

Inhaled corticosteroid doses for NICE's asthma guideline

We have developed these tables to support recommendations on inhaled corticosteroid (ICS) dosages in the NICE guideline on [asthma](#). They indicate low, moderate and high ICS dosages for adult and paediatric maintenance therapy. Dosages are based on information from manufacturers' summaries of product characteristics (SPCs), the [Global Initiative for Asthma](#) (2018), the [BNF](#) and [BNFC](#). The tables do not make any recommendations about a particular product's place in therapy, nor should these be inferred.

Using the tables

When using the tables, prescribers should consult manufacturers' SPCs, the BNF and BNFC for full prescribing information, and take into account that:

- **Doses relate to the metered ICS dose:** for some inhalers this may be different from the delivered dose (the dose that leaves the mouthpiece) and the labelled strength.
- **Dosages in the tables are not strict dose equivalences but are a guide to similar clinical effectiveness.** Prescribers should also take into account the possibility of adverse effects from ICS, which may differ between ICS and according to dosage.
- **Clinical judgement should be used for dosages for young people:** the NICE guideline gives recommendations on treatment for adults aged 17 years and over, children and young people aged 5 to 16 years, and children under 5 years. The tables give dosages for adults aged 17 and over and children aged 5 to 11 years, because these reflect the age categories used in most UK marketing authorisations. In practice, the prescriber will choose dosages for children under 5 years and young people aged 12 to 16 years taking into account factors such as the severity of the condition being treated and the person's size in relation to the average size of people of the same age.
- **The smallest dosage should be used to obtain optimal control:** people with asthma should usually use the smallest dosage of ICS that provides optimal asthma control, to reduce the risk of side effects. The MHRA advises that steroid treatment cards should be routinely provided for people who need prolonged treatment with high dose ICS ([Current problems in pharmacovigilance](#), May 2006).
- **Not all products have UK marketing authorisation for use at all dosages or in all ages:** if considering prescribing a product outside the terms of its marketing authorisation, follow relevant professional guidance and take full responsibility for the decision. Obtain and document informed consent. See the General Medical Council's [Good practice in prescribing and managing medicines and devices](#) for further information.

Table 1 ICS dosages for adults aged 17 years and over

	Low dose	Moderate dose	High dose
Beclometasone dipropionate¹			
Standard particle CFC-free inhalers	200–500 micrograms per day in 2 divided doses	600–1,000 micrograms per day in 2 divided doses	1,200–2,000 micrograms per day in 2 divided doses
Extra-fine particle CFC-free inhalers²	100–200 micrograms per day in 2 divided doses	300–400 micrograms per day in 2 divided doses	500–800 micrograms per day in 2 divided doses
Budesonide			
Dry powder inhalers	200–400 micrograms per day as a single dose or in 2 divided doses	600–800 micrograms per day as a single dose or in 2 divided doses	1,000–1,600 micrograms per day in 2 divided doses
Ciclesonide			
Metered dose inhaler	80–160 micrograms per day as a single dose	240–320 micrograms per day as a single dose or in 2 divided doses	400–640 micrograms per day in 2 divided doses
Fluticasone propionate			
Metered dose and dry powder inhalers³	100–250 micrograms per day in 2 divided doses	300–500 micrograms per day in 2 divided doses	600–1,000 micrograms per day in 2 divided doses
Fluticasone furoate⁴			
Dry powder inhaler	–	100 micrograms as a single daily dose	200 micrograms as a single daily dose
Mometasone furoate			
Dry powder inhaler	200 micrograms per day as a single dose a day	400 micrograms per day in 2 divided doses	Up to 800 micrograms per day in 2 divided doses

¹ CFC-containing beclometasone dipropionate MDIs are no longer available, so are not included. The MHRA advises that beclometasone dipropionate CFC-free inhalers should be prescribed by brand name ([Drug safety update](#), July 2008).

