

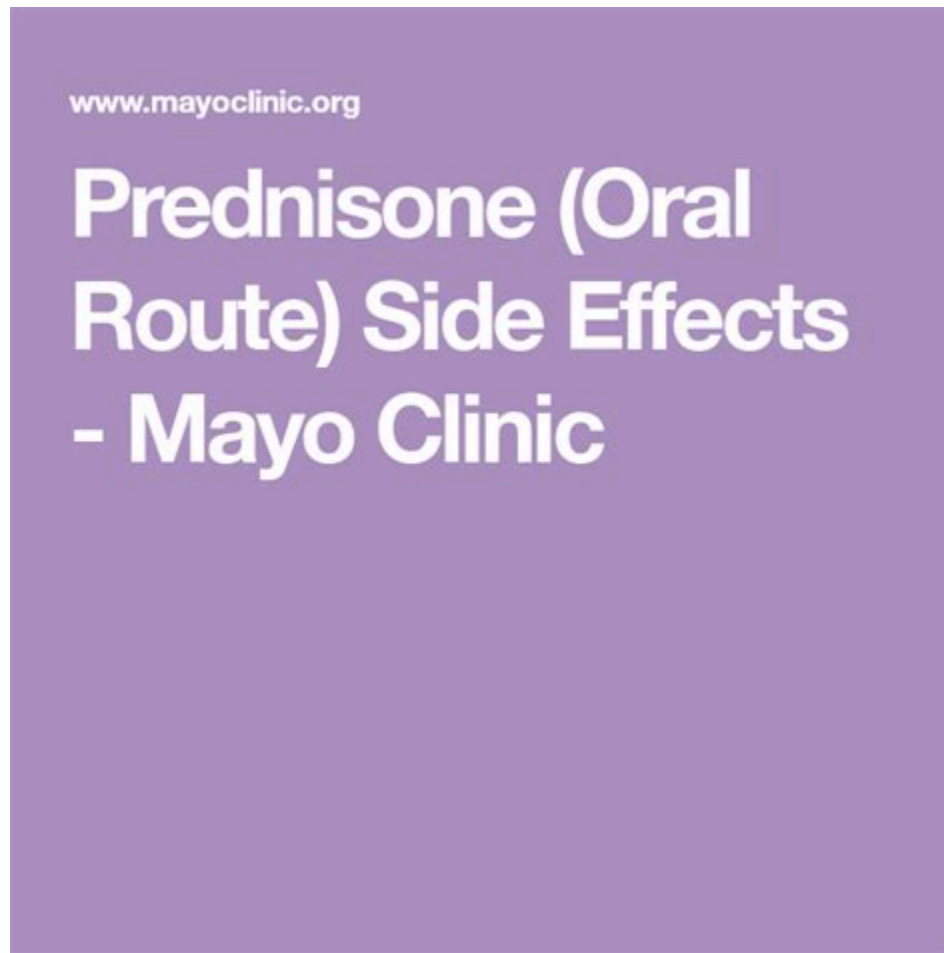
about this, check with your child's doctor or pharmacist. If a Dose Is Vomited Even if the medicine is thrown up (vomited) right after giving it, some of the medicine may still be in the stomach.

Steroid Medicines and Behavior - Together by St. Jude™



There has been some concern about potential side effects of oral, topical or inhaled steroids, including reduction in growth, weight gain, behavioural changes and immunosuppression resulting in infection.
Objective

Prednisone (Oral Route) Side Effects - Mayo Clinic



The pre-emptive use of high-dose inhaled corticosteroids for intermittent wheezing episodes requires further study. In a meta-analysis of preschoolers with recurrent wheeze, this approach was shown to reduce exacerbations compared with placebo (5 studies, N = 422; risk ratio 0.65; 95% CI 0.51-0.81). 23.

Systematic Review of the Toxicity of Long-Course Oral Corticosteroids .

Causes	Discontinue	Death
Infection	2	21
Hyperglycaemia	-	2
Behaviour changes	9	-
Growth retardation	4	-
Cushingoid features	4	-
Hypertension	2	-
Ulceration	2	-
HPA axis suppression	1	-
Vomiting	1	-
Increased intraocular pressure	1	-
Obstructive sleep apnoea	1	-
Unknown ADRs	65	20
Total	92	43

doi:10.1371/journal.pone.0170259.t005

Weight gain, growth retardation and Cushingoid features were the most frequent ADRs seen when long-course oral corticosteroids were given to children. Increased susceptibility to infection was the most serious ADR. Go to: Introduction

What to Know if Your Child Is Prescribed Steroids



Prednisone oral tablet is a generic drug used to treat asthma, rheumatoid arthritis, and more. . In most cases, side effects in children taking prednisone are similar to side effects in adults .

