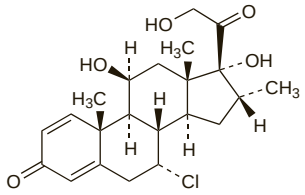
21. Jayne DRW, *et al.* Treatment of systemic vasculitis with pooled intravenous immunoglobulin. *Lancet* 1991; **337:** 1137–9.
22. Nowack R, *et al.* Mycophenolate mofetil for systemic vasculitis and IgA nephropathy. *Lancet* 1997; **349:** 774.
23. Keogh KA, *et al.* Rituximab for refractory Wegener's granulomatosis: report of a prospective, open-label pilot trial. *Am J Respir Crit Care Med* 2006; **173:** 180–7.

Alclometasone Dipropionate *(BANM, USAN, rINNM)* ⊗

Alclométasone, Dipropionate d'; Alclometasoni Dipropionas; Alklometasondipropionat; Alklometasonidipropionaatti; Dipropionato de alclometasona; Sch-22219. 7α-Chloro-11β,17α,21-trihydroxy-16α-methylpregna-1,4-diene-3,20-dione 17,21-dipropionate.

Альклометазона Дипропионат

$C_{28}H_{37}ClO_7$ = 521.0.
CAS — 67452-97-5 (alclometasone); 66734-13-2 (alclometasone dipropionate).
ATC — D07AB10; S01BA10.
ATC Vet — QD07AB10; QS01BA10.



(alclometasone)

Pharmacopoeias. In *US.*
USP 31 (Alclometasone Dipropionate). Store in airtight containers.

Profile
Alclometasone dipropionate is a corticosteroid used topically for its glucocorticoid activity (p.1490) in the treatment of various skin disorders. It is usually used as a cream or ointment containing 0.05%.

When applied topically, particularly to large areas, when the skin is broken, or under occlusive dressings, corticosteroids may be absorbed in sufficient amounts to cause systemic effects (p.1490). The effects of topical corticosteroids on the skin are described on p.1492. For recommendations concerning the correct use of corticosteroids on the skin, and a rough guide to the clinical potencies of topical corticosteroids, see Topical Application, p.1497.

Preparations
USP 31: Alclometasone Dipropionate Cream; Alclometasone Dipropionate Ointment.

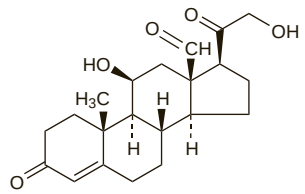
Proprietary Preparations (details are given in Part 3)
Austral.: Logoderm†; ***Chile:*** Logoderm†; ***Cz.:*** Afloderm; ***Denm.:*** Legederm†; ***Fin.:*** Legederm†; ***Ger.:*** Delonal; ***Gr.:*** Lomesone; ***Hong Kong:*** Perderm; ***Hung.:*** Perderm†; ***Indon.:*** Cloderm; Perderm; ***Irl.:*** Modrasone; ***Ital.:*** Legederm; ***Malaysia:*** Perderm†; ***Mex.:*** Logoderm; ***Neth.:*** Aclosone; ***NZ:*** Logoderm†; ***Port.:*** Miloderme; ***Rus.:*** Afloderm (Афлодерм); ***Singapore:*** Perderm†; ***Swed.:*** Legederm†; ***Switz.:*** Delonal†; ***UK:*** Modrasone; ***USA:*** Aclovate; ***Venez.:*** Demiderm.

Aldosterone *(BAN, rINN)*

Aldosteron; Aldosterona; Aldostérone; Aldosteroni; Aldosteronum; Electrocortin. 11β,18-Epoxy-18,21-dihydroxypregn-4-ene-3,20-dione.

Альдостерон

$C_{21}H_{28}O_5$ = 360.4.
CAS — 52-39-1.
ATC — H02AA01.
ATC Vet — QH02AA01.



Adverse Effects
Aldosterone has very pronounced mineralocorticoid actions and little effect on carbohydrate metabolism. It may therefore exhibit the mineralocorticoid adverse effects described for the corticosteroids in general (p.1490).

Uses and Administration
Aldosterone is the main mineralocorticoid (p.1490) secreted by the adrenal cortex. It has no significant glucocorticoid (anti-inflammatory) properties.

