Dexbrompheniramine maleate is normally given as an ingredient of decongestant preparations containing pseudoephedrine. The dose of dexbrompheniramine maleate by mouth in these combinations is 2 mg up to four times daily. Children over 6 years can be given 1 mg up to four times daily.

Modified-release oral preparations of brompheniramine maleate or dexbrompheniramine maleate are available in some countries; dosage is specific to a particular formulation.

Preparations

BP 2008: Brompheniramine Tablets;
USP 31: Brompheniramine Maleate Elixir; Brompheniramine Maleate Injection; Brompheniramine Maleate Tablets; Dexbrompheniramine Maleate and Pseudoephedrine Sulfate Oral Solution.

Proprietary Preparations (details are given in Part 3)
Fr.: Dimegan; ***Malaysia:*** Bomex; ***Singapore:*** Bomex†; ***Thai.:*** Babycold; Bomine; Dimetane; ***UK:*** Dimotane†; ***USA:*** Bidhist; Dimetane†; J-Tan; Lodrane 12; Lodrane 24; Oraminic II; P-Tex.

Multi-ingredient: ***Arg.:*** Factus; ***Austral.:*** Dimetapp; Dimetapp DM; ***Braz.:*** Bialerge; Decongex Plus; Decongex Plus Expectorante†; Dimetapp; Winter AP; ***Canad.:*** Dimetane Expectorant C; Dimetane Expectorant DC; Dimetapp Cold; Dimetapp DM Cough & Cold; Dimetapp Oral Infant Cold & Fever Drops; Dimetapp Oral Infant Drops; Dimetapp-C; Drixoral; Drixoral Day/Night; ***Chile:*** Disofrin†; ***Cz.:*** Disophrol; ***Fin.:*** Disofrol†; ***Fr.:*** Dimetane Expectorant Enfant†; Martigene†; ***Gr.:*** Dimetapp New†; ***Hong Kong:*** Brom-PP; Brom-Ramine Compound; Bromhexine Compound; Bromphenex; DF Multi-Symptom; Dimaxin†; Dimeta-2; Dimetapp; Drixoral; Eascold; ENT†; Eurotapp; Unihist; Vidatapp; Vidatapp Forte; ***Hung.:*** Disophrol†; ***Indon.:*** Alco Plus; Alco Plus DMP; Drixoral; ***Irl.:*** Dimotane Co; ***Malaysia:*** Drixoral†; Rinafort; ***Mex.:*** Afrinex; Cripofen; Dimetapp; ***NZ:*** Dimetapp; Dimetapp DM Cold & Cough; ***Philipp.:*** Dimerrin; Dimetapp; Hisdec; Nasatapp; Nostero; Penbrosol; PPB; Rhinodec; Rhinotapp; Snizee; Zeditapp; ***Pol.:*** Disophrol; ***Port.:*** Constipal; Ilvico N; ***S.Afr.:*** Dimetapp; Ilvico; ***Singapore:*** Dimetapp; Drixoral†; Rinafort; ***Spain:*** Disofrol; Ilvico; ***Swed.:*** Disofrol; ***Switz.:*** Disofrol; Ruptonf†; ***Thai.:*** Asiatapp; Bepeno; Bepeno-G; Bluco; Bromavon; Bromesep Elixir; Bromesep Expectorant; Bromped; Bromtussia; Bromtussia DC†; Brontus; Centapp; Daminate; Dimetapp; Meditapp; Meditapp Expectorant; MEXY; Minra†; Nartap; Nasorest†; Pharfed; Polamine; Polydine; Polydrop; Postap; Postap Expectorant; Rhinadine; Rhinophen-C†; Unihist; ***Turk.:*** Disophrol; ***UK:*** Dimotane Co; Dimotane Expectorant; Dimotane Plus†; ***USA:*** 12 Hour Antihistamine Nasal Decongestant; 12 Hour Cold; Accuhist; Accuhist DM Pediatric; Accuhist PDX; Alacol DM; Allent; Anaplex DM; Anaplex HD; Andehist DM†; Andehist†; Brofed; Bromadine-DM; Bromarest DX; Bromatan-DM; Bromatane DX; Bromfed; Bromfed-DM; Bromfed-PD; Bromfenex; Bromhist; Bromhist PDX; Bromhist-DM; Bromhist-NR; Bromphen DX Cough; Brompheniramine Cough; Brovex PD; C-Tan D; Carbodex DM; Coldec DM; Comtrex Acute Head Cold; CPB WC; Cytuss-HC NR; Dallergy DM; DEKA; Dexaphen-SA; Dimetane Decongestant†; Dimetapp; Dimetapp Cold & Fever; Dimetapp DM; Dimetapp Nighttime Flu; Disobrom; Disophrol; Dristan Allergy; Dristan Cold Maximum Strength Multi-symptom Formula; Drixomed; Drixoral; Drixoral Cold & Allergy; Drixoral Cold & Flu; Drixoral Plus; Drocon-CS; Endafed; Histacol DM; Histussin HC; Iofed; Lodrane; Lodrane 12D; Lodrane D; Lortuss DM; M-END WC; Maximum Strength Dristan Cold; Myphetane DX; Nalex AC; Neo DM; P-Hist DM; PBM Allergy; Pediahist DM; Q-Tapp DM; Respahist; Resperal-DM; Rondamine-DM; Rondec; Seradex-LA; Sildec-DM; Sinadrin Plus; Touro A & H; Touro Allergy; Tusdec-DM; Tusnel-HC; Tussall; ULTRAbrom; VaZol-D; Vazotab; Vazotan; Vazotuss HC; Zotex-PE; ***Venez.:*** Dimetapp; Ilvico; Metorfedrin.

