Pharmacopoeias. In *Eur.* (see p.vii).
Ph. Eur. 6.2 (Lynestrenol). A white or almost white crystalline powder. Practically insoluble in water; soluble in alcohol and in acetone. Protect from light.

Profile
Lynestrenol is a progestogen (see Progesterone, p.2125) structurally related to norethisterone that is used alone or as the progestogenic component of oral contraceptives (see p.2058). Typical oral daily doses for contraception are 500 micrograms when used as a progestogen-only preparation, and 0.75 or 2.5 mg when combined with an oestrogen. When used alone for menstrual disorders, doses of 5 to 10 mg daily are given, often as cyclical regimens.

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

Preparations
Proprietary Preparations (details are given in Part 3)
Arg.: Exluton; ***Austria:*** Orgametril; ***Belg.:*** Orgametril; ***Braz.:*** Exluton; ***Chile:*** Exluton; Linosun; Normalac; ***Cz.:*** Exluton†; Orgametril; ***Denm.:*** Orgametril; ***Fin.:*** Exluton†; Orgametril; ***Fr.:*** Orgametril; ***Ger.:*** Orgametril; ***Gr.:*** Orgametril†; ***Hung.:*** Orgametril; ***Indon.:*** Endometril; Exluton; ***Mex.:*** Exluton; ***Neth.:*** Exluton; Orgametril; ***Norw.:*** Exlutona†; ***Philipp.:*** Daphne; Exluton; ***Pol.:*** Orgametril; ***Port.:*** Exluton†; Orgametril†; ***Rus.:*** Exluton (Экслютон); ***S.Afr.:*** Exluton†; ***Spain:*** Orgametril; ***Swed.:*** Exlutena; Orgametril; ***Thai.:*** Exluton; ***Turk.:*** Orgametril; ***Venez.:*** Exluton; Normalac.

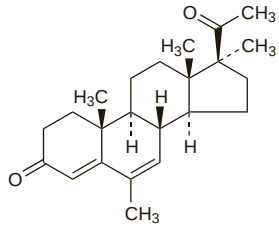
Multi-ingredient: ***Arg.:*** Lindiol†; ***Braz.:*** Anacyclin†; Ovoresta; ***Chile:*** Anovulatorios; ***Cz.:*** Restovar†; ***Ger.:*** Lyn-ratiopharm-Sequenz; Ovoresta M; ***Neth.:*** Lyndiol†; Ministat; Ovostat†; ***Swed.:*** Restovar; ***Thai.:*** Lyndiol†.

Medrogestone *(BAN, USAN, rINN)*

AY-62022; Medrogeston; Medrogestona; Médrogestone; Medrogestoni; Medrogestonum; Metrogestone; NSC-123018; R-13-615. 6,17α-Dimethylpregna-4,6-diene-3,20-dione.

Медрогестон

$C_{23}H_{32}O_2$ = 340.5.
CAS — 977-79-7.
ATC — G03DB03.
ATC Vet — QG03DB03.



Profile
Medrogestone is a progestogen structurally related to progesterone (p.2125) that is used in the treatment of menstrual disorders, and as the progestogen in menopausal HRT (see p.2071). It is usually given orally in daily doses of 5 to 10 mg, generally in a cyclical regimen. Higher doses were used in the treatment of endometrial carcinoma, prostatic hyperplasia, and breast disorders including carcinoma. It has also been used for threatened or recurrent miscarriage, but such use is not recommended unless there is proven progesterone deficiency.

Preparations
Proprietary Preparations (details are given in Part 3)
Austria: Colpron; ***Belg.:*** Colpro†; ***Fr.:*** Colprone; ***Ger.:*** Prothil; ***Hong Kong:*** Colprone†; ***Ital.:*** Colprone†; ***S.Afr.:*** Colpro†; ***Spain:*** Colpro†; ***Switz.:*** Colpro†.

Multi-ingredient: ***Austria:*** Premarin compositum†; Premarin Plus; ***Belg.:*** Premplus†; ***Cz.:*** Presomen Compositum†; ***Ger.:*** Presomen Compositum; ***Hong Kong:*** Prempak†; ***Ital.:*** Prempak†; ***Malaysia:*** Prempak†; ***Neth.:*** Premarin Plus†; ***Port.:*** Premarin Plus†; ***S.Afr.:*** Prempak N; ***Switz.:*** Premarin Plus†.

