

Patient information factsheet

Your steroid medication and emergency card

We have given you this factsheet because you have been prescribed steroid medication. It's important to be aware that in some cases, taking steroids can increase your risk of developing a condition called adrenal insufficiency. If left untreated, this can lead to a serious medical emergency known as an adrenal crisis.

This factsheet explains:

- What steroid medication does
- What adrenal insufficiency and adrenal crisis are
- The symptoms to look out for
- What to do if you feel unwell
- How to reduce your risk of an adrenal crisis

Please keep this factsheet in a safe place in case you need to refer to it in the future. If you have any further questions or concerns, please contact us using the details at the end of this factsheet.

NHS steroid emergency card

If you are prescribed or have recently been prescribed a long-term or high-dose steroid medication, you may be given an NHS steroid emergency card. This is a card that lets healthcare professionals know that you take or have recently taken steroid medication(s) and may be at risk of an adrenal crisis.

It is important that you:

- carry this card with you at all times
- show the card to any healthcare professional you see
- ask your general practitioner (GP), pharmacy or hospital for a new card immediately if you lose your card.

The card can also be downloaded as a PDF and added as a lock screen to mobile devices. For more information about this, please see the Society of Endocrinology link in the 'Useful links' section on page 7.

If you are unsure whether you need an NHS steroid emergency card, please ask your GP, the healthcare professional who prescribes your steroids or your local pharmacy.

What steroid medication does

Steroids are an artificial version of hormones your body usually makes by itself. Steroid medication can be used to help treat a range of conditions, and can come in various forms, including tablets, liquid medicine, inhalers, injections, creams, nasal sprays and suppositories.

It's important to be aware that in some cases, higher doses of steroid treatments can reduce your body's ability to produce its own steroid hormone (cortisol).

What is cortisol?

Cortisol is a steroid hormone made by the adrenal glands (two small glands that sit on top of the kidneys).

It plays an important role in maintaining and regulating normal healthy body functions, particularly when you are ill or under stress. You may have heard cortisol referred to as the 'stress hormone'.

Cortisol helps the body:

- maintain blood pressure
- regulate metabolism (the process by which your body converts food and drink into energy to keep you alive and functioning)
- respond to infection
- respond to physical stress (for example, illness, surgery or injury)

The pituitary gland (a pea-sized gland located at the base of the brain) tells the adrenal glands when to make cortisol. When you are stressed or unwell, your body needs to produce more cortisol to be able to function normally.

What is adrenal insufficiency (AI)?

Adrenal insufficiency is a condition that occurs when your body does not produce enough cortisol to meet its needs. It is classified into three types:

- **Primary adrenal insufficiency (including Addison's disease)**
This is a rare condition which occurs when the adrenal glands are damaged and cannot make enough of the hormones cortisol and aldosterone (a steroid hormone produced by the adrenal glands which helps to regulate blood pressure). The condition can occur at any age. People with primary adrenal insufficiency will need to have lifelong steroid replacement therapy. This involves taking steroid medicine daily to replace the lost hormones.
- **Secondary adrenal insufficiency**
This is a condition which is caused by an issue with the pituitary gland. The pituitary gland makes a hormone called adrenocorticotropin (ACTH) that tells the adrenal glands to make cortisol. If the pituitary gland is damaged, it can affect the production of ACTH, resulting in the adrenal glands not producing enough cortisol. People with secondary adrenal insufficiency may need lifelong steroid replacement therapy.
- **Tertiary adrenal insufficiency**
This is a condition which is caused by taking steroid medications (such as tablets, inhalers, creams, nasal sprays, injections, or suppositories) for other health conditions. Steroid medications trick the body into thinking it has enough cortisol, so the pituitary gland stops sending signals to the adrenal glands to produce it. Over time, the adrenal glands 'switch off' or become sluggish, leading to adrenal insufficiency.

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What is an adrenal crisis?

An adrenal crisis (also known as acute adrenal insufficiency) is a rare but **life-threatening emergency** where a person's cortisol level has significantly dropped.

What causes an adrenal crisis?

An adrenal crisis can be caused by a number of factors, including:

- illness (for example, a fever (a high temperature of 38°C or more), vomiting or diarrhoea)
- surgery or dental treatments
- childbirth
- medical procedures (for example, a colonoscopy)
- serious injury or trauma
- severe emotional shock (for example, the death of a family member)

Who is at risk of an adrenal crisis?