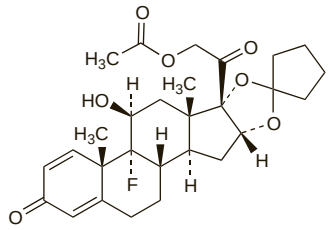
Aldosterone has been given by intramuscular or intravenous injection, with a glucocorticoid, in the treatment of primary adrenocortical insufficiency (p.1498) but synthetic mineralocorticoids such as fludrocortisone (p.1530), which can be given orally, are usually preferred. It has also been used as the sodium succinate.

Amcinonide *(BAN, USAN, rINN)* ⊗

Amcinónida; Amcinonidum; Amcinopol; CL-34699. 16α,17α-Cyclopentylidenedioxy-9α-fluoro-11β,21-dihydroxypregna-1,4-diene-3,20-dione 21-acetate.

Амцинонид

$C_{28}H_{35}FO_7$ = 502.6.
CAS — 51022-69-6.
ATC — D07AC11.
ATC Vet — QD07AC11.



Pharmacopoeias. In *US.*

Profile
Amcinonide is a corticosteroid used topically for its glucocorticoid activity (p.1490) in the treatment of various skin disorders. It is usually used as a cream, lotion, or ointment containing 0.1%.

When applied topically, particularly to large areas, when the skin is broken, or under occlusive dressings, corticosteroids may be absorbed in sufficient amounts to cause systemic effects (p.1490). The effects of topical corticosteroids on the skin are described on p.1492. For recommendations concerning the correct use of corticosteroids on the skin, and a rough guide to the clinical potencies of topical corticosteroids, see p.1497.

Preparations
USP 31: Amcinonide Cream; Amcinonide Ointment.

Proprietary Preparations (details are given in Part 3)
Belg.: Amicla; ***Canad.:*** Amcort; Cyclocort; ***Fr.:*** Penticort†; ***Ger.:*** Amciderm; ***Mex.:*** Visderm H; ***Thai.:*** Amciderm; Visderm†; ***USA:*** Cyclocort†.

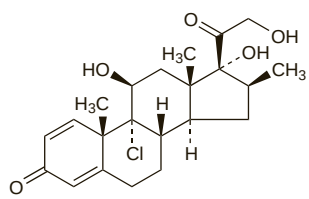
Beclometasone Dipropionate

(BANM, rINNM) ⊗

Béclométasone, dipropionate de; Beclometasoni dipropionas; Beclometasoni Diproprionas; Beclomethasone Dipropionate *(USAN)*; Beklometasondipropionat; Beklometason-dipropionát; Beklometasonidipropionaatti; Beklometazon Dipropiyonat; Beklometazon-diproprionát; Beklometazono dipropionatas; Beklometazonu dipropionian; 9α-Chloro-16β-methylprednisolone Dipropionate; Dipropionato de beclometasona; Sch-18020W. 9α-Chloro-11β,17α,21-trihydroxy-16β-methylpregna-1,4-diene-3,20-dione 17,21-dipropionate.

Беклометазона Дипропионат

$C_{28}H_{37}ClO_7$ = 521.0.
CAS — 4419-39-0 (beclometasone); 5534-09-8 (beclometasone dipropionate).
ATC — A07EA07; D07AC15; R01AD01; R03BA01.
ATC Vet — QA07EA07; QD07AC15; QR01AD01; QR03BA01.



(beclometasone)

Pharmacopoeias. In *Chin.*, *Eur.* (see p.vii), *Int.*, and *Jpn.*
US allows either the anhydrous or monohydrate form. *Eur.* also includes a separate monograph for the monohydrate.
Ph. Eur. 6.2 (Beclometasone Dipropionate, Anhydrous). A white or almost white, crystalline powder. Practically insoluble in water; sparingly soluble in alcohol; freely soluble in acetone. Protect from light.
Ph. Eur. 6.2 (Beclometasone Dipropionate Monohydrate). A white or almost white powder. Practically insoluble in water; sparingly soluble in alcohol; freely soluble in acetone. Protect from light.
USP 31 (Beclomethasone Dipropionate). It is anhydrous or contains one molecule of water of hydration. A white to cream white, odourless powder. Very slightly soluble in water; freely soluble in alcohol and in acetone; very soluble in chloroform.

Adverse Effects, Treatment, Withdrawal, and Precautions
As for corticosteroids in general (p.1490).