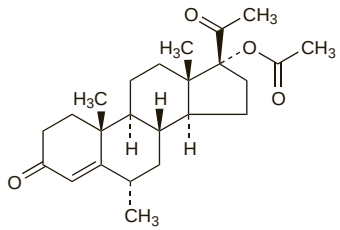
Medroxyprogesterone Acetate

(BANM, rINNM)

Acetato de medroxiprogesterona; Medroksiprogesteron Asetat; Medroksiprogesteroniasetaatti; Medroksiprogesterono acetatas; Medroksyprogesteronu octan; Medroxiprogesteronacetat; Medroxiprogeszteron-acetát; Medroxyprogesteron-acetát; Médroxyprogestérone, acétate de; Medroxyprogesteroni acetas; Methylacetoxyprogesterone; Metipregnone; NSC-26386. 6α-Methyl-3,20-dioxopregn-4-en-17α-yl acetate; 17α-Hydroxy-6α-methylpregn-4-ene-3,20-dione acetate.

Медроксипрогестерона Ацетат

$C_{24}H_{34}O_4$ = 386.5.
CAS — 520-85-4 (medroxyprogesterone); 71-58-9 (medroxyprogesterone acetate).
ATC — G03AC06; G03DA02; L02AB02.
ATC Vet — QG03AC06; QG03DA02; QL02AB02.



Pharmacopoeias. In *Chin., Eur.* (see p.vii), *Int.*, and *US.*
Ph. Eur. 6.2 (Medroxyprogesterone Acetate). A white or almost white crystalline powder. Practically insoluble in water; sparingly soluble in alcohol; soluble in acetone; freely soluble in dichloromethane. Protect from light.
USP 31 (Medroxyprogesterone Acetate). A white to off-white, odourless, crystalline powder. Insoluble in water; sparingly soluble in alcohol and in methyl alcohol; soluble in acetone and in dioxan; freely soluble in chloroform; slightly soluble in ether. Store in airtight containers at a temperature of 25°, excursions permitted between 15° and 30°. Protect from light.

Adverse Effects and Precautions
As for progestogens in general (see Progesterone, p.2125). See also under Hormonal Contraceptives, p.2059. Medroxyprogesterone acetate may have glucocorticoid effects when given long term at high doses.

Breast feeding. Medroxyprogesterone is reported to be distributed into breast milk when given as a depot progestogen-only contraceptive.[1] No adverse effects have been seen in breast-fed infants of mothers given medroxyprogesterone, and the American Academy of Pediatrics considers[2] that it is therefore usually compatible with breast feeding. Progestogen-only parenteral contraceptives should not be used until 6 weeks after birth if the woman is breast feeding (see Breast Feeding under Hormonal Contraceptives, p.2066).

1. Schwallie PC. The effect of depot-medroxyprogesterone acetate on the fetus and nursing infant: a review. *Contraception* 1981; **23:** 375–86.
2. American Academy of Pediatrics. The transfer of drugs and other chemicals into human milk. *Pediatrics* 2001; **108:** 776–89. Correction. *ibid.*; 1029. Also available at: http://aappolicy.aappublications.org/cgi/content/full/pediatrics%3b108/3/776 (accessed 27/06/08)

Carcinogenicity. The risk of various cancers associated with the use of depot medroxyprogesterone acetate as a contraceptive has been evaluated by WHO.[1] Overall, there was no increase in risk of breast cancer, although there is some evidence that current or recent use may be associated with a slight increase in risk (see also p.2059). There was no significant increased risk of cervical cancer (see also p.2060), and a protective effect against endometrial cancer (see p.2060). In contrast to combined oral contraceptives, there was no evidence of a protective effect against ovarian cancer (p.2061).

1. Anonymous. Depot-medroxyprogesterone acetate (DMPA) and cancer: memorandum from a WHO meeting. *Bull WHO* 1993; **71:** 669–76.

Effects on bone density. Use of medroxyprogesterone acetate as a parenteral progestogen-only contraceptive has been associated with reductions in bone density (see under Effects on the Musculoskeletal System, p.2064). This effect has also been reported after oral doses for menstrual disorders,[1] and is thought to be due to medroxyprogesterone-induced oestrogen deficiency.

1. Cundy T, *et al.* Short-term effects of high dose oral medroxyprogesterone acetate on bone density in premenopausal women. *J Clin Endocrinol Metab* 1996; **81:** 1014–17.

Effects on the skin. Acute local skin necrosis has been reported[1] after the intramuscular injection of medroxyprogesterone acetate as a depot contraceptive. A case of pigmented purpura on the lower legs, occurring about 4 months after starting medroxyprogesterone acetate injections, has been described.[2]

1. Clark SM, Lanigan SW. Acute necrotic skin reaction to intramuscular Depo-Provera . *Br J Dermatol* 2000; **143:** 1356–7.
2. Tsao H, Lerner LH. Pigmented purpuric eruption associated with injection medroxyprogesterone acetate. *J Am Acad Dermatol* 2000; **43:** 308–10.