² Extra-fine particle CFC-free inhalers include brands such as Qvar and Fostair, which are more potent than standard particle CFC-free inhalers. Fostair and Fostair NEXThaler are combination products containing beclometasone dipropionate with formoterol. The manufacturer's SPC and the BNF indicate that 100 micrograms of beclometasone dipropionate via Qvar products are approximately equivalent to 200–250 micrograms of beclometasone dipropionate in standard particle CFC-free inhalers, and 200–250 micrograms of budesonide; 100 micrograms of beclometasone dipropionate via Fostair products are equivalent to 250 micrograms of beclometasone dipropionate in standard particle CFC-free inhalers.

³ Flixotide Evohaler and Flixotide Accuhaler are licensed up to 2,000 micrograms per day (in 2 divided doses), which is approximately equivalent to 4,000 micrograms per day of budesonide. The manufacturer's SPC advises that, because of the risk of systemic effects, doses of fluticasone propionate above 1,000 micrograms per day should be prescribed only for adults aged 17 years and over with severe asthma where additional clinical benefit is expected, demonstrated by either an improvement in pulmonary function and/or symptom control, or by a reduction in oral corticosteroid therapy.

⁴ At the time of publication (July 2018), fluticasone furoate was available only in a combination product, Relvar Ellipta (fluticasone furoate with vilanterol). The manufacturer's SPC states that in people with asthma, fluticasone furoate 100 micrograms once daily is approximately equivalent to fluticasone propionate 250 micrograms twice daily, and fluticasone furoate 200 micrograms once daily is approximately equivalent to fluticasone propionate 500 micrograms twice daily. See also the NICE evidence summary [Asthma: fluticasone furoate/vilanterol \(Relvar Ellipta\) combination inhaler](#) (2014).

Table 2 ICS dosages for children aged 5 to 11 years

	Paediatric low dose	Paediatric moderate dose	Paediatric high dose
Beclometasone dipropionate¹			
Standard particle CFC-free inhalers	100–200 micrograms per day in 2 divided doses	300–400 micrograms per day in 2 divided doses	500–800 micrograms per day
Extra-fine particle CFC-free inhalers²	100 micrograms per day in 2 divided doses	150–200 micrograms per day in 2 divided doses	300–400 micrograms per day in 2 divided doses
Budesonide			
Dry powder inhalers	100–200 micrograms per day as a single dose or 2 divided doses	300–400 micrograms per day as a single dose or 2 divided doses	500–800 micrograms per day in 2 divided doses
Ciclesonide			
Metered dose inhaler³	80 micrograms per day as a single dose	160 micrograms per day as a single dose or in 2 divided doses	240–320 micrograms per day in 2 divided doses
Fluticasone propionate			
Metered dose and dry powder inhalers⁴	100 micrograms per day in 2 divided doses	150–200 micrograms per day in 2 divided doses	250–400 micrograms per day in 2 divided doses
<p>¹ CFC-containing beclometasone dipropionate MDIs are no longer available, so are not included. The MHRA advises that beclometasone dipropionate CFC-free inhalers should be prescribed by brand name (Drug safety update, July 2008).</p> <p>² Extra-fine particle CFC-free inhalers include brands such as Qvar, which are more potent than standard particle CFC-free inhalers. The manufacturer's SPC and the BNF indicate that 100 micrograms of beclometasone dipropionate via Qvar products are approximately equivalent to 200–250 micrograms of beclometasone dipropionate in standard particle CFC-free inhalers, and 200–250 micrograms of budesonide. At the time of publication (July 2018), Qvar products did not have UK marketing authorisations for use in children aged under 12 years (see notes on page 1). Dosages in this table are based on Global Initiative for Asthma (GINA) 2018 recommendations for children aged 6 to 11 years.</p> <p>³ At the time of publication (July 2018), ciclesonide (Alvesco) did not have UK marketing authorisation for use in children aged under 12 years (see notes on page 1). Dosages in this table are based on Global Initiative for Asthma (GINA) 2018 recommendations for children aged 6 to 11 years.</p> <p>⁴ At the time of publication (July 2018), the only licensed dosage of fluticasone propionate for children aged 4 to 11 years via the combination products Seretide Accuhaler and Seretide Evohaler (fluticasone propionate with salmeterol) was 200 micrograms per day in 2 divided doses.</p>			