Buclizine Hydrochloride *(BANM, USAN, rINNM)*

Buclizine, Chlorhydrate de; Buclizini Hydrochloridum; Buklizin Hidroklorür; Hidrocloruro de buclizina; NSC-25141; UCB-4445. (*RS*)1-(4-*tert*-Butylbenzyl)-4-(4-chlorobenzhydryl)piperazine dihydrochloride.

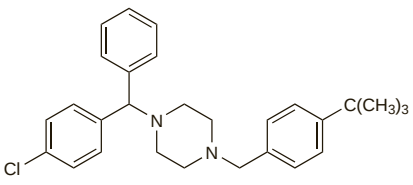
Буклизина Гидрохлорид

$C_{28}H_{33}ClN_2,2HCl$ = 505.9.

CAS — 82-95-1 (buclizine); 129-74-8 (buclizine hydrochloride).

ATC — R06AE01.

ATC Vet — QR06AE01.



(buclizine)

Pharmacopoeias. In *Br.*
BP 2008 (Buclizine Hydrochloride). A white or slightly yellowish, crystalline powder. Practically insoluble in water; very slightly soluble in alcohol; sparingly soluble in chloroform and in propylene glycol.

Adverse Effects and Precautions
As for the sedating antihistamines in general, p.561.

Interactions
As for the sedating antihistamines in general, p.563.

Uses and Administration
Buclizine hydrochloride, a piperazine derivative, is a sedating antihistamine with antimuscarinic and moderate sedative actions. It is used mainly for its antiemetic action, particularly in the prevention of motion sickness (p.564) and with analgesics in the treatment of migraine (p.616). In some countries it is given in the management of allergic conditions and in pruritic skin disorders (p.565). Buclizine has also been used in the treatment of vertigo (p.565) associated with disorders of the vestibular system, although its value in these conditions remains to be established.

To prevent motion sickness, buclizine hydrochloride is given at least 30 minutes before travelling in an oral dose of 25 or 50 mg, which may be repeated, if necessary, after 4 to 6 hours. The usual dose to alleviate nausea is 25 or 50 mg daily up to 100 mg daily in divided doses; in severe cases up to 150 mg daily has been given.

In the treatment of migraine, buclizine hydrochloride is given in usual doses of 12.5 mg at the start of an attack or when one is known to be imminent; children aged 10 to 14 years may be given 6.25 mg and older children the usual adult dose.

In pruritic skin disorders the usual dose of buclizine hydrochloride is 25 to 50 mg daily.

Preparations

Proprietary Preparations (details are given in Part 3)
Belg.: Longifene; ***Braz.:*** Buclina; Postafen; ***Fr.:*** Aphilan; ***Hong Kong:*** Longifene†; ***India:*** Longifene; ***Malaysia:*** Buchzine†; Longifene†; Longimin†; ***Port.:*** Buclina; Postafeno†; ***S.Afr.:*** Longifene; ***Singapore:*** Longifene†; Panzimine†; ***Turk.:*** Longifene; ***USA:*** Bucladin-S Softab.