Glucocorticoid effects. There have been reports of Cushing's syndrome induced by medroxyprogesterone acetate in patients receiving long-term therapy with high doses for the treatment of malignant neoplasms[1-5] or paraphilia.[6] Cushingoid symptoms regressed when treatment was stopped. Medroxyprogesterone possesses glucocorticoid activity and there is a risk of adrenal insufficiency during periods of stress or after sudden withdrawal of treatment. Some[4] consider that patients should be monitored for glucose intolerance and adrenal insufficiency during treatment.

1. Siminoski K, *et al.* The Cushing syndrome induced by medroxyprogesterone acetate. *Ann Intern Med* 1989; **111:** 758–60.
2. Donckier JE, *et al.* Cushing syndrome and medroxyprogesterone acetate. *Lancet* 1990; **335:** 1094.
3. Grenfell A, *et al.* Cushing's syndrome and medroxyprogesterone acetate. *Lancet* 1990; **336:** 256.
4. Merrin PK, Alexander WD. Cushing's syndrome induced by medroxyprogesterone. *BMJ* 1990; **301:** 345.
5. Shotliff K, Nussey SS. Medroxyprogesterone acetate induced Cushing's syndrome. *Br J Clin Pharmacol* 1997; **44:** 304.
6. Krueger RB, *et al.* Prescription of medroxyprogesterone acetate to a patient with pedophilia, resulting in Cushing's syndrome and adrenal insufficiency. *Sex Abuse* 2006; **18:** 227–8.

Porphyria. Medroxyprogesterone has been associated with acute attacks of porphyria and is considered unsafe in porphyric patients. However, for a reference to the use of medroxyprogesterone acetate with buserelin acetate in the prevention of premenstrual exacerbations of porphyria in 2 women, see p.2084.

Interactions
As for progestogens in general (see Progesterone, p.2126). Aminoglutethimide markedly reduces plasma concentrations of medroxyprogesterone so that an increase in medroxyprogesterone dosage is likely to be required.

Pharmacokinetics
Medroxyprogesterone is absorbed from the gastrointestinal tract. In the blood, it is highly protein bound, principally to albumin. It is metabolised in the liver and excreted mainly as glucuronide conjugates in the urine and faeces. It has a half-life of about 16 to 30 hours after oral doses; the half-life may be as long as 50 days after intramuscular injection. Medroxyprogesterone is reported to be distributed into breast milk.

Uses and Administration
Medroxyprogesterone acetate is a progestogen structurally related to progesterone, with actions and uses similar to those of the progestogens in general (see Progesterone, p.2126). It is given orally or, for prolonged action, as an aqueous suspension by intramuscular or subcutaneous injection, depending on the product.

It is used for the treatment of **menorrhagia** (p.2126) and **secondary amenorrhoea** in oral doses of 2.5 to 10 mg daily for 5 to 10 days starting on the assumed or calculated 16th to 21st day of the menstrual cycle, although treatment may begin on any day in secondary amenorrhoea.

In the treatment of mild to moderate **endometriosis** (p.2091) usual oral doses are 10 mg three times daily for 90 consecutive days, or 50 mg weekly or 100 mg every 2 weeks by intramuscular injection for at least 6 months. An alternative formulation used for the treatment of pain associated with endometriosis is given in a dose of 104 mg in 0.65 mL by subcutaneous injection once every 12 to 14 weeks.

Medroxyprogesterone acetate is also given by injection as a **contraceptive** (see under Hormonal Contraceptives, p.2069). As a progestogen-only contraceptive an intramuscular dose of 150 mg is given every 12 or 13 weeks. A combined contraceptive injection containing medroxyprogesterone acetate 25 mg with estradiol cipionate 5 mg is given monthly as an intramuscular injection. An alternative formulation used as a progestogen-only contraceptive is given as a dose of medroxyprogesterone acetate 104 mg in 0.65 mL by subcutaneous injection once every 12 to 14 weeks.

When used as the progestogen component of **menopausal HRT** (see p.2076), medroxyprogesterone acetate is given orally in a variety of regimens including 1.5, 2.5, or 5 mg daily continuously, 5 or 10 mg daily for 12 to 14 days of a 28-day cycle, and 20 mg daily for 14 days of a 91-day cycle.