Clinical Use and Molecular Action of Corticosteroids in the Pediatric .

Review

Clinical Use and Molecular Action of Corticosteroids in the Pediatric Age

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Abstract: Corticosteroids are the mainstay of therapy for many pediatric disorders and sometimes are life-saving. Both endogenous and synthetic derivatives diffuse across the cell membrane and, by binding to their cognate glucocorticoid receptor, modulate a variety of physiological functions, such as glucose metabolism, immune homeostasis, organ development, and the endocrine system. However, despite their proved and known efficacy, corticosteroids show a lot of side effects, among which growth retardation is of particular concern and specific for pediatric age. The aim of this review is to discuss the mechanism of action of corticosteroids, and how their genomic effects have both beneficial and adverse consequences. We will focus on the use of corticosteroids in different pediatric subspecialties and most common diseases, analyzing the most recent evidence.

Keywords: corticosteroids; systemic corticosteroids; oral steroids; pediatric diseases; side effects; mechanism of actions of glucocorticoids

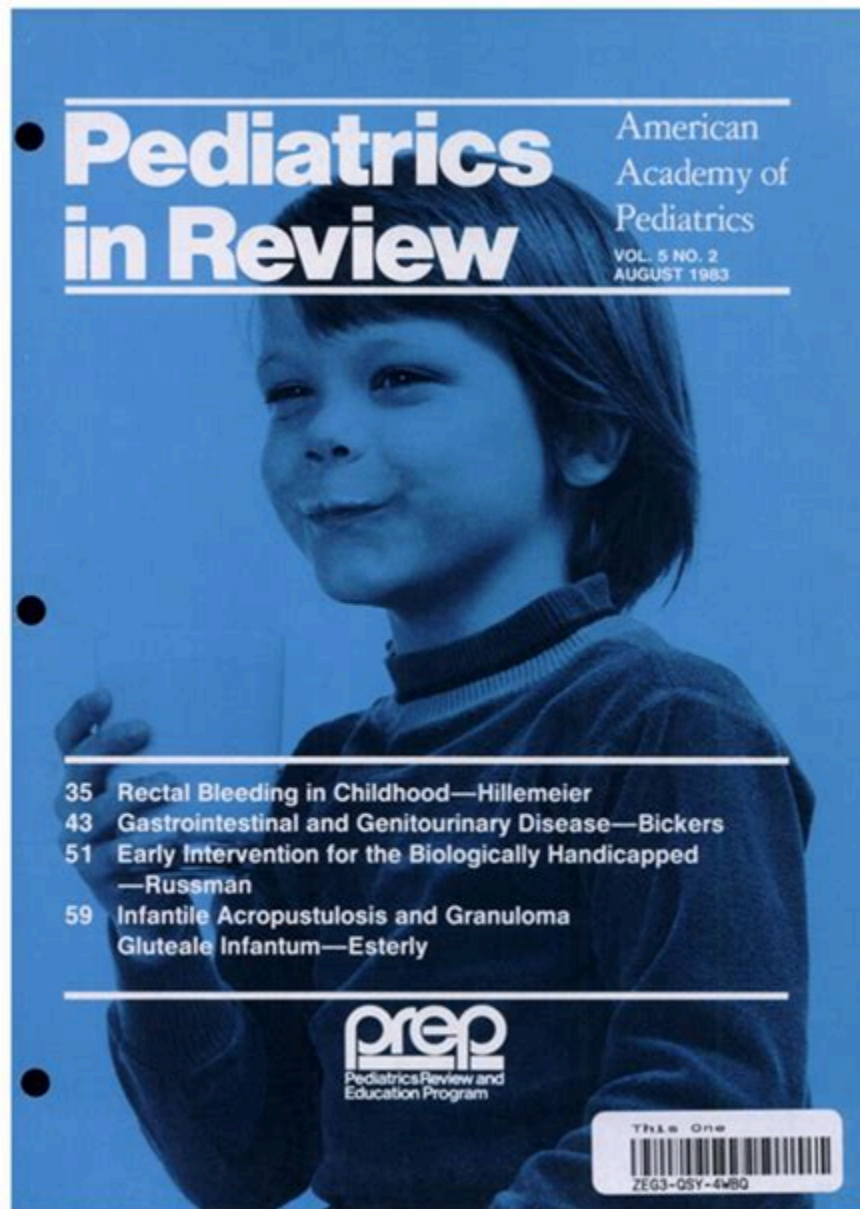
1. Introduction

The discovery of corticosteroids more than six decades ago can be considered one of the most important therapeutic revolutions of the last century. Numerous compounds have been synthesized since then, and their use, alone or in combination with other drugs, is crucial for the treatment of many disorders presenting in childhood that sometimes has demonstrated to be life-saving.