Adrenal suppression may occur in some patients treated with high-dose long-term inhalation therapy for asthma. It has been stated that in the majority of patients no significant suppression is likely to occur when total daily doses of less than 1.5 mg are used (but see Adrenal Suppression, below).

When applied topically, particularly to large areas, when the skin is broken, or under occlusive dressings, corticosteroids may be absorbed in sufficient amounts to cause systemic effects. Systemic absorption may also follow nasal use, particularly after high doses or prolonged treatment.

Adrenal suppression. The problem of adrenal suppression with corticosteroids is discussed on p.1491. Listed below are some references and correspondence concerning adrenal suppression due to beclometasone inhalation therapy,[1-8] in some cases occurring with doses below 1.5 mg daily.[6] However, one study found that function of the hypothalamic-pituitary-adrenal axis remained normal in most patients at beclometasone doses below 3 mg daily.[9]

1. Grant IWB, Crompton GK. Becloforte inhaler. *BMJ* 1983; **286:** 644–5.
2. Slessor IM. Becloforte inhaler. *BMJ* 1983; **286:** 645.
3. Ebden P, Davies BH. High-dose corticosteroid inhalers for asthma. *Lancet* 1984; **ii:** 576.
4. Law CM, *et al.* Nocturnal adrenal suppression in asthmatic children taking inhaled beclomethasone dipropionate. *Lancet* 1986; **i:** 942–4.
5. Brown HM. Nocturnal adrenal suppression in children inhaling beclomethasone dipropionate. *Lancet* 1986; **i:** 1269.
6. Maxwell DL, Webb J. Adverse effects of inhaled corticosteroids. *BMJ* 1989; **298:** 827–8.
7. Priftis K, *et al.* Adrenal function in asthma. *Arch Dis Child* 1990; **65:** 838–40.
8. Tabachnik E, Zadik Z. Diurnal cortisol secretion during therapy with inhaled beclomethasone dipropionate in children with asthma. *J Pediatr* 1991; **118:** 294–7.
9. Brown PH, *et al.* Large volume spacer devices and the influence of high dose beclomethasone dipropionate on hypothalamo-pituitary-adrenal axis function. *Thorax* 1993; **48:** 233–8.

Candidiasis. Results of a study involving 229 asthmatic children indicated that the presence of a sore throat or a hoarse voice was not related to the presence of *Candida* or to treatment with inhaled beclometasone.[1] The occurrence of only one clinical case of oral candidiasis in 129 of the children receiving beclometasone confirmed previous observations that it is an uncommon finding in children compared with the reported incidence of between 4.5 and 13% in adults. The incidence of colonisation with *Candida* was greater in those children who received corticosteroids than in those who did not but was not affected by either the dose or type of inhaler used.

1. Shaw NJ, Edmunds AT. Inhaled beclomethasone and oral candidiasis. *Arch Dis Child* 1986; **61:** 788–90.

Effects on the bones. The adverse effects of corticosteroids in general on bones are discussed on p.1491.

Studies in healthy subjects have shown that inhaled beclometasone dipropionate can suppress bone metabolism.[1-3] These studies measured biochemical markers such as serum-osteocalcin concentrations, serum alkaline phosphatase activity, and urinary hydroxyproline-creatinine ratio, over short periods of time. Another study found that markers of collagen turnover, but not osteocalcin, were reduced by beclometasone or budesonide 800 micrograms daily in mildly asthmatic children.[4] Results are difficult to interpret since osteocalcin concentrations are reduced in patients with asthma regardless of treatment,[5] and it is uncertain whether significant bone loss does occur in practice. One 12-month study[6] in adults with asthma found that biochemical markers showed suppressed bone formation from inhaled beclometasone, and that there was some loss of bone mineral density from the hip. This study also found that inhaled fluticasone, in equivalent therapeutic doses, may have less adverse effect on bone. Another, smaller, study[7] found no adverse effects from beclometasone or fluticasone on bone mass or metabolism. In a study[8] of asthmatic children, comparing those treated with inhaled budesonide with those who received no corticosteroids, an average daily dose of about 500 micrograms budesonide for 3 to 6 years did not adversely affect bone density and mineral measures.

1. Pouw EM, *et al.* Beclomethasone inhalation decreases serum osteocalcin concentrations. *BMJ* 1991; **302:** 627–8.