

Your steroid medicine and sick day rules

About this leaflet

This leaflet is designed for people who are taking glucocorticoid (steroid) medicine and need guidance on managing steroids during illness and stressful situations. It has been written with and reviewed by people who have adrenal insufficiency.

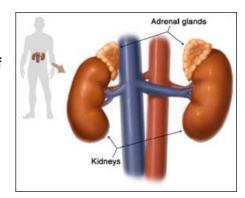
Who is this leaflet for?

People with adrenal insufficiency or those who may develop adrenal insufficiency due to adrenal suppression from steroid medicine. Your nurse or doctor has given you this as it **important you know how to take your steroids when you are unwell.**

What is adrenal insufficiency?

Adrenal Insufficiency happens when you cannot make enough of certain adrenal hormones, most importantly the steroid called cortisol. Cortisol is essential for your body because it:

- helps regulate your metabolism (turning food to energy)
- helps to control your blood pressure
- helps to control your blood glucose (sugar) levels
- helps reduces inflammation



Cortisol blood levels are highest in the morning and become lower as the day goes on. Cortisol also increases when you are unwell to help your body cope and recover from illness and stress.

Cortisol replacement (Hydrocortisone or Prednisolone tablets) is taken by people who have hypothalamic, pituitary gland or adrenal gland malfunction and do not produce enough of their own cortisol.

Steroid medicines are also used to treat a wide range of non-endocrine illnesses and can be taken as tablets, inhalers, creams, nasal sprays and injections. If you take steroid medication for an illness, it can stop your body making its own cortisol. If this happens you may develop adrenal insufficiency.

When you are unwell or if you experience sudden, intense psychological/emotional stress, it is likely you will need more steroid medicine (Hydrocortisone or Prednisolone). Steroid sick day rules can help make sure you take the right amount of steroid medicine at the right time. Please see page 3 and 4 for more information on steroid sick day rules.

What are the main signs and symptoms of adrenal insufficiency?

- Weight loss
- Lack of appetite
- Feeling sick
- Feeling dizzy or light-headed
- Feeling extremely tired
- Muscle weakness



What is an adrenal crisis?

An adrenal crisis occurs when there is not enough cortisol in the body. This can be life-threatening if not treated. It can be caused by the following:

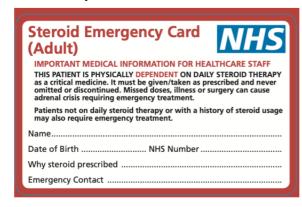
- Severe virus or infection, for example, flu, urine infection
- Gastrointestinal bug, vomiting +/-diarrhoea
- Stopping steroid medicine suddenly
- Not taking extra or enough steroid medicine when you are unwell
- When you are a patient in hospital and not given enough steroid medication
- When you are not given enough steroid medication before and after surgery and invasive medical procedures, e.g., endoscopy, wisdom tooth removal
- Severe shock
- Physical trauma
- Severe psychological/ emotional stress

What are the main signs and symptoms of an adrenal crisis?

- Low blood pressure
- Feeling dizzy or light-headed
- High temperature
- Shivering or feeling very cold
- Feeling sick or being sick
- Feeling very weak
- Extreme tiredness
- Feeling sleepy or confused
- Collapse

How can I avoid an adrenal crisis?

- Do not stop your steroid medication suddenly
- Do not miss taking your steroid medication
- Follow the steroid sick day rules when you are unwell (see page 3 and 4)
- Always carry your NHS Steroid Emergency Card and show this to every healthcare professional involved in your care
- Do not run out of steroid medicine maintain a good supply of your steroid medicine
- Do not reduce the dose of your steroid medication unless your nurse or doctor has told you to. If you no longer need steroid treatment, you will be advised on how to reduce/stop your steroid medication
- Contact your nurse or doctor if you start to experience signs and symptoms of adrenal insufficiency as listed above



When calling 999 or 111, emphasise this is a likely adrenal insufficiency/Addison's/Addisonian crisis or emergency AND describe symptoms (vomiting, diarrhoea, dehydration, injury/shock).

Emergency treatment of adrenal crisis

1) Immediate 100mg Hydrocortisone i.v. or i.m. injection.
Followed by 24 hr continuous i.v. infusion of 200mg
Hydrocortisone in Glucose 5% OR 50mg Hydrocortisone i.v. or i.m. qds (100mg if severely obese).

2) Rapid rehydration with Sodium Chloride 0.9%.

3) Liaise with endocrinology team.

Scan here for further information or search
https://www.endocrinology.org/adrenal-crisis

What should I look for when reducing my steroid dose?