Multi-ingredient: ***Braz.:*** Apetibe†; Apetil; Buclamin†; Buclifen-Vit†; Buclimax; Bucliplex†; Carnabol; Complevit; Klizin; Nutri-Ped†; Nutrimaiz SM; Pepsivit†; Pondusvitam; Profol; Propan†; Vitaler†; ***Ger.:*** Migralave N†; ***Irl.:*** Migralave; ***Israel:*** Migralave; ***Philipp.:*** Appebon; Appebon with Iron; Appetason; Biotermin AS; Ferlette; Medifortan-AS; Pediafortan-AS; Propan; Propan with Iron; Regeron-E Plus; ***Port.:*** Migraleve; ***S.Afr.:*** Vomifene; ***Spain:*** Migraleve; ***Switz.:*** Migraleve; ***UK:*** Migraleve; ***Venez.:*** Dexapostafen.

Carbinoxamine Maleate *(BANM, rINNM)*

Carbinoxamine, Maléate de; Carbinoxamini Maleas; Karbinoksamin Maleat; Maleato de carbinoxamina. 2-[4-Chloro-α-(2-pyridyl)benzyloxy]-*NN*-dimethylethylamine hydrogen maleate.

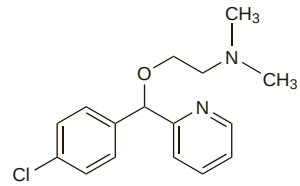
Карбиноксамина Малеат

$C_{16}H_{19}ClN_2O,C_4H_4O_4$ = 406.9.

CAS — 486-16-8 (carbinoxamine); 3505-38-2 (carbinoxamine maleate).

ATC — R06AA08.

ATC Vet — QR06AA08.



(carbinoxamine)

Pharmacopoeias. In *US.*
USP 31 (Carbinoxamine Maleate). A white, odourless, crystalline powder. Soluble 1 in less than 1 of water, 1 in 1.5 of alcohol and of chloroform, and 1 in 8300 of ether. pH of a 1% solution in water is between 4.6 and 5.1. Store in airtight containers. Protect from light.

Adverse Effects and Precautions
As for the sedating antihistamines in general, p.561.

Interactions
As for the sedating antihistamines in general, p.563.

Uses and Administration
Carbinoxamine maleate, a monoethanolamine derivative, is a sedating antihistamine with antimuscarinic, significant sedative, and serotonin antagonist effects. Carbinoxamine maleate is used for the relief of allergic conditions such as rhinitis (p.565), and is a common ingredient of compound preparations for symptomatic treatment of coughs and the common cold (p.564).

Dose recommendations for carbinoxamine maleate may vary between preparations. Licensed US product information suggests a usual oral dose of carbinoxamine maleate in adults of 4 to 8 mg given 3 or 4 times daily. Children of 2 to 3 years of age may be given a dose of 2 mg three or four times daily, children aged 3 to 6 years given 2 to 4 mg three or four times daily, and those above 6 years given 4 to 6 mg three or four times daily. Lower doses, sometimes less than half these licensed in the US, may be used in other countries. Carbinoxamine polistirex has also been given by mouth.

Preparations

USP 31: Carbinoxamine Maleate Tablets; Pseudoephedrine Hydrochloride, Carbinoxamine Maleate, and Dextromethorphan Hydrobromide Oral Solution.

Proprietary Preparations (details are given in Part 3)
Arg.: Omega 100; ***Mon.:*** Allergefon; ***Thai.:*** Histin; Sinumine†; ***USA:*** Carboxine†; Histex CT; Histex I/E; Histex PD; Palgic; Pediatex.

