

WHEN TO ISSUE STEROID EMERGENCY CARDS

A National Patient Safety Alert has been issued regarding the issuing of a Steroid Emergency Card to relevant patients to support the early recognition and treatment of adrenal crisis in adults.

[Read the National Patient Safety Alert](#)

Steroid Emergency Card (Adult) NHS

IMPORTANT MEDICAL INFORMATION FOR HEALTHCARE STAFF
THIS PATIENT IS PHYSICALLY DEPENDENT ON DAILY STEROID THERAPY as a critical medicine. It must be given/taken as prescribed and never omitted or discontinued. Missed doses, illness or surgery can cause adrenal crisis requiring emergency treatment.

Patients not on daily steroid therapy or with a history of steroid usage may also require emergency treatment.

Name.....
Date of Birth NHS Number

Why steroid prescribed

Emergency Contact

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>

Steroid Emergency card should be given to:

All adults with **adrenal insufficiency**, such as those with **Addison's disease, congenital adrenal hyperplasia, and hypothalamo-pituitary damage from tumours or surgery that are steroid dependent.**

All patients receiving **exogenous steroids at a dose of prednisolone 5 mg/day or equivalent for 4 weeks or longer.** This is across all routes of administration (oral, topical, inhaled, or intranasal) as they are also at risk of adrenal insufficiency.

Patients taking **inhaled beclomethasone >1000 mcg/day or equivalent or fluticasone >500 mcg/day** or equivalent this is because they are at risk of adrenal insufficiency due to hypothalamo-pituitary axis suppression

Patients **taking more that 40mg prednisolone per day or equivalent for longer than 1 week or repeated courses** of short oral doses. e.g. patients on rescue treatment for COPD.

Patients taking a **course of oral glucocorticoid within a year of stopping long term therapy.**

Patients taking **drugs that affect CYP3A4 (CP450) metabolism with a steroid treatment.** Clinicians should have a high degree of clinical suspicion and give stress doses of hydrocortisone if there is any concern with regards to the development of an adrenal crisis during an intercurrent illness or a procedure in these patients.

These emergency steroid cards can be ordered from NHSBSA

<http://www.nhsforms.co.uk>

OR Primary care support England

<https://secure.pcse.england.nhs.uk/forms/pcsssignin.aspx>

Patients who use smartphones may download a pdf copy of the card to use as the lock screen of their phone. The link is available from the British Society of Endocrinology [link](#)



When to issue a Steroid Emergency Card

In 2020 NHS Improvement published a National Patient Safety Alert to launch a Steroid Emergency Card to support early recognition and treatment of adrenal crisis in adults. This was in response to a number of incidents where patients had not received their usual steroid medication on admission to hospital and/or had not received appropriate additional steroid therapy for acute illness. All patients on long term steroids are to be given a Steroid Emergency Card to carry with them and show to the medical team on admission to hospital.

All patients on doses of steroids, equivalent to or greater than the values shown below, for 4 weeks or longer, (unless otherwise stated below) must be given a Steroid Emergency Card.

Oral steroids	Long term steroids > 4 weeks	Repeated short courses or one short course if the patient has been on long term steroids within the past year
Beclometasone dipropionate	625mcg daily	5mg daily
Betamethasone	750mcg daily	6mg daily
Budesonide	1.5mg daily	12mg daily
Deflazacort	6mg daily	48mg daily
Dexamethasone	500mcg daily	4mg daily
Hydrocortisone	15mg daily	120mg daily
Methylprednisolone	4mg daily	32mg daily
Prednisolone	5mg daily	40mg daily
Prednisone	5mg daily	40mg daily

Inhalers and Nebules

Beclometasone dipropionate Inhalers

Dry powder inhaler, Aerosol inhaler Brand: Easyhaler, Clenil Modulite, Soprobe	>1000mcg daily
Extra fine particle products Brand: Qvar, Qvar Autohaler, Qvar Easi-Breathe, Fostair, Kelhale	>500mcg daily