You may notice you feel tired, have low mood and loss of appetite. This is a normal response to going back to lower dose steroids. If this doesn't improve, speak to your Specialist nurse or doctor.



STEROID SICK DAY RULES					
Reason to increase steroid dose	Action				
Mild illness with no temperature	No change				
Illness with high temperature	If you have a high temperature (above 38), you need to take more steroid medicine. Please follow sick day rule doses in Table 1, page 4				
Being sick (vomiting) or extremely unwell (suspected adrenal crisis)	If you are sick once, take an extra 5mg of Prednisolone OR 20mg of Hydrocortisone by mouth. Consider taking oral rehydration therapy, e.g. Dioralyte If you are sick within 30 minutes of taking the extra dose, take another dose immediately. If you are sick again within 30minutes of the second extra dose OR have signs and symptoms of an adrenal crisis, give yourself the emergency hydrocortisone injection (100mg) and seek specialist advice.				
	Adrenal Crisis: call an ambulance immediately via 999. Take your NHS Steroid Emergency Card with you and shows to all health care professionals you come in to contact with.				
Diarrhoea	If you have diarrhoea, you need to take more steroid medicine Follow steroid sick day rule doses in Table 1, page 4 Consider taking oral electrolyte replacement, e.g. Dioralyte				
Infection requiring antibiotics	Follow steroid sick day rule doses in Table 1, page 4				
Trauma/Injury	Immediately take Prednisolone 5mg or Hydrocortisone 20mg and seek Specialist advice				
Hospital Admission Surgery Investigative procedures	Your Clinical team should refer to the perioperative guidelines for steroid management: see link below				
Sudden or severe emotional/psychological stress (e.g. bereavement, major life changes, acute anxiety or panic attacks)	Take an extra 5mg of Prednisolone OR 20mg of Hydrocortisone by mouth immediately. Follow sick day rules for 1- 2 days and seek advice if you continue to feel unwell.				
Other times you may need to take more steroid medicine	 Pregnancy – tell your GP and Specialist as soon as possible to plan for any required steroid dose adjustment Dental procedures, e.g., wisdom tooth removal Prolonged physical or mental exertion, such as shift work, long-haul travel, unusually long working hours, or unusually long days (e.g., weddings, nights out) Build-up of emotional/psychological stress Seek advice from your Specialist 				
Adrenal Crisis	Call an ambulance immediately via 999. Take your NHS Steroid Emergency Card with you and show to all health care professionals you come in to contact with.				



Table 1		STEROID SICK DAY RULE DOSES		
Name of Steroid	Maintenance	Steroid Sick Day Rule Dose		
medication	Dose	 until illness, physical stress resolved 		
Prednisolone	3-10mg daily	Take Prednisolone 5mg immediately		
		then 5mg every 12 hours or 10mg daily		
Prednisolone	More than	Take Prednisolone 5mg immediately		
	10mg daily	THEN continue to take your normal daily dose. This can		
		be halved and taken at 12 hour intervals.		
Hydrocortisone	15-25mg	Take Hydrocortisone 20mg immediately then 40mg		
	daily	daily in 2-4 divided doses, e.g., 10mg every 6 hours		
Other steroid		Take Hydrocortisone 20mg immediately, then 40mg		
medicine		daily in 2-4 divided doses, e.g., 10mg every 6 hours		

Continue taking a higher steroid dose until the underlying cause has resolved. When you start to feel better you can reduce the dose of your steroids. If you are unsure seek Specialist advice.

If your symptoms get worse or you are not feeling better within 48hours of increasing your steroid dose, seek Specialist advice

Some people require higher doses of steroids, e.g. patients taking mitotane. Refer to your individualised steroid sick day rule management plan or consult your Specialist team

If you have or are at risk of adrenal insufficiency



- Carry an NHS Steroid Emergency Card at all times
- People with adrenal insufficiency should have an extra supply of oral Hydrocortisone or Prednisolone to manage steroid sick day rules
- If you have been recommended a Hydrocortisone emergency management kit: always carry one, have a spare and know how to use it.
- Travelling: ensure you take a good supply of steroid medication and your Hydrocortisone emergency management kit. If flying, carry medication in your hand luggage, with a letter from your Specialist confirming medication needs.

Key Contacts (GP, Specialist Doctor/Nurse)							
Name		Contact Number		Contact Email			
My Steroid Medicine							
Date	Name		Dose	and How Often			

Further Information available at:

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

<u>Guidelines for the management of glucocorticoids during the peri-operative period for patients with adrenal insufficiency - Woodcock - 2020 - Anaesthesia - Wiley Online Library</u>

NICE (2024) Adrenal Insufficiency: identification and management
Overview | Adrenal insufficiency: identification and management | Guidance | NICE