Medroxyprogesterone acetate may also be used in the palliative treatment of some hormone-dependent malignant neoplasms. In **breast carcinoma** (see below) oral doses of 0.4 to 1.5 g daily may be given, although doses up to 2 g daily have been used in the past. Intramuscular medroxyprogesterone acetate has been given in initial doses of 500 mg daily for 4 weeks, then in maintenance doses twice weekly. In **endometrial** (below) and **renal carcinoma** (p.667) oral doses have ranged from 200 to 600 mg daily. Initial doses of 0.6 to 1.2 g weekly have been given by intramuscular injection, reducing to a maintenance schedule of as little as 450 mg monthly. In **prostatic carcinoma** (p.671) oral

doses have been 100 to 600 mg daily; 500 mg has also been given by intramuscular injection, initially twice weekly for 3 months then once weekly for maintenance.

Cachexia. Medroxyprogesterone may improve appetite and food intake, and prevent loss of body-weight in cachexia (p.2115) associated with severe chronic disorders,[1,2] although information is limited.

1. Simons JPFHA, *et al.* Effects of medroxyprogesterone acetate on appetite, weight, and quality of life in advanced-stage non-hormone-sensitive cancer: a placebo-controlled multicenter study. *J Clin Oncol* 1996; **14:** 1077–84.
2. Simons JPFHA, *et al.* Effects of medroxyprogesterone acetate on food intake, body composition, and resting energy expenditure in patients with advanced, nonhormone-sensitive cancer: a randomized, placebo-controlled trial. *Cancer* 1998; **82:** 553–60.

Contraception. Medroxyprogesterone acetate has an established use as a parenteral progestogen-only contraceptive (p.2070). It has also been developed as the progestogenic component of a combined injectable contraceptive and has been investigated as a component of hormonal contraceptives for men.

References.

1. Garza-Flores J, *et al.* Introduction of Cyclofem once-a-month injectable contraceptive in Mexico. *Contraception* 1998; **58:** 7–12.
2. Kaunitz AM, *et al.* Comparative safety, efficacy, and cycle control of Lunelle monthly contraceptive injection (medroxyprogesterone acetate and estradiol cypionate injectable suspension) and Ortho-Novum 7/7/7 oral contraceptive (norethindrone/ethinyl estradiol triphasic). *Contraception* 1999; **60:** 179–87.
3. Kaunitz AM. Current concepts regarding use of DMPA. *J Reprod Med* 2002; **47** (suppl): 785–9.
4. Turner L, *et al.* Contraceptive efficacy of a depot progestin and androgen combination in men. *J Clin Endocrinol Metab* 2003; **88:** 4659–67.
5. Gu YQ, *et al.* Male hormonal contraception: effects of injections of testosterone undecanoate and depot medroxyprogesterone acetate at eight-week intervals in Chinese men. *J Clin Endocrinol Metab* 2004; **89:** 2254–62.
6. Page ST, *et al.* Testosterone gel combined with depomedroxyprogesterone acetate is an effective male hormonal contraceptive regimen and is not enhanced by the addition of a GnRH antagonist. *J Clin Endocrinol Metab* 2006; **91:** 4374–80.

Epilepsy. Early findings[1] suggested that medroxyprogesterone acetate might be of value in the management of catamenial epilepsy (p.465). In a later review[2] it was suggested that hormonal manipulation with drugs such as medroxyprogesterone should be reserved for highly selected groups under close supervision.

1. Mattson RH, *et al.* Treatment of seizures with medroxyprogesterone acetate: preliminary report. *Neurology* 1984; **34:** 1255–8.
2. Herkes GK. Drug treatment of catamenial epilepsy. *CNS Drugs* 1995; **3:** 260–6.

Male hypersexuality. The anti-androgenic action of medroxyprogesterone has been used for suppression of libido in the control of men with deviant or disinhibited sexual behaviour[1-8] (see Disturbed Behaviour, p.954). Most have received intramuscular medroxyprogesterone acetate; doses of about 300 mg weekly have been used,[3] but ranged from 100 mg each month to 500 mg each week in one report of 5 cases,[8] and up to 750 mg each week in another case.[6] Oral treatment with 30 mg daily was also successful in 1 case.[5]