You may be at risk of an adrenal crisis if you:

- have **primary** or **secondary** adrenal insufficiency
- are taking or using prescription steroid medications (the type, dose and duration of your prescription steroids can affect your risk), particularly if:
 - you are unwell
 - you are under stress (for example, having a surgical procedure)
 - your steroid treatment is suddenly stopped or the dose is reduced

What are the symptoms of an adrenal crisis?

It is important that you recognise the symptoms of an adrenal crisis so that you can get urgent treatment, if necessary.

Symptoms of an adrenal crisis can include:

- dizziness or light-headedness
- nausea (feeling sick) and vomiting
- a fever (a high temperature of 38°C or more), chills, or feeling very cold
- extreme tiredness or weakness
- confusion or drowsiness
- muscle or joint aches
- stomach pain
- severe diarrhoea
- low blood pressure

How is an adrenal crisis diagnosed?

An adrenal crisis is a medical emergency which is usually diagnosed in an acute hospital setting such as an emergency department.

To make a diagnosis of an adrenal crisis, the healthcare professional caring for you will:

- assess your symptoms
- ask you questions about your medical and medication history
- perform some blood tests

How is an adrenal crisis treated?

An adrenal crisis is usually treated with steroid injections (usually hydrocortisone) and intravenous fluids (fluids given directly into a vein) in hospital.

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How can I prevent an adrenal crisis?

To remain well while on **regular steroid medication**, it is important that you:

- continue taking or using your steroid medication as prescribed by your healthcare team (**do not** suddenly stop taking your steroids or skip doses)
- know what to do when you are unwell (see the 'What are 'steroid sick day rules'?' section below for more information)
- carry your **NHS steroid emergency card** with you at all times (see page 1 for more information)
- have a **sufficient steroid supply** (you should always have a minimum of four weeks' worth of your usual steroid dose to allow for a dose increase when you are unwell)
- seek medical advice from your GP or the specialist team prescribing your steroids if you feel unwell after a reduction in your steroid dose

If you occasionally take **short courses of oral steroid medication**, you may need to seek medical advice if you become unwell as you may need to:

- be restarted on steroids if stopped or
- increase your dose if you are still taking steroids (see section below).

What are 'steroid sick day rules'?

When you are unwell, you may need to increase your steroid dose to prevent you from having an adrenal crisis. 'Sick day rules' are a guide designed to help you manage your steroid medication when you are unwell.

Please read the information in the tables below carefully and follow the guidance that is applicable to you. If you are unsure about anything, please contact us using the details at the end of this factsheet.

If you use steroid containing inhalers, injections, creams, nasal sprays, or suppositories

Type of illness	Action
<ul style="list-style-type: none">• Mild illness (for example, a cold) without a fever	You do not need to change your treatment. You can continue as normal.
<ul style="list-style-type: none">• A fever (a high temperature of 38°C or more)• Mild vomiting or diarrhoea• Physical injury or severe shock (for example, a bereavement or traffic accident)	Keep hydrated, rest, and monitor your symptoms. If you do not feel better after 24 hours, call your GP or NHS 111 for advice.
<ul style="list-style-type: none">• Severe vomiting or diarrhoea• Dizziness• Confusion	You may be in adrenal crisis. Call 999 for an ambulance or go to your nearest emergency department.

If you occasionally take short courses of oral steroids (tablets or liquid)

Follow the guidance in the table on the next page if:

- you have taken oral steroids for more than **one week** at a time on **three or more separate occasions** in the last year
- the **daily** steroid dose you have taken is:
 - 40mg prednisolone or more
 - 120mg hydrocortisone or more
 - 4mg dexamethasone or more

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Type of illness	Action
<ul style="list-style-type: none"> Mild illness (for example, a cold) without a fever 	You do not need to change your treatment. You can continue as normal.
<ul style="list-style-type: none"> A fever (a high temperature of 38°C or more) Mild vomiting or diarrhoea Physical injury or severe shock (for example, a bereavement or traffic accident) 	Contact your GP or NHS 111 urgently for advice. You may need to restart taking steroids if you have stopped them or increase your dose if you are still taking steroids.
<ul style="list-style-type: none"> Severe vomiting or diarrhoea Dizziness Confusion 	You may be in adrenal crisis. Call 999 for an ambulance or go to your nearest emergency department.

If you take regular (daily) oral steroids

Please note that the information provided below does not replace your existing steroid management plan (if you have one) for your underlying health condition. For example, if you have been prescribed steroids for a COPD exacerbation and have been given specific instructions on when to take them, those instructions take priority over the general steroid sick day rule guidance provided below.