The physiological and pharmacological effects of corticosteroids are mediated through the binding to the glucocorticoid receptor (GR), a protein belonging to the superfamily of nuclear hormone receptors (gene ID: NR3C1) [1]. The main characteristic of these nuclear hormone receptors is that they are transcription factors: upon ligand binding, they migrate to the nucleus and interact with specific DNA motifs to modulate transcription of genes. Indeed, the glucocorticoid receptor upon ligand binding translocates to the nucleus of cells and regulates transcription of thousands of genes, thus exerting actions that can be summarized as anti-inflammatory/immunosuppressive, metabolic, and toxic. The anti-inflammatory and immunosuppressive actions of corticosteroids are mainly attributable to the transcription, or repression, of genes expressed in immune cells [2,3]. Corticosteroid exposure, in fact, promotes changes in leukocyte trafficking (into, through and out of the



In children, an annual oral glucose tolerance test merits consideration if the child is obese or has risk factors for diabetes. Assessment of Ophthalmological Complications. . Children are particularly vulnerable to the side effects of corticosteroids, and parents need to understand the benefits and adverse effects of glucocorticoids. .

Corticosteroids | Pediatrics In Review - American Academy of Pediatrics



Corticosteroids carry a risk of side effects. Some side effects can cause serious health problems. When you know what side effects are possible, you can take steps to control their impact. Side effects of corticosteroids taken by mouth Corticosteroids that you take by mouth affect your entire body.

Asthma: Oral steroids - AboutKidsHealth



Oral Corticosteroids (OCS)	Inhaled Corticosteroids (ICS)
<ul style="list-style-type: none">• Pills taken by mouth to treat a severe asthma flare.• Medicine travels through the bloodstream.	<ul style="list-style-type: none">• An inhaler or nebulizer taken by mouth as an asthma maintenance medication.• Medicine is inhaled directly into your lungs and airways.
<p>OCS are typically taken as a short-term course (5-7 days) for acute asthma flares but are sometimes used daily for severe asthma.</p> <p>OCS enter other body systems - not just the lungs. As a result, your body is exposed to more steroids and there's risk for severe side effects.</p>	<p>ICS are typically taken daily to maintain asthma control for 12-24 hours. They should not be taken more frequently than prescribed.</p> <p>ICS treat your lungs and airways only. As a result, your body is exposed to less steroids and there's less risk harmful for side effects.</p>
<p>www.allergyasthmanetwork.org</p>	

Darkening or lightening of skin color. dizziness or lightheadedness. flushing of face or cheeks. hiccups. increased joint pain (after injection into a joint) increased sweating. nosebleeds (after injection into the nose) sensation of spinning. After you stop using this medicine, your body may need time to adjust.


Steroids in Children - Are They Always Harmful? by Dr. Sagar Bhattad



eye problems (e. g. glaucoma) heart, kidney or liver problems bone problems (e. g. weak bones) high blood pressure behavioural problems. It is still safe for your child to have corticosteroids if they have these conditions, but they may need extra monitoring or closer management by their doctor. Are there any side effects of corticosteroids?



Use of Oral Corticosteroids in the Wheezy Toddler

Inhaled vs. Oral Corticosteroids




Inhaled

- Treatment for persistent asthma
- Intended for long-term use
- Fewer and less severe effects such as headache, sore throat, common cold or flu, and muscle aches



Oral

- Treatment for severe asthma and/or attacks
- Intended for short-term usage
- More severe, diverse side effects such as nausea, acne, weight gain, and irregular heartbeat




verywell

This drug lowers how much natural steroid your child's body makes. Tell your child's doctor if your child has fever, infection, surgery, or injury. The body's normal response to these stresses may be affected. Your child may need extra doses of steroid. High blood pressure has happened with this drug.