Multi-ingredient: ***Arg.:*** Aseptobron C; Cobenzil Compuesto†; Omega 100 Expectorante†; Rondec Compositum†; Rondec†; Torfan H†; ***Austria:*** Rhinopront; ***Belg.:*** Rhinopront†; ***Braz.:*** Afebrin†; Gegrip†; Iodeto de Potassio Composto†; Naldecon; Naldecon Pediatrico; Nasaliv; Neolefrin; Neolefrin Baby; Resprin; ***Chile:*** Matinor; Rhinopront†; Rinofrim†; ***Cz.:*** Rhinopront†; Rhinotussal†; ***Ger.:*** Rhinopront†; Rhinotussal†; ***Gr.:*** Rhinopront-S†; Rhinopront†; Rondec; ***Hong Kong:*** Became; Coritussal; Metoplex; Rhinopront; ***Hung.:*** Rhinopront†; ***India:*** Clistin; ***Indon.:*** Kenantist; ***Israel:*** Rhinovis†; ***Malaysia:*** Became; Rhinopront†; ***Mex.:*** Lentostamin; Prindex; ***Singapore:*** Became; Rhinopront†; ***Spain:*** Rinomax; Rinoretard†; ***Switz.:*** Rhinopront†; Rhinotussal; ***Thai.:*** Rhinar; Rhinohist; Rhinopront†; Rondec-DM†; ***Turk.:*** Rhinopront; Rhinotussal; ***UAE:*** Fluzal†; ***USA:*** Andehist DM†; Andehist†; Aridex; Carbinoxamine Compound†; Carbiset; Carbodec; Carbodec DM; Carbodex DM; Carboxine-PSE; Coldec D; Cordron-D; Cordron-DM; Cydec DM†; Cydec†; Dacex-A; Decahist-DM†; DMax; Histex HC; Nacon; Norel LA; Palgic DS; Palgic-D; Pediatex-D; Pediatex-DM; Pseudo-Car DM; Rondec; Sildec-DM; Trituss-A; XiraHist DM; ***Venez.:*** Aurimel†; Resprin; Rhinopront†; Rondec†; Sondinal†.

Cetirizine Hydrochloride

(BANM, USAN, rINNM)

Cetirizin-dihidroklorid; Cetirizin-dihydrochlorid; Cetirizindihydroklorid; Cétirizine, Chlorhydrate de; Cétirizine, dichlorhydrate de; Cetirizini dihydrochloridum; Cetirizini Hydrochloridum; Cetirizino dihidrochloridas; Cetyryzyny dichlorowodorek; Hidrocloruro de cetirizina; P-071; Setiritsinidihydrokloridi; Setirizin Hidroklorür; UCB-P071. The dihydrochloride of 2-[4-(4-chlorobenzhydryl)piperazin-1-yl]ethoxyacetic acid.

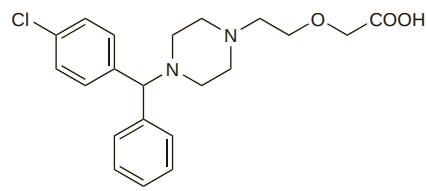
Цетиризина Гидрохлорид

$C_{21}H_{25}ClN_2O_3,2HCl$ = 461.8.

CAS — 83881-51-0 (cetirizine); 83881-52-1 (cetirizine hydrochloride).

ATC — R06AE07.

ATC Vet — QR06AE07.



(cetirizine)

Pharmacopoeias. In *Eur.* (see p.vii).
Ph. Eur. 6.2 (Cetirizine Dihydrochloride; Cetirizine Hydrochloride BP 2008). A white or almost white powder. Freely soluble in water; practically insoluble in acetone and in dichloromethane. A 5% solution in water has a pH of 1.2 to 1.8. Protect from light.

Adverse Effects and Precautions
As for the non-sedating antihistamines in general, p.561. Reduced dosage is recommended for patients with hepatic or renal impairment (see under Uses and Administration, below).

Arrhythmias. The ECG effects of cetirizine were studied[1] in normal subjects; doses of up to six times the usual recommended dose did not prolong the QT interval. Additionally, the FDA[2] in the USA and representatives of the manufacturers[3] in Belgium did not find any association between cetirizine and the development of ventricular arrhythmias. However, there has been a subsequent report[4] of torsade de pointes after overdosage with cetirizine in a hypokalaemic patient undergoing haemodialysis for chronic renal failure. See also p.562.

1. Sale ME, *et al.* The electrocardiographic effects of cetirizine in normal subjects. *Clin Pharmacol Ther* 1994; **56:** 295–301.
2. Himmel MH, *et al.* Dangers of non-sedating antihistamines. *Lancet* 1997; **350:** 69.
3. Coulie P, *et al.* Non-sedating antihistamines and cardiac arrhythmias. *Lancet* 1998; **351:** 451.
4. Renard S, *et al.* Torsades de pointes induites par surdosage en cétirizine. *Arch Mal Coeur Vaiss* 2005; **98:** 157–61.

