*** Defobin†; Elenium; ***Denm.:*** Klopoxid; Risolid; ***Fin.:*** Risolid; ***Ger.:*** Librium; Multum; Radepur; ***Gr.:*** Oasil; ***Hong Kong:*** Librium; ***Hung.:*** Elenium; Librium; ***India:*** Equilibrium; Librium; ***Indon.:*** Cetabrium; Librium; ***Irl.:*** Librium; ***Ital.:*** Librium; Reliberan†; ***Malaysia:*** Benpine; Klorpo†; ***Mex.:*** Kalmocaps†; ***NZ:*** Novapam; ***Pol.:*** Elenium; ***Port.:*** Paxium; ***Rus.:*** Elenium (Элениум); ***S.Afr.:*** Librium; ***Singapore:*** Benpine; Klorpo; ***Spain:*** Huberplex; Omnalio; ***Thai.:*** Benpine; Cozep; Epoxide†; ***UK:*** Librium; Tropium; ***USA:*** Libritabs†; Librium; Mitran†; Reposans†; ***Venez.:*** Eposal.

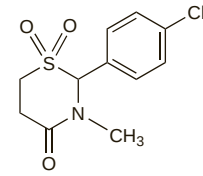
Multi-ingredient: ***Arg.:*** Libraxin; Plafonyl†; ***Austria:*** Limbitrol; ***Braz.:*** Limbitrol; Menotensil; ***Canad.:*** Apo-Chlorax; Librax; ***Chile:*** Aero Itan; Aerogastrol; Antalin; Garceptol; Gaseofin†; Gastrolen; Lerogin; Libraxin; Limbatrilin; Lironex†; Morelin; No-Ref; Profisin; Sedogastrol†; Tensoliv; Tiperin; Tranvagal†; ***Fin.:*** Klotriptyl; Librax; Limbitrol; ***Fr.:*** Librax; ***Gr.:*** Librax; ***Hong Kong:*** Bralix; Epilon; Librax; Medocalum†; ***India:*** Emotrip; Equirex; Normaxin; Spasrax; ***Indon.:*** Braxidin; Cliad; Klidibrax; Librax; Limbritol; Melidox; Neurogen; Renagas; Sanmag; Spasmium; ***Israel:*** Nirvaxal; ***Ital.:*** Diapatol; Librax; Limbitryl; Sedans; ***Malaysia:*** Apo-Chlorax†; Liblan; ***Port.:*** Librax; ***Rus.:*** Amixide (Амиксид); ***S.Afr.:*** Librax; Limbitrol; ***Singapore:*** Apo-Chlorax; Chlobax; Librax; Medocalum; ***Spain:*** Psico Blocan; ***Switz.:*** Librax; Librocol; Limbitrol; ***Thai.:*** Kenspa; Librax; Pobrax†; Tumax; Zepobrax†; ***Turk.:*** Klipaks; Libkol; Librax; ***USA:*** Clindex; Librax; Limbitrol; ***Venez.:*** Librax.

Chlormezanone *(BAN, rINN)*

Chlormethazanone; Chlormézanone; Chlormezanonum; Clormezanona; Kloorimetsanoni; Klormezanon. 2-(4-Chlorophenyl)-3-methylperhydro-1,3-thiazin-4-one 1,1-dioxide.

Хлормезанон

$C_{11}H_{12}ClNO_3S$ = 273.7.
CAS — 80-77-3.
ATC — M03BB02.
ATC Vet — QM03BB02.



Profile

Chlormezanone has been used in the treatment of anxiety disorders and insomnia. It was also used in conditions associated with painful muscle spasm, often in compound preparations with analgesics; its mechanism of action is not clear but is probably related to its sedative effect. Chlormezanone was withdrawn from use in many countries after reports of serious skin reactions (see below).

Effects on the skin. Chlormezanone was responsible for 5 of 86 cases of fixed drug eruption detected in a Finnish hospital from 1971 to 1980.[1] In the period from 1981 to 1985 chlormezanone was responsible for 1 out of 77 such eruptions.[2] In a case control study[3] comparing drug use in 245 patients hospitalised because of toxic epidermal necrolysis or Stevens-Johnson syndrome and 1147 controls, 13 patients and one control were found to have taken chlormezanone. From these figures a high crude relative risk of 62 was calculated; the excess risk was estimated to be 1.7 cases per million users per week.

1. Kauppinen K, Stubb S. Fixed eruptions: causative drugs and challenge tests. *Br J Dermatol* 1985; **112:** 575–8.