1. Kiersch TA. Treatment of sex offenders with Depo-Provera. *Bull Am Acad Psychiatry Law* 1990; **18:** 179–87.
2. Weiner MF, *et al.* Intramuscular medroxyprogesterone acetate for sexual aggression in elderly men. *Lancet* 1992; **339:** 1121–2.
3. Kravitz HM, *et al.* Medroxyprogesterone treatment for paraphiliacs. *Bull Am Acad Psychiatry Law* 1995; **23:** 19–33.
4. Britton KR. Medroxyprogesterone in the treatment of aggressive hypersexual behaviour in traumatic brain injury. *Brain Inj* 1998; **12:** 703–7.
5. Brooks JO, Waikar MV. Inappropriate masturbation and schizophrenia. *J Clin Psychiatry* 2000; **61:** 451.
6. Stewart JT. Optimizing antilibidinal treatment with medroxyprogesterone acetate. *J Am Geriatr Soc* 2005; **53:** 359–60.
7. Maletzky BM, *et al.* The Oregon depo-Provera program: a five-year follow-up. *Sex Abuse* 2006; **18:** 303–16.
8. Light SA, Holroyd S. The use of medroxyprogesterone acetate for the treatment of sexually inappropriate behaviour in patients with dementia. *J Psychiatry Neurosci* 2006; **31:** 132–4.

Malignant neoplasms. ***BREAST.*** Progestogens are used as second- or third-choice drugs in the hormonal therapy of advanced breast cancer (p.661). Some references to the use of medroxyprogesterone acetate in advanced breast cancer are cited below.[1-8] Comparative studies have shown that patients respond equally well to medroxyprogesterone and either mepitiostane,[1] aminoglutethimide,[2] or oophorectomy.[3]

1. Izuo M, *et al.* A phase III trial of oral high-dose medroxyprogesterone acetate (MPA) versus mepitiostane in advanced postmenopausal breast cancer. *Cancer* 1985; **56:** 2576–9.
2. Canney PA, *et al.* Randomized trial comparing aminoglutethimide with high-dose medroxyprogesterone acetate in therapy for advanced breast carcinoma. *J Natl Cancer Inst* 1988; **80:** 1147–51.
3. Martoni A, *et al.* High-dose medroxyprogesterone acetate versus oophorectomy as first-line therapy of advanced breast cancer in premenopausal patients. *Oncology* 1991; **48:** 1–6.
4. Muss HB, *et al.* Tamoxifen versus high-dose oral medroxyprogesterone acetate as initial endocrine therapy for patients with metastatic breast cancer: a Piedmont Oncology Association study. *J Clin Oncol* 1994; **12:** 1630–8.
5. Clinton OP, *et al.* A prospective randomized trial to evaluate different oral dose regimens of medroxyprogesterone acetate in women with advanced breast cancer. *Clin Oncol* 1995; **7:** 251–6.
6. Byrne MJ, *et al.* Medroxyprogesterone acetate addition or substitution for tamoxifen in advanced tamoxifen-resistant breast cancer: a phase III randomized trial. *J Clin Oncol* 1997; **15:** 3141–8.
7. Koyama H, *et al.* A randomized controlled comparative study of oral medroxyprogesterone acetate 1,200 and 600 mg in patients with advanced or recurrent breast cancer. *Oncology* 1999; **56:** 283–90.
8. Kloke O, *et al.* Maintenance treatment with medroxyprogesterone acetate in patients with advanced breast cancer responding to chemotherapy: results of a randomized trial. *Breast Cancer Res Treat* 1999; **55:** 51–9.

ENDOMETRIUM. Progestogens are used in the treatment of advanced endometrial carcinoma (p.663) but there are doubts about their value in the earlier stages of disease.[1] Medroxyprogesterone acetate was effective in a rare case of low-grade endometrial stromal sarcoma.[2] It has also been used in a few patients as adjuvant therapy after surgery[3] and for the treatment of metastatic disease.[4]

1. Martin-Hirsch PL, *et al.* Progestagens for endometrial cancer. Available in The Cochrane Database of Systematic Reviews; Issue 4. Chichester: John Wiley; 1999 (accessed 27/06/08).
2. Rand RJ, Lowe JW. Low-grade endometrial stromal sarcoma treated with a progestogen. *Br J Hosp Med* 1990; **43:** 154–6.
3. Amant F, *et al.* Clinical study investigating the role of lymphadenectomy, surgical castration and adjuvant hormonal treatment in endometrial stromal sarcoma. *Br J Cancer* 2007; **97:** 1194–9.
4. Pink D, *et al.* Harm or benefit of hormonal treatment in metastatic low-grade endometrial stromal sarcoma: single center experience with 10 cases and review of the literature. *Gynecol Oncol* 2006; **101:** 464–9.