Effects on the liver. Life-threatening hepatitis developed in a 23-year-old man who had been taking cetirizine long-term for atopic dermatitis.[1] He recovered after treatment with prednisolone.

There has been a report of recurrent acute hepatitis associated with the short-term use of cetirizine for seasonal allergic rhinitis in a 26-year-old man.[2]

1. Watanabe M, *et al.* Severe hepatitis in a patient taking cetirizine. *Ann Intern Med* 2001; **135:** 142–3.
2. Pompili M, *et al.* Recurrent acute hepatitis associated with use of cetirizine. *Ann Pharmacother* 2004; **38:** 1844–7.

Hypersensitivity. Hypersensitivity reactions manifesting as urticaria[1,2] and fixed drug eruptions[3] have been reported with cetirizine.

1. Karamfilov T, *et al.* Cetirizine-induced urticarial reaction. *Br J Dermatol* 1999; **140:** 979–80.
2. Calista D, *et al.* Urticaria induced by cetirizine. *Br J Dermatol* 2001; **144:** 196.
3. Inamadar AC, *et al.* Multiple fixed drug eruptions due to cetirizine. *Br J Dermatol* 2002; **147:** 1025–6.

Sedation. For discussion of the sedative effects of antihistamines see p.562.

Interactions

As for the non-sedating antihistamines in general, p.563. However, some interactions are less likely with cetirizine than with non-sedating antihistamines such as astemizole and terfenadine, since cetirizine appears to have low hepatic metabolism and little arrhythmogenic potential (see Arrhythmias, above).

Anticoagulants. For a report of an interaction between cetirizine and *acenocoumarol*, see under Interactions in Warfarin, p.1429.

Pharmacokinetics

Cetirizine is rapidly absorbed from the gastrointestinal tract after oral doses, peak plasma concentrations being attained within about an hour. Food delays the time to peak plasma concentrations but does not decrease the amount of drug absorbed. Cetirizine is highly bound to plasma proteins and has an elimination half-life of about 10 hours. It has been detected in breast milk. Cetirizine is excreted primarily in the urine mainly as unchanged drug. It does not appear to cross the blood-brain barrier to a significant extent.

◊ References.

1. Awni WM, *et al.* Effect of haemodialysis on the pharmacokinetics of cetirizine. *Eur J Clin Pharmacol* 1990; **38:** 67–9.
2. Desager JP, *et al.* A pharmacokinetic evaluation of the second-generation H -receptor antagonist cetirizine in very young children. *Clin Pharmacol Ther* 1993; **53:** 431–5.
3. Pitsiu M, *et al.* Retrospective population pharmacokinetic analysis of cetirizine in children aged 6 months to 12 years. *Br J Clin Pharmacol* 2004; **57:** 402–11.
4. Hussein Z, *et al.* Retrospective population pharmacokinetics of levocetirizine in atopic children receiving cetirizine: the ETAC study. *Br J Clin Pharmacol* 2005; **59:** 28–37.

Uses and Administration

Cetirizine hydrochloride, a piperazine derivative and metabolite of hydroxyzine (p.581), is described as a long-acting non-sedating antihistamine with some mast-cell stabilising activity. It appears to have a low potential for drowsiness in usual doses and to be virtually free of antimuscarinic activity. It is used for the symptomatic relief of allergic conditions including rhinitis (p.565) and chronic urticaria (p.565).

In adults and children aged 6 years and over, cetirizine hydrochloride is given in an oral dose of 10 mg once daily or 5 mg twice daily. Children aged 2 to 5 years may be given cetirizine 5 mg once daily or 2.5 mg twice daily. In the USA, children aged 6 months to 2 years may be given a dose of 2.5 mg once daily, increased to a maximum of 2.5 mg twice daily in those aged 12 months and over, for the treatment of perennial allergic rhinitis and chronic urticaria.

It is also used with a decongestant such as pseudoephedrine hydrochloride.

Dosage of cetirizine should be reduced in patients with hepatic or renal impairment, see below.

◊ References.

1. Curran MP, *et al.* Cetirizine: a review of its use in allergic disorders. *Drugs* 2004; **64:** 523–61.

Administration in hepatic or renal impairment. In patients with hepatic impairment, US licensed product information recommends that the dosage of cetirizine may need to be reduced to half the usual oral daily dose (see above). Similarly in patients with renal impairment, both the UK and US product information recommends a dosage reduction to half the usual daily dose.