Oral Steroids: Types and Side Effects | Patient

Inhaled vs. Oral Corticosteroids




Inhaled

- Treatment for persistent asthma
- Intended for long-term use
- Fewer and less severe effects such as headache, sore throat, common cold or flu, and muscle aches



Oral

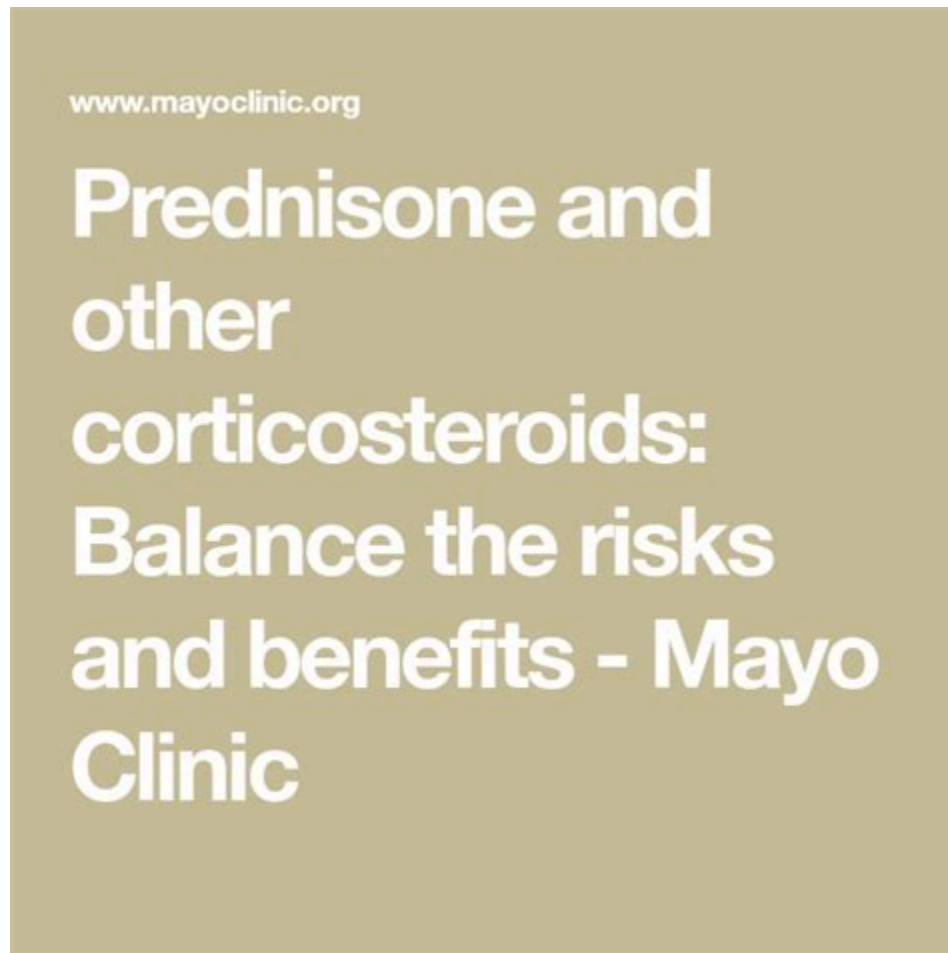
- Treatment for severe asthma and/or attacks
- Intended for short-term usage
- More severe, diverse side effects such as nausea, acne, weight gain, and irregular heartbeat



verywell

Long-term steroid treatment (e. g. for asthma) can temporarily cause a minimal growth delay in children. Adults have a slightly higher risk of developing cataracts over time. The risk depends on various factors, such as the dosage of the medication and how long it is used. . Not every oral steroid causes all of these side effects. The .

Prednisone and other corticosteroids - Mayo Clinic



Pediatric Appropriate studies performed to date have not demonstrated pediatric-specific problems that would limit the usefulness of prednisone in children. However, pediatric patients are more likely to have slower growth and bone problems if prednisone is used for a long time.

Side effects of steroids (children) - The Brain Tumour Charity



Corticosteroids have been used to treat a wide range of diseases, including allergic, dermatologic, gastrointestinal, and hematologic/oncologic disorders; some infectious diseases; organ transplant; renal disease; and respiratory and rheumatologic disorders.

Prednisone - Memorial Sloan Kettering Cancer Center



Use of high doses, particularly over a prolonged period of time, is associated with changes in appearance including a "moon-face", weight gain, centripetal redistribution of fat, muscle wasting, acne, bruising,

thinning of the skin, and stretch marks. High doses can also precipitate or exacerbate existing diabetes mellitus and cause hypertension.

