

Inhaled corticosteroid doses for NICE's asthma guideline

What is this guide for?

We have developed the tables in this guide to support the 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.

The dosages given are based on the following sources:

- manufacturers' [summaries of product characteristics](#) (SPCs)
- the [Global Initiative for Asthma](#) (2022)
- the [SIGN/BTS British guideline on the management of asthma](#) (2019)
- the [British National Formulary \(BNF\)](#)
- the [British National Formulary for children \(BNFC\)](#).

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 the following:

- **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 children and 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 ([MHRA, Current problems in pharmacovigilance, May 2006](#)).
- **Not all products have UK marketing authorisation for use at all dosages or for 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 advice on Good practice in prescribing and managing medicines and devices](#) for further information.

Please note that footnotes for table 1 follow on page 4.

Table 1. ICS dosages for adults aged 17 years and over

	Low dose	Moderate dose	High dose
Beclometasone dipropionate			
Standard particle metered dose and dry powder inhalers	200 to 500 micrograms per day in 2 divided doses	600 to 800 micrograms per day in 2 divided doses	1,000 to 2,000 micrograms per day in 2 divided doses
Extra-fine particle metered dose inhalers ¹	100 to 200 micrograms per day in 2 divided doses	300 to 400 micrograms per day in 2 divided doses	500 to 800 micrograms per day in 2 divided doses
Budesonide			
Dry powder inhalers	200 to 400 micrograms per day as a single dose or in 2 divided doses	600 to 800 micrograms per day as a single dose or in 2 divided doses	1,000 to 1,600 micrograms per day in 2 divided doses
Ciclesonide			
Metered dose inhalers	80 to 160 micrograms per day as a single dose	240 to 320 micrograms per day as a single dose or in 2 divided doses	400 to 640 micrograms per day in 2 divided doses
Fluticasone propionate			
Metered dose and dry powder inhalers (excluding Seffalair Spiromax) ^{2 3}	100 to 250 micrograms per day in 2 divided doses	300 to 500 micrograms per day in 2 divided doses	600 to 1,000 micrograms per day in 2 divided doses
Fluticasone furoate			
Dry powder inhalers ⁴	Not available	100 micrograms per day as a single dose	200 micrograms per day as a single dose
Mometasone furoate			
Dry powder inhaler	200 micrograms per day as a single dose	400 micrograms per day as a single dose or in 2 divided doses	600 to 800 micrograms per day in 2 divided doses
Inhalation powder capsules ⁵	80 micrograms per day as a single dose	160 micrograms per day as a single dose	320 micrograms per day as a single dose

- 1 Extra-fine particle CFC-free inhalers include brands such as Qvar, Luforbec, Kelhale and Fostair, which are more potent than standard particle CFC-free inhalers.
- 2 Flixotide Evohaler and Flixotide Accuhaler are licensed up to 2,000 micrograms per day (in 2 divided doses). 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.
- 3 Seffalair Spiromax is a combination product containing fluticasone propionate and salmeterol. The manufacturer's SPC states the delivered dose of Seffalair Spiromax is different from other salmeterol/fluticasone containing products on the market and the products are not interchangeable. From the manufacturer's SPC, a metered dose of fluticasone propionate 226 micrograms per day (in 2 divided doses) via Seffalair Spiromax is moderate dose and 464 micrograms per day (in 2 divided doses) is high dose.
- 4 At the time of publication (December 2022), fluticasone furoate was available for asthma 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.
- 5 Aectura Breezhaler is a combination product containing mometasone furoate and indacaterol in a hard capsule delivered via the Breezhaler device. From the manufacturer's SPC a metered dose of mometasone furoate 160 micrograms per day via Aectura Breezhaler is moderate dose and 320 micrograms per day is high dose.

Table 2. ICS dosages for children aged 5 to 11 years

	Paediatric low dose	Paediatric moderate dose	Paediatric high dose
Beclometasone dipropionate			
Standard particle metered dose inhalers	100 to 200 micrograms per day in 2 divided doses	300 to 400 micrograms per day in 2 to 4 divided doses	500 to 800 micrograms per day in 2 to 4 divided doses
Extra-fine particle metered dose inhalers ^A	100 micrograms per day in 2 divided doses	150 to 200 micrograms per day in 2 divided doses	300 to 400 micrograms per day in 2 divided doses
Budesonide			
Dry powder inhalers	100 to 200 micrograms per day as a single dose or in 2 divided doses	300 to 400 micrograms per day as a single dose or in 2 divided doses	500 to 800 micrograms per day in 2 divided doses
Ciclesonide			
Metered dose inhalers ^B	80 micrograms per day as a single dose	160 micrograms per day as a single dose or in 2 divided doses	240 to 320 micrograms per day in 2 divided doses
Fluticasone propionate			
Metered dose and dry powder inhalers ^C	100 micrograms per day in 2 divided doses	150 to 200 micrograms per day in 2 divided doses	250 to 400 micrograms per day in 2 divided doses

A Extra-fine particle CFC-free inhalers include brands such as Qvar, which are more potent than standard particle CFC-free inhalers.

B At the time of publication (December 2022), ciclesonide (Alvesco) did not have UK marketing authorisation for use in children aged under 12 years (see notes on page 2). Dosages in this table are based on Global Initiative for Asthma (GINA) 2022 recommendations for children aged 6 to 11 years.

C At the time of publication (December 2022), the only licensed dosage of fluticasone propionate for children aged 4 to 11 years via the combination products Seretide Accuhaler, Seretide Evohaler, Combisal and Avenor (fluticasone propionate with salmeterol) was 200 micrograms per day in 2 divided doses.