Budesonide Inhalers and Nebules

Inhaler Nebules Brand: Easyhaler, Budelin Novolizer, Fobumix, DuoResp, Spiromax, Pulmicort, Symbicort, Pulmicort Respules	>1000mcg daily
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Ciclesonide Inhalers

Brand: Alvesco	>480mcg daily
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Fluticasone propionate Inhalers and Nebules

Aerosol inhaler, Dry power inhaler, Nebules Brand: AirFluSal, Aloflute, Combisal, Flixotide, Flutiform, Flutiform K, Sereflo, Seretide Evohaler, Sirdupla, AirFluSal, Forspiro, Flixotide Accuhaler, Fusacomb Easyhaler, Seretide Accuhaler, Stalpex	>500mcg daily
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Fluticasone Furoate Inhalers

Dry powder inhaler Brand: Relvar Ellipta, Trelegly Ellipta	>100mcg daily
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Mometasone Furoate Inhalers

Brand: Asmanex	>400mcg daily
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Any patients on any steroid inhaler AND a nasal spray must receive a steroid emergency card

Nasal sprays

Fluticasone furoate Brand: Avamys	>100mcg daily (4 sprays per day for >7 days)
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Any patients on any steroid inhaler AND a nasal spray must receive a steroid emergency card

Rectal Preparations

Prednisolone 20mg/application foam enema	One metered dose daily
Prednisolone 5mg suppositories	One suppository daily
Prednisolone 20mg/100ml enema	One enema daily

Intra Articular

Hydrocortisone	Steroid emergency cards should be given for all patients receiving intra articular steroid injections.
Methylprednisolone	
Triamcinolone	
Patients should be advised to carry the card for 4 weeks after treatment, unless they have had repeated injections and/or they are on additional oral/inhaled steroid therapy in which case they should be advised to continue to carry the card.	

Eye/ear/nasal drop and sprays

Fluticasone propionate nasal drops: Flixonase Nasule	>500mcg daily
Prednisolone sodium phosphate 0.5% ear/eye drops	> 20 drops daily for more than 7 days
Prednisolone acetate eye drops 1%	> 10 drops daily for more than 7 days

Skin Preparations

Very potent steroids

Clobetasol preparations Brand: ClobaDerm, Dermovate, Etrivex	>50g per week or > 200g per month
Diflucortolone valerate 0.3% Brand: Nerisone Forte	30-60g per month if long term and/or occlusion

Potent steroids

Beclometasone	>75g per week or >300g per month >60-120g per month if long term and/or occlusion
Betamethasone Brand: Audavate, Betnovate, Diprosone, Diprosalic, Dovobet	
Fucibet	
Diflucortolone valerate 0.1% Brand: Nerisone	
Fluocinonide Brand: Metosyn, Metosyn FAPG	
Fluocinolone Brand: Synalar, Synalar C	
Fluticasone propionate Brand: Cutivate	
Hydrocortisone butyrate Brand: Locoid	
Mometasone furoate Brand: Elocon	

References

- NHSI. Steroid emergency card to support early recognition and treatment of adrenal crisis in adults Aug 2021
- Specialist Pharmacy service. Exogenous steroids, adrenal insufficiency and adrenal crisis – who is at risk and how should they be managed. March 2021
- PrescQIPP. Implementing the Steroid Emergency Card National Patient Safety Alert. April 2021

Patients Eligible for Steroid Emergency Card

CYP3A4 enzyme inhibitors increasing cortisol concentration and risk of adrenal suppression -Patients prescribed any form of steroids in combination with potent CYP3A4 inhibitors listed below must be issued with a Steroid Emergency Card.

Potent protease inhibitors

Atazanavir
Darunavir
Fosamprenavir
Ritonavir(+/- lopinavir)
Saquinavir
Tipranavir

Antifungals

Itraconazole
Ketoconazole
Voriconazole
Posaconazole

Antibiotics

Clarithromycin – long term courses

Sick Day Rules

Patients with adrenal insufficiency will require higher doses of steroids if they become ill. They may also require injectable steroid if illness severe or undergoing procedures or surgery.