Prednisolone (Oral Route) Side Effects - Mayo Clinic



PREDNISONE
Anti-Inflammatory Medications

Purpose: treatment of severe inflammation, immunosuppression, neoplasms, multiple sclerosis, collagen disorders, dermatological disorders, pulmonary fibrosis, and asthma

SIDE EFFECTS

- Peptic ulcer/possible perforation
- Depression
- Hypertension, circulatory problems
- Nausea, diarrhea
- Abdominal distention
- Hyperglycemia
- Psychic derangements

NURSING CONSIDERATIONS

- Treatment of severe inflammation, immune suppression, neoplasms, multiple sclerosis, collagen disorders, dermatologic disorders, myasthenia gravis
- PO: take with food, milk, antacids
- PO: peak 1–2 hours, duration 24–36 hours
- Eat food high in protein, calcium, vitamin D; avoid sodium
- Contact clinician if anorexia, difficulty breathing, weakness, dizziness; symptoms may appear during periods of stress or trauma
- Contact clinician if black/tarry stools, slow wound healing, blurred vision, bruising/bleeding, weight gain, emotional changes
- Excessive consumption of licorice can increase risk of hypokalemia
- Wear medical information tag
- Monitor blood sugar in diabetic patients
- Rx-Preg
- Cat C

KAPLAN NURSING
For nurses, by nurses

The course of steroids may last anywhere from three to seven days. There are usually no serious side effects if your child takes oral steroids for this length of time. If oral steroids are to be given longer than seven to 14 days (one to two weeks), the doctor will slowly reduce the dosage over a period of time.

Prednisone oral tablet side effects: Mild to serious - Medical News Today



Pediatric Appropriate studies performed to date have not demonstrated pediatric-specific problems that would limit the usefulness of prednisolone in children. However, pediatric patients are more likely to have slower growth and bone problems if prednisolone is used for a long time.

Steroids: side effects

mnemonic: **BECLOMETHASONE**

- **B**uffalo hump
- **E**asy bruising
- **C**ataracts
- **L**arger appetite
- **O**besity
- **M**oonface
- **E**uphoria
- **T**hin arms & legs
- **H**ypertension/ Hyperglycaemia
- **A**vascular necrosis of femoral head
- **S**kin thinning
- **O**steoporosis
- **N**egative nitrogen balance
- **E**motional liability



Longer-term use of steroids for more serious, chronic conditions may result in other side effects such as swelling due to water retention, fatigue, sleep problems and weight gain. Questions to Ask Your Doctor To be sure you understand the treatment and possible side effects, Dr. Lieberman suggests asking your doctor these questions:

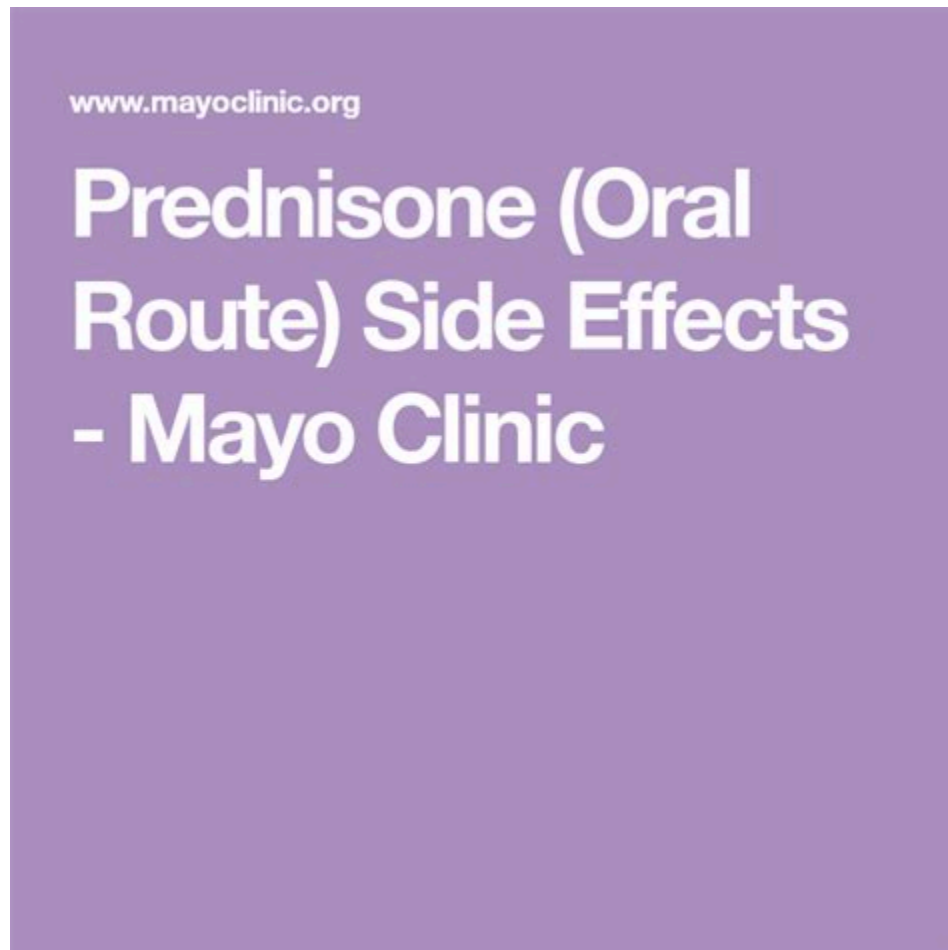
Kids Health Information : Corticosteroid medicine - The Royal Children .