Respiratory disorders. Reviews of the use of medroxyprogesterone acetate in obstructive sleep apnoea have concluded that it has a limited role.[1,2]

Progesterone and, more commonly, medroxyprogesterone acetate are used in the treatment of pulmonary lymphangioleiomyomatosis, a rare disease affecting only women.[3-7] Anecdotal evidence suggests some patients improve or stabilise on treatment, possibly those with chylous effusions or chylous ascites.[8] However, a more rapid decline in lung function has also been observed with progestogen therapy in some groups.[5,6]

Medroxyprogesterone acetate was reported to be effective in treating congenital central hypoventilation syndrome in 2 children.[9] It has also been used in adults with central hypoventilation resulting from brainstem stroke[10] and other causes.[11] Medroxyprogesterone has also been investigated for its effects on respiration in chronic obstructive pulmonary disease, sometimes with acetazolamide.[12-14]

1. Millman RP. Medroxyprogesterone and obstructive sleep apnea. *Chest* 1989; **96:** 225–6.
2. Terra SG, Oberg KC. Medroxyprogesterone acetate in the treatment of obstructive sleep apnea. *Ann Pharmacother* 1997; **31:** 776–8.
3. Johnson S. Lymphangioleiomyomatosis: clinical features, management and basic mechanisms. *Thorax* 1999; **54:** 254–64.
4. Johnson SR, Tattersfield AE. Clinical experience of lymphangioleiomyomatosis in the UK. *Thorax* 2000; **55:** 1052–7.
5. Johnson SR, *et al.* Survival and disease progression in UK patients with lymphangioleiomyomatosis. *Thorax* 2004; **59:** 800–3.
6. Taveira-DaSilva AM, *et al.* Decline in lung function in patients with lymphangioleiomyomatosis treated with or without progesterone. *Chest* 2004; **126:** 1867–74.
7. Schiavina M, *et al.* Efficacy of hormonal manipulation in lymphangioleiomyomatosis: a 20-year-experience in 36 patients. *Sarcoidosis Vasc Diffuse Lung Dis* 2007; **24:** 39–50.
8. Taylor JR, *et al.* Lymphangioleiomyomatosis: clinical course in 32 patients. *N Engl J Med* 1990; **323:** 1254–60.
9. Milerad J, *et al.* Alveolar hypoventilation treated with medroxyprogesterone. *Arch Dis Child* 1985; **60:** 150–5.
10. Smyth A, Riley M. Chronic respiratory failure: an unusual cause and treatment. *Thorax* 2002; **57:** 835–6.
11. Bootsma GP, *et al.* Chronic respiratory failure. *Thorax* 2003; **58:** 281.
12. Wagenaar M, *et al.* Combined treatment with acetazolamide and medroxyprogesterone in chronic obstructive pulmonary disease patients. *Eur Respir J* 2002; **20:** 1130–7.
13. Wagenaar M, *et al.* Comparison of acetazolamide and medroxyprogesterone as respiratory stimulants in hypercapnic patients with COPD. *Chest* 2003; **123:** 1450–9.
14. Saaresranta T, *et al.* Medroxyprogesterone improves nocturnal breathing in postmenopausal women with chronic obstructive pulmonary disease. *Respir Res* 2005; **6:** 28.

Sickle-cell disease. The frequency of painful crises has been reduced in women with homozygous sickle-cell disease (p.1044) given intramuscular depot medroxyprogesterone acetate,[1,2] and it is now considered to be a suitable contraceptive for this group (see also Sickle-cell Disease, under Precautions of Hormonal Contraceptives, p.2067).

1. de Ceulaer K, *et al.* Medroxyprogesterone acetate and homozygous sickle-cell disease. *Lancet* 1982; **ii:** 229–31.
2. de Abood M, *et al.* Effect of Depo-Provera or Microgynon on the painful crises of sickle cell anemia patients. *Contraception* 1997; **56:** 313–16.

Preparations

BP 2008: Medroxyprogesterone Injection; Medroxyprogesterone Tablets; ***USP 31:*** Medroxyprogesterone Acetate Injectable Suspension; Medroxyprogesterone Acetate Tablets.