Preparations

Proprietary Preparations (details are given in Part 3)

Arg.: Cabal; Cetidac; Cetizine; Cetriler; Salvalerg; Stopaler; Zyrtec; ***Austral.:*** Alzene; Zyrtec; ***Austria:*** Alerid; Cetiderm; Cetirhexal; Cetiristad; Cetyrol†; ratioAllerg; Reactine; Rigix; Tirizin; Virlix; Zirtek†; Zyrtec; ***Belg.:*** Histimed; Reactine; Zyrtec; ***Braz.:*** Aletir; Cetihexal†; Cetrizin; Zetalerg†; Zetir; Zinetrin; Zyrtec; ***Canad.:*** Allergy Relief; Reactine; ***Chile:*** Alertop; Coolips; Findaler; Histalen; Histax; Remitex; Rigotax; Sanaler; Sixacina; Zyrtec; ***Cz.:*** Alerid; Analergin; Cerex; Letizen; Parlazin; Reactine; Virlix†; Zodac; Zyrtec; ***Denm.:*** Alnok; Asytec; Benaday; Cidron; Gardex; Virlix†; Zyrtec; ***Fin.:*** Alzyr; Cidron†; Gardex; Heinix; Histec; Senirex; Siterin; Zyrtec; ***Fr.:*** Humex Rhinite Allergique†; Reactine; Virlix; Zyrtec; ***Ger.:*** Alerid†; Cetalerg†; Ceterifug†; Ceti-Puren; Ceti†; Cetiderm; Cetidura†; Ceti; CetiLich; Cetirigamma; Cetirlan†; Reactine; Zetir; Zyrtec; ***Gr.:*** Agelmin; Alenstran; Alergoxal; Arzedyn; Bebexin; Blezamont; Cetialfa; Cetiram; Cetirgen; Cezirен†; Cirizine; Dermizin; Enahimine; Gentiran; Habitek; Hamiltosin; Histafren; Kilsol; Lambeta; Ralizon; Remezine; Rezerc; Spatanil; Tasker; Telarix; Vitinelin; Zeda; Zepholin; Ziptek; Zirtek†; Znupril; ***Hong Kong:*** Adezio; Cetihis; Cetirin; Cety; Histacet; Histazine; Marizine; Rhinil; Ryvel; Simtec; Vick-Zyrt; Zertine; Zicet; Zyrtec; ***Hung.:*** Alerid; Cetigen; Cetrin; Cetripharm; Merzin; Parlazin; Zyrtec; ***India:*** Alerid; Cetcip; Ceticad; Cetriwal; Cetrizet; Cetrizine; CTZ; ELG Nil; LGNil; Rinitrin; Zyrtec; ***Indon.:*** Betarhin; Cerini; Cetrixal; Cetryn; Cetymin; Estin; Falergi; Histrine; Incidal-OD; Ozen; Risina; Rydian; Ryvel; Ryzen; Ryzo; Tiriz; Zenriz; ***Irl.:*** Cetrine; Histek; Zirpine; Zirtek; Zynor; ***Israel:*** Histazine; Zyllergy; ***Ital.:*** Formistin; Virlix†; Zirtec; ***Jpn:*** Zyrtec; ***Malaysia:*** Adezio; Ceritec; Simtec; Zicet; Zyrtec; ***Mex.:*** Apoliz; Cethexal; Kenicet; Reactine; Trizinet; Virlix; Zyrtec; ***Neth.:*** Reactine; Revalintabs; Zyrtec; ***Norw.:*** Acura; Reactine; Virlix†; Zyrtec; ***NZ:*** Razene; Zyrtec; ***Philipp.:*** Brellercet; Cet-10; Cetimin; Prixlae; Unizef; Virlix; Zinex; Zyrrigin; Zyrtec; ***Pol.:*** Acer; Alermed; Alerzina; Allertec; Amertil; Ceratio; CetAlergin; Cetrivax; Cetrizen; Cetyryzyna; Letizen; Virlix; Zyrtec; Zyx; ***Port.:*** Cetix; Cinaz; Rinoliber; Virlix; Zyrtec; ***Rus.:*** Alerza (Алерза); Allertec (Аллертек); Analergin (Аналергин); Cetirinax (Цетириная); Cetrine (Цетрин); Letizen (Летизен); Parlazin (Парлазин); Zetrinal (Зетринал); Zodac (Зодак); Zyncet (Зинцет); Zyrtec (Зиртек); ***S.Afr.:*** Allecet; Allermine; Texa; Zetop; Zyrtec; ***Singapore:*** Adezio; Agelmin†; Allertec†; Alzytec; Cetihis; Cetrine; Rhizin†; Sancotec; Terizin; Zyrtec; ***Spain:*** Alercina; Alerlisin; Coulergin; Reactine Plus; Reactine†; Virdox†; Virlix; Voltric†; Zyrtec; ***Swed.:*** Acura; Alerid; Cidron; Reactine; Zyrlex; ***Switz.:*** Cerzine; Cet eco; Cetallerg; Cetrine; Histatec; Tobin; Zyrtec; ***Thai.:*** Allercet; Cetihis; Cetrimed; Cetrine; Cetrizet; Cetrizin; Ceza; Cistamine; Cyzine; Fatec; Histica; Incidal-OD†; Rentrex; Setin; Sutac; Terzine; Tizine; Triz; Unicet; Zensil; Zermed; Zertine; Zittec; Zymed; Zyrac; Zyrazine; Zyrcon; Zyrex; Zyrtec; ***Turk.:*** Allerset; Cetryn; Hitrizin; Ressital; Setiral; Virlix; Yenizin; Zyrtec; ***UAE:*** Cetralon; ***UK:*** AllerTek; Benadryl Allergy Oral Solution; Benadryl One A Day; Cetirocol†; Hayfever & Allergy Relief; Hayfever Relief; Piriteze; Pollenshield; Zirtek; ***USA:*** Zyrtec; ***Venez.:*** Celay; Cetirex; Cetirivax; Cetral; Cetrine†; Talzic; Virlix†; Zyrtec.