Potential Side Effects of Steroid Treatment in PMR. As with most medications, you may notice side

effects when you start taking steroids. Oral drugs like these get absorbed through the stomach, so it's important to eat food when you take them (gut irritation is a common side effect), says Dr. Cohen.

Prednisone (Oral Route) Side Effects - Mayo Clinic



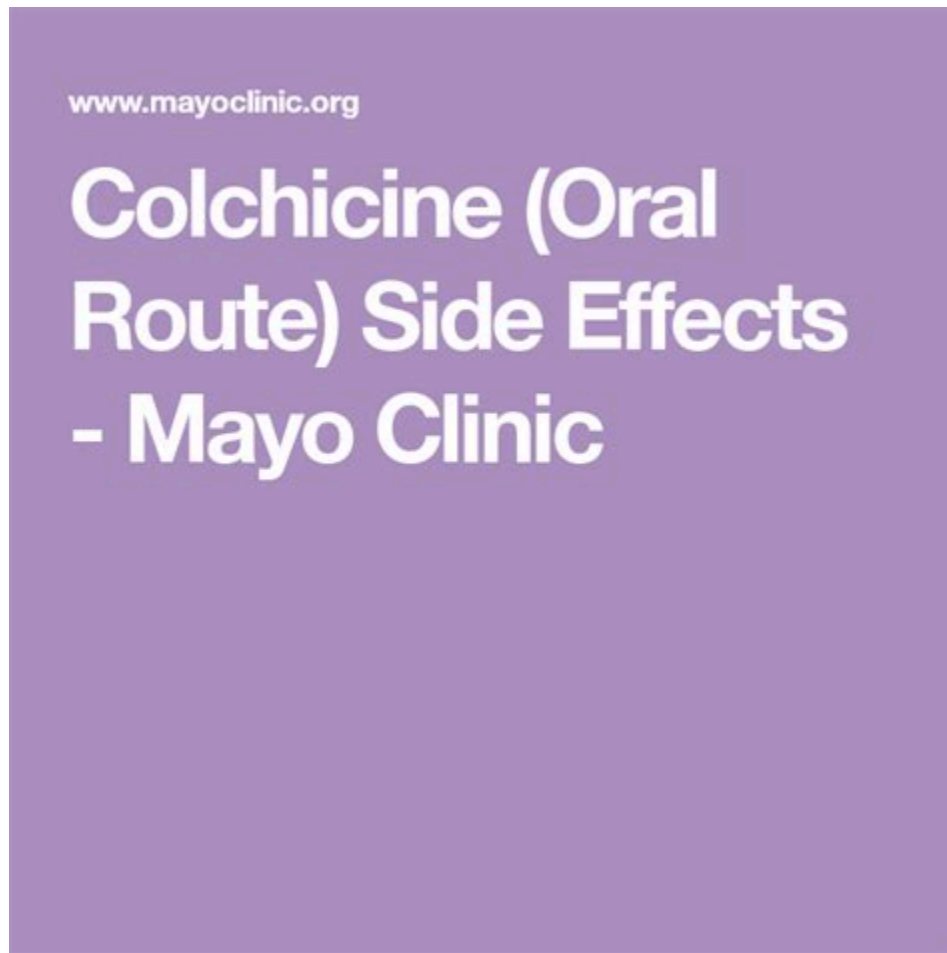
Some of the common side-effects of steroids are: Increased appetite Difficulty sleeping Irritation to stomach lining Candidal infection in the mouth (oral thrush) Changes to blood sugar levels Water retention Skin thinning Muscle wasting Greater chance of infection Inoculations Effects on growth Effects on the eyes Emotional effects