Proprietary Preparations (details are given in Part 3)
Arg.: Cycrin†; Depo-Provera†; Farlutale; Livomedrox; Map An; Medrosterona; Veraplex; ***Austral.:*** Depo-Provera; Depo-Ralovera; Medroxyhexal; Provera; Ralovera; ***Austria:*** Depocon; Farlutal; Prodafem; Provera†; ***Belg.:*** Depo-Provera; Farlutal; Provera; Veraplex; ***Braz.:*** Acemedrox; Acetoflux; Contracep; Cycrin; Depo-Provera; Farlutal; Medroxitest; Medroxon; Progesan†; Provera; Tricilon†; ***Canad.:*** Alti-MPA†; Apo-Medroxy; Depo-Provera; Gen-Medroxy; Novo-Medrone; Provera; ratio-MPA; ***Chile:*** Depo-Prodasone; Farlutal; Farlutes; Prodasone; Provera; Sicrit†; ***Cz.:*** Depo-Provera; Femihexal; Medroplex; Provera; Sayana; ***Denm.:*** Depo-Provera; Perlutex; Provera; ***Fin.:*** Depo-Provera; Farlutal; Gestapuran; Lutopolar†; Mepastat; Provera; ***Fr.:*** Depo-Prodasone; Depo-Provera; Farlutal; Gestoral†; ***Ger.:*** Clinofem; Clinovir; Depo-Clinovir; Farlutal†; G-Farlutal†; MPA; MPA Gyn; MPA-beta; MPA-Noury†; ***Gr.:*** Depo-Provera; Farlutal; Gestoral†; Progevera; Provera; ***Hong Kong:*** Depo-Provera; Farlutal; Provera; ***Hung.:*** Depo-Provera; Provera; ***India:*** Depo-Provera; Meprate; ***Indon.:*** Planibu; Prothyra; Provera; Triclofem; Veraplex; ***Irl.:*** Depo-Provera; Provera; ***Israel:*** Aragest; Depo-Provera; Provera; ***Ital.:*** Depo-Provera; Farlutal; Provera; ***Jpn:*** Hysron; ***Malaysia:*** Condep; Depo-Provera; Farlutal†; Non-Preg; Petogen†; Provera; Veraplex; ***Mex.:*** Ciclotal; Cycrin†; Depo-Provera†; Farlutal†; Megestrin†; Megestron; Provera; ***Neth.:*** Depo-Provera; Farlutal†; Megestron; Provera; ***Norw.:*** Depo-Provera; Farlutal; Perlutex; Provera; ***NZ:*** Depo-Provera; Farlutal†; Provera; ***Philipp.:*** Depo-Provera; Depotrust; Lyndavel; Provera; ***Pol.:*** Depo-Provera; Gestomikron; Provera; ***Port.:*** Depo-Provera; Provera; ***Rus.:*** Ciclotal (Циклотал); Depo-Provera (Депопровера); Veraplex (Вераплекс); ***S.Afr.:*** Depo-Provera; Petogen; Provera; ***Singapore:*** Depo-Provera; Farlutal†; Provera; ***Spain:*** Depo-Progevera; Farlutal; Progevera; Progevera 250; ***Swed.:*** Depo-Provera; Farlutal†; Gestapuran; Provera; ***Switz.:*** Depo-Provera; Farlutal; Prodafem; ***Thai.:*** Contracep†; Depo-Gestin; Depo-M; Depo-Progesno; Depo-Progesta; Depo-Provera†; Enaf; Farlutal; Manodepo; Medeton; Pheno-M; Provera; ***Turk.:*** Depo-Provera; Farlutal; ***UK:*** Climanor; Depo-Provera; Farlutal†; Provera; ***USA:*** Amen†; Cycrin†; Depo-Provera; Depo-subQ Provera; Provera; ***Venez.:*** Depo-Provera; Farlutal†; Provera.