Multi-ingredient: ***Arg.:*** Cabal-D; Cetriler D; Zyrtec-D; ***Austria:*** Cirrus; ***Belg.:*** Cirrus; Reactine Pseudoephedrine; ***Braz.:*** Zyrtec-D; ***Canad.:*** Reactine Allergy & Sinus; ***Chile:*** Alertop-D; Findaler-D; Histalen D; Remitex D; Rigotax-D; Sanaler-D; Zyrtec-D†; ***Cz.:*** Pronose†; ***Fin.:*** Cirrus; ***Fr.:*** Actifed-duo; Humex Rhinite Allergique; ***Ger.:*** Reactine duo; Zyrtec Duo†; ***Hong Kong:*** Cirrus; Zyrtec-D; ***Hung.:*** Zyrtec-D; ***India:*** Alerid Cold; Alerid D; Amcold; Cheston Cold; ***Indon.:*** Cirrus; ***Ital.:*** Naristar; Pronose†; Reactine; ***Malaysia:*** Cirrus; Zyrtec-D; ***Mex.:*** Virlix-D; Zyrtec-D; ***NZ:*** Zyrtec Decongestant; ***Pol.:*** Cirrus; Zyrtec D; ***Port.:*** Cirrus; ***Singapore:*** Cirrus†; ***Spain:*** Naristar†; Stopcold; Virlix Plus; ***Thai.:*** Zyrtec-D; ***Turk.:*** Cirrus; ***USA:*** Zyrtec-D; ***Venez.:*** Cetirivax D; Zyrtec-D.

Chlorcyclizine Hydrochloride *(BANM, rINNM)*

Chlorciklizino hidrochloridas; Chlorcyclizine, chlorhydrate de; Chlorcyclizini hydrochloridum; Chlorcyclizinium Chloride; Chlorcyklizin-hydrochlorid; Hidrocloruro de clorciclizina; Kloorisyklitsiinihydrokloridi; Klórciklizin-hidroklorid; Klorcyklizinhydroklorid. 1-(4-Chlorobenzhydryl)-4-methylpiperazine hydrochloride.

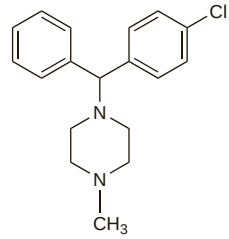
Хлорциклизина Гидрохлорид

$C_{18}H_{21}ClN_2,HCl$ = 337.3.

CAS — 82-93-9 (chlorcyclizine); 1620-21-9 (chlorcyclizine hydrochloride).

ATC — R06AE04.