Understanding Steroid Treatment in Polymyalgia Rheumatica - CreakyJoints



A clinical practice guideline for the management of sore throat indicates a weak recommendation for the use of oral corticosteroids in children aged 5 years or older and in adults. 25 Dvorin . T, Trautner C, Buhl R. Consequences of long-term oral corticosteroid therapy and its side-effects in severe asthma in adults: a focused review .

Corticosteroid (Oral Route, Parenteral Route) Side Effects - Mayo Clinic



numbness or tingling in the arms or legs. pounding in the ears. shortness of breath. swelling of the fingers, hands, feet, or lower legs. trouble thinking, speaking, or walking. troubled breathing at rest. weight gain.

Association of Oral Corticosteroid Bursts With Severe Adverse Events in .

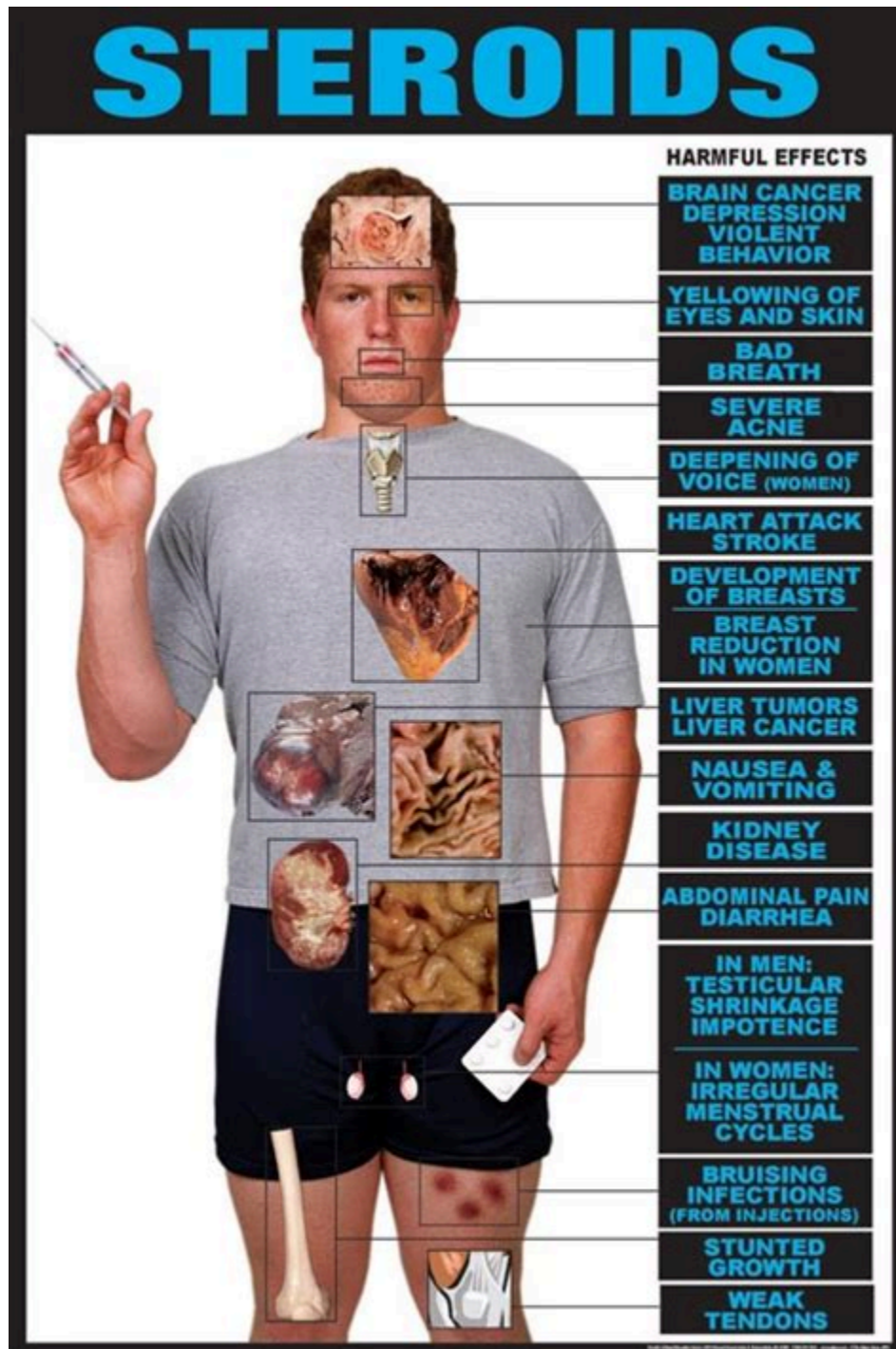
Table 1. Characteristics of Children With Corticosteroid Bursts