Multi-ingredient: ***Arg.:*** Dilena†; Farludiol; Farludiol Ciclo; Periofem Ciclico†; Periofem Continuo†; Premelle Ciclico†; Premelle Continuo†; ***Austral.:*** Menoprem†; Premia; Premia Continuous; Premia Low†; Provelle†; ***Austria:*** Femipak; Filena†; Perennia; Sequennia; ***Belg.:*** Diviplus; Diviva; Premelle Cycle†; Premelle†; Trivina†; ***Braz.:*** Cyclofemina; Dilena; Menosedan Ciclo†; Menosedan Fase†; Menosedan MPA†; Premarin MPA†; Premelle; Premelle Ciclo; Prempro Bifasico; Prempro Monofasico; Repogen Ciclo; Repogen Conti; Selecta; ***Canad.:*** Premplus; ***Chile:*** Climatrol Continuo; Climatrol HT; Climatrol HT Continuo; Conpremin Pak; Conpremin Pak Plus; Cyclofem†; Enadiol CC; Enadiol MP; Estranova 30 Simple; Estranova CC; Farlupost; Farlutal Estrogeno†; Kilios; Novafac; Novafac 30; Novafac CC; Novafem; Prempak†; Primaquin MP; Primaquin MP Continuo; Profemina CC†; Profemina MP; ***Cz.:*** Cyclo-Premella†; Divina; Diviseq; Indivina; Premella†; ***Denm.:*** Divina; Divina Plus; Indivina; Klimalet; Klimaxil†; Trevina; ***Fin.:*** Divina; Divitren; Indivina; ***Fr.:*** Divina; Diviseq; Duova; Precyclan; ***Ger.:*** Climopax; Climopax Cyclo; Estrafemol; Gianda; Indivina; Osmil; Procyclo; Sisare; Sisare 28; Vitrena†; ***Gr.:*** Divina; Estopause; Premelle; Premelle Cycle; ***Hong Kong:*** Dilena; Premelle; Premelle Cycle; ***Hung.:*** Cyclo-Premella†; Divina; Divitren†; Indivina; Premella†; ***Indon.:*** Cyclofem; ***Irl.:*** Diviseq†; Indivina; Premique; Premique Cycle; ***Israel:*** Meno-MPA†; Premaril MP†; Premaril Plus MP†; ***Ital.:*** Filena; Premelle Combinato; Premelle S†; Premelle Sequenziale†; ***Malaysia:*** Plentiva Cycle 5†; Plentiva†; Premelle; ***Mex.:*** Cyclofemina; Dilena; Premelle; Xofemina; ***Neth.:*** Divina†; Premelle Cycle†; Premelle†; PremelleLite†; ***Norw.:*** Diviseq†; Indivina; ***NZ:*** Menoprem†; Premia Continuous; Premia†; ***Philipp.:*** Premelle; Premelle Cycle; ***Pol.:*** Divina; Diviseq; Indivina; ***Port.:*** Dilena; Medrivas Antibiotico; Premelle Cycle†; Premelle†; ***Rus.:*** Divina (Дивина); Diviseq (Дивисек); Divitren (Дивитрен); Indivina (Индивина); ***S.Afr.:*** Divina; Premelle; Premelle Cycle; Trivina; ***Singapore:*** Premelle Cycle†; Premelle†; ***Spain:*** Medrivas; Medrivas Antib; Perifem; Premelle; Premelle Ciclico; ***Swed.:*** Divina Plus; Divina†; Indivina; Premelle Sekvens†; Premelle†; Trivina; ***Switz.:*** Cyclo-Premella ST; Diviseq; Indivina; OestroTabs Plus Cyclic†; Premella; Premia†; Triaval; ***Thai.:*** Diviseq; Indivina; Premelle Cycle†; Premelle†; ***Turk.:*** Divina; Premelle; Premelle Cycle; ***UK:*** Indivina; Premique; Premique Cycle; Tridestra; ***USA:*** Lunelle†; Premphase; Prempro; ***Venez.:*** Climatrol HT Ciclico; Climatrol HT Continuo; Premelle Ciclico†; Premelle Continuo; Premelle Plus Continuo†.

Megestrol Acetate *(BANM, USAN, rINNM)*

Acetato de megestrol; BDH-1298; Compound 5071; Megestol Asetat; Mégestrol, acétate de; Megestrolacetat; Megestrol-acetát; Megestroli acetas; Megestroliasetaatti; Megestrolio acetatas; Megesztrol-acetát; NSC-71423; SC-10363. 6-Methyl-3,20-dioxopregna-4,6-dien-17α-yl acetate; 17α-Hydroxy-6-methylpregna-4,6-diene-3,20-dione acetate.

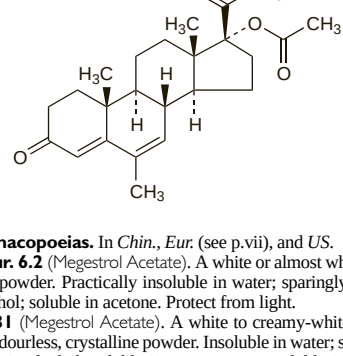
Мегестрола Ацетат

$C_{24}H_{32}O_4$ = 384.5.

CAS — 3562-63-8 (megestrol); 595-33-5 (megestrol acetate).

ATC — G03AC05; G03DB02; L02AB01.

ATC Vet — QG03AC05; QG03DB02; QL02AB01.



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

Ph. Eur. 6.2 (Megestrol Acetate). A white or almost white crystalline powder. Practically insoluble in water; sparingly soluble in alcohol; soluble in acetone. Protect from light.

USP 31 (Megestrol Acetate). A white to creamy-white, essentially odourless, crystalline powder. Insoluble in water; sparingly soluble in alcohol; soluble in acetone; very soluble in chloroform; slightly soluble in ether and in fixed oils. Protect from light.