Type of illness	Action
<ul style="list-style-type: none"> Mild illness (for example, a cold) without a fever 	Continue taking your usual steroid dose.
<ul style="list-style-type: none"> A fever (a high temperature of 38°C or more) Mild vomiting or diarrhoea Physical injury or severe shock (for example, a bereavement or traffic accident) 	Increase your steroid dose as per the steroid dosage guidance in the table below until you feel better.
<ul style="list-style-type: none"> Severe vomiting or diarrhoea Dizziness Confusion 	You may be in adrenal crisis. Call 999 for an ambulance or go to your nearest emergency department.

Sick day steroid dosage guidance

Type of steroid	Usual daily steroid dose	Steroid dose to take when unwell with a fever or physical injury
Prednisolone	Less than 10mg	Take 5mg twice daily (morning and evening).
	10mg and above	<p>Split your usual daily dose into two equal doses (take half of your usual dose in the morning and the other half in the evening).</p> <p>When you are unwell, your body breaks down steroids faster. Splitting the dose (morning and evening) helps to ensure that you have enough steroid coverage throughout the day.</p>
Hydrocortisone	Variable	Take 20mg in the morning, 10mg at lunchtime and 10mg in the evening or your usual dose if it is higher than this.
Dexamethasone	Less than 1.5mg	Take 2mg once a day in the morning.
	1.5mg and above	Continue taking your usual daily dose.

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You can return to your usual steroid dose once you have recovered from your illness or as advised by a healthcare professional.

If you take regular (daily) oral steroids and need a dental procedure

Always let your dentist know that you are taking oral steroids before having any dental procedure.

For minor dental procedures

On the day of your procedure, you should adjust the dose of your steroids according to the 'Sick day steroid dosage guidance' table on page 5.

You should also take an **additional** 5mg prednisolone or 20mg hydrocortisone **one hour** before your procedure.

After your procedure, continue to follow the sick day steroid dosage guidance in the table on page 5 for 24 hours or as advised by your dentist. After 24 hours, return to your usual steroid dose(s).

For major dental procedures

You should discuss this with your dentist beforehand. You may need to have a steroid injection before your procedure.

After your procedure, continue to follow the sick day steroid dosage guidance (as per the table on page 5) for at least 24 hours or as advised by your dentist. After this time, return to your usual steroid dose(s).

If you use other **medications containing steroids** or **occasionally take repeat courses of oral steroids**, please discuss this with your dentist before your dental procedure.

If you are unsure whether you need to increase or change your steroid dose before your dental procedure, speak to your dentist or contact us for advice using the details at the end of this factsheet.

If you take oral steroids and experience vomiting or diarrhoea

If you vomit or have diarrhoea within 30 minutes of taking your steroid medication, it will be very unlikely that you have absorbed the steroids properly. You will need to take another dose of your steroids straight away. See the 'Sick day steroid dosage guidance' table on page 5 for what dose to take.

If you continue to experience mild vomiting or diarrhoea, you should seek medical advice from NHS 111.

If the vomiting or diarrhoea is severe, you should call **999** or go to your nearest emergency department.

If you have an unplanned hospital visit

It is important that you tell the healthcare team caring for you that you:

- are currently taking, or have previously taken, steroids or medication containing steroids within the last 12 months (let the healthcare team know when you last had steroids and what the dose was)
- may be at risk of adrenal insufficiency

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If you have a planned hospital visit or are waiting for a surgical procedure

Let your healthcare team know in **advance** that you are currently taking, or have previously taken, steroids or medication containing steroids within the last 12 months.

If you are pregnant, think you might be pregnant or are planning on becoming pregnant

Please discuss your steroid medication with your healthcare team as soon as possible.

When should I seek urgent medical help?

Call **999** for an ambulance or go to your nearest emergency department **immediately** if you experience any symptoms of an adrenal crisis (see page 3 for a list of the symptoms). **This might be a medical emergency, and delaying treatment could be fatal.**

Contact us

If you have any questions or concerns about your steroid doses, please contact the clinical team that prescribed your steroids in the first instance.

If you have any further questions or concerns, please contact:

Medicines advice service

Telephone: **023 8120 6907** (Monday to Friday, 9am to 6.30pm)

Email: medicinesadvice@uhs.nhs.uk

Useful links

Society of Endocrinology – ‘Adrenal Crisis Information’

www.endocrinology.org/clinical-practice/clinical-guidance/adrenal-crisis



The Pituitary Foundation – ‘Emergency info for AI and AVP-D (DI)’

www.pituitary.org.uk/information/emergency-information



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For help preparing for your visit, arranging an interpreter or accessing the hospital, please visit www.uhs.nhs.uk/additionalsupport