Characteristic	Children, No. (%)	
	1 Corticosteroid burst (n = 1 064 587)	All corticosteroid burst(s) (n = 1 897 858)
Age, mean (SD), y	9.7 (5.8)	9.5 (5.7)
Female	520 319 (48.9)	897 193 (47.3)
Corticosteroid use		
Daily dose, median (IQR), mg/d	6.00 (1.50-15.00)	8.17 (1.25-15.00)
Duration, median (IQR), d	3.00 (3.00-3.00)	3.00 (3.00-3.00)
Incidence rate per 1000 person-years (95% CI)		
GI bleeding	2.48 (2.44-2.52)	2.54 (2.51-2.57)
Sepsis	0.37 (0.35-0.39)	0.41 (3.96-4.22)
Pneumonia	25.74 (25.59-25.88)	27.86 (27.75-27.98)
Glaucoma	0.62 (0.60-0.64)	0.65 (0.64-0.65)
Diagnosis of the top 10 acute conditions (ICD-9-CM and ICD-10-CM codes)*		
Urticaria (708.xx and L50.xxxxx)	126 290 (11.9)	20 8957 (11.0)
Contact dermatitis and other eczema (692.xx, L23.xxxxx, L24.xxxxx, and L25.xxxxx)	109 113 (10.3)	172 276 (9.1)
Acute		
Upper respiratory tract infections (465.xx and J06.xxxxx)	108 082 (10.2)	198 685 (10.5)
Bronchitis and bronchiolitis (466.xx, J20.xxxxx, and J21.xxxxx)	96 514 (9.1)	191 826 (10.1)
Sinusitis (461.xx and J01.xxxxx)	59 329 (5.6)	113 428 (6.0)
Asthma (493.xx and J45.xxxxx)	55 064 (5.2)	13 4658 (7.1)
Allergic rhinitis (477.xx and J30.xxxxx)	35 879 (3.4)	60 884 (3.2)
Acute		
Tonsillitis (463.xx and J03.xxxxx)	35 683 (3.4)	6640 (3.3)
Laryngitis and tracheitis (464.xx, J04.xxxxx, and J05.xxxxx)	32 541 (3.1)	56 086 (3.0)
Nasopharyngitis (460.xx and J00.xxxxx)	30 847 (2.9)	60 384 (3.2)
Physician specialty		
Pediatrics	283 996 (26.7)	558 859 (29.5)
Dermatology	276 286 (26.0)	434 936 (22.9)
Otolaryngology	189 174 (17.8)	336 791 (17.8)
Family practice	159 178 (15.0)	277 690 (14.6)
Internal medicine	78 516 (7.4)	135 956 (7.2)

Abbreviations: GI, gastrointestinal; ICD-9-CM, International Classification of Diseases, Ninth Revision, Clinical Modification; ICD-10-CM, International Statistical Classification of Diseases, Tenth Revision, Clinical Modification; IQR, interquartile range.
* ICD-9-CM codes were used to define the conditions in 2013 to 2015, and ICD-10-CM codes were used to define the conditions in 2016 and 2017 (eTable 2 in the Supplement).

Asthma. Chronic obstructive pulmonary disease (COPD). Croup. Oral steroids are also used to treat the effects of some cancers or to treat conditions in which a person is not making enough of their own natural steroids (for example, in Addison's disease, congenital adrenal hyperplasia and hypopituitarism).

Using steroids correctly and avoiding side effects



Side effects of steroids can include changes in your child's mood and behavior. How steroids might affect your child Behavior - Your child might act differently. Common changes include angry outbursts, restlessness, and crying more than normal. Also, your child may act very energetic or hyperactive.

- <https://telegra.ph/Centrinolab-Deca-200-02-09>
- <https://groups.google.com/g/39beef93/c/h03mBTr3KfY>
- <https://www.a5oc.com/members/kostjamakarovmy.156688/#about>