ATC Vet — QR06AE04.



(chlorcyclizine)

Pharmacopoeias. In *Eur.* (see p.vii).

Ph. Eur. 6.2 (Chlorcyclizine Hydrochloride). A white or almost white, crystalline powder. Freely soluble in water and in dichloromethane; soluble in alcohol. A 1% solution in water has a pH of 5.0 to 6.0. Protect from light.

Profile

Chlorcyclizine hydrochloride, a piperazine derivative, is a sedating antihistamine (p.561). It has been given orally for the symptomatic relief of hypersensitivity reactions; it has also been used as an antiemetic. It has been used in topical preparations, although as with other antihistamines, there is a risk of sensitisation.

Chlorcyclizine dibunate (naftoclizine) has been used as a cough suppressant similarly to sodium dibunate (p.1573).

Preparations

Proprietary Preparations (details are given in Part 3)

Denm.: Trihistan†; ***Norw.:*** Trihistan†.

Multi-ingredient: ***Fin.:*** Anervan; ***Israel:*** Temigran; ***Neth.:*** Primatour; ***Norw.:*** Anervan; ***Spain:*** Diminex Antitusigeno; ***Swed.:*** Anervan; Exolyt.

Chloropyramine Hydrochloride *(BANM, rINNM)*

Chloropyramine, Chlorhydrate de; Chloropyramini Hydrochloridum; Halopyramine Hydrochloride; Hidrocloruro de cloropiramina. *N*-(4-Chlorobenzyl)-*N*′*N*′-dimethyl-*N*-(2-pyridyl)ethylenediamine hydrochloride.

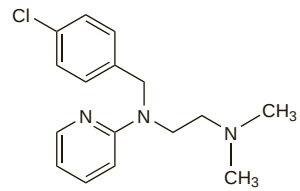
Хлоропирамина Гидрохлорид

$C_{16}H_{20}ClN_3,HCl$ = 326.3.

CAS — 59-32-5 (chloropyramine); 6170-42-9 (chloropyramine hydrochloride).

ATC — D04AA09; R06AC03.

ATC Vet — QD04AA09; QR06AC03.



(chloropyramine)

Profile

Chloropyramine hydrochloride, an ethylenediamine derivative, is an antihistamine (p.561). It has been given orally and by injection.

Preparations

Proprietary Preparations (details are given in Part 3)

Hung.: Suprastin; ***Mex.:*** Avapena; ***Rus.:*** Suprastin (Супрастин).

Chlorphenamine Maleate

(BANM, rINNM)

Chlorfenamin-maleinát; Chlorfenamino maleatas; Chlorofenaminy maleinian; Chlorphénamine, maléate de; Chlorphenamini maleas; Chlorpheniramine Maleate; Chlorprophenpyridamine Maleate; Kloorifenamiinimaleaatti; Klorfenaminmaleat; Klórfenamin-maleát; Maleato de clorfenamina. (±)-3-(4-Chlorophenyl)-*NN*-dimethyl-3-(2-pyridyl)propylamine hydrogen maleate.

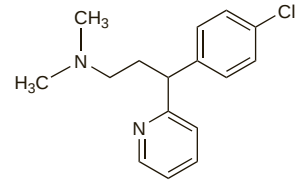
Хлорфенамина Малеат

$C_{16}H_{19}ClN_2,C_4H_4O_4$ = 390.9.

CAS — 132-22-9 (chlorphenamine); 113-92-8 (chlorphenamine maleate).

ATC — R06AB04.

ATC Vet — QR06AB04.



(chlorphenamine)

Pharmacopoeias. In *Chin.*, *Eur.* (see p.vii), *Int.*, *Jpn*, *US*, and *Viet.*

Ph. Eur. 6.2 (Chlorphenamine Maleate). A white or almost white, crystalline powder. Freely soluble in water; soluble in alcohol. Protect from light.

USP 31 (Chlorpheniramine Maleate). A white, odourless, crystalline powder. Soluble 1 in 4 of water and 1 in 10 of alcohol and of chloroform; slightly soluble in ether and in benzene. Its solutions in water have a pH between 4 and 5. Store in airtight containers. Protect from light.

Incompatibility. Chlorphenamine maleate has been reported to be incompatible with calcium chloride, kanamycin sulfate, noradrenaline acid tartrate, pentobarbital sodium, and meglumine adipiodone.