These patients must therefore be prescribed extra oral steroids and if needed injectable hydrocortisone and given advice 'on sick day rules'

(See patient information leaflet)

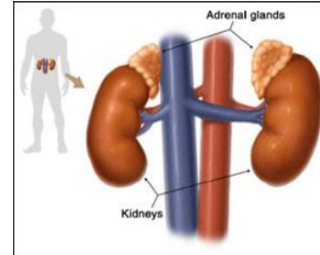
Steroid Sick Day Rules

This leaflet is intended for patients on steroid treatment at risk of adrenal insufficiency/adrenal crisis. It explains more about the steroid sick day rules. If you have any further questions, please speak to the Health Care Professional (HCP) supervising your care.

Why are steroid sick day rules important?

Taking steroid medication such as prednisolone tablets, steroid inhalers and steroid injections, can stop your adrenal glands from making the hormone, cortisol. When this occurs, it is known as Adrenal Insufficiency.

Cortisol is essential for life and when you are unwell your adrenals produce more cortisol. You have been given this information because your HCP thinks you could be at risk of becoming seriously unwell (known as an adrenal crisis) if you are unwell or have a procedure, such as surgery, without an appropriate increase in your steroid medication.



What is an adrenal crisis?

An adrenal crisis occurs when there is insufficient circulating cortisol in the body. This can be life-threatening if not treated.

What are the signs and symptoms of an adrenal crisis?

Low blood pressure. Feeling dizzy or light-headed. Fever, shivering or feeling very cold. Nausea and/or vomiting. Feeling very weak. Extreme tiredness, drowsiness or confusion. Aching muscles and/or joints. Stomach ache. Severe diarrhoea.

How can I prevent an adrenal crisis?

- Ensure you follow the sick day rules described below and know what to do when unwell
- Ensure you have a sufficient supply of the steroid medications to take when unwell
- Never stop your steroid treatment abruptly or skip doses
- Only reduce your steroid dose as advised by your HCP
- If you start to feel unwell following a steroid dose reduction, contact your HCP for advice
- If you are unwell, make sure that the person treating you knows you are at risk of adrenal crisis and show them your NHS Steroid Emergency Card

SICK DAY RULES: When do I need to take more steroids?

Mild illness without fever: no change in dose.

Illness with fever: If your temperature is raised, your steroid dose needs to be increased for the duration of the illness. However, if you are already on prednisolone 15mg or more there is no need to take additional steroid medication.

Vomiting or diarrhoea: If you vomit once, take an extra 5mg of Prednisolone OR 20mg of Hydrocortisone by mouth. **If vomiting persists after you have taken the extra steroid dose, you must seek urgent medical attention:** go to the Emergency Department, or call an ambulance via 999. Take your NHS Steroid Emergency Card with you and ensure that the team looking after you know that you are on steroid medication and that you are at risk of adrenal crisis and may need a steroid injection.

Extremely unwell: Take an extra 20mg of Prednisolone OR 50mg of Hydrocortisone and seek medical advice.

SICK DAY RULES: Pregnancy, Surgery and Dental procedures.

Pregnancy - carry on normal doses unless advised by your HCP.

At the onset of labour or start of a caesarean section, to start a continuous IV infusion of 200 mg Hydrocortisone over 24 hours (alternatively 50 mg of Hydrocortisone IV or IM every 6 hours).

Double usual oral dose for 48 hours after the baby is born.

Minor Dental Surgery - Take 5mg of Prednisolone OR 20mg of Hydrocortisone one hour prior to the procedure and take a double dose for 24 hours after the procedure, then return to your normal dose.

Major Dental Surgery - You may need 100mg of IM Hydrocortisone before major dental work anaesthesia – discuss in advance with your dentist. Take a double dose for 24 hours after any dental procedure, then return to your normal dose.

Surgery and invasive procedures - 100 mg of Hydrocortisone by IV or IM injection at the start of surgery followed by a continuous IV infusion of 200 mg Hydrocortisone over 24 hours, or 50 mg of Hydrocortisone IV or IM every 6 hours. Double usual dose when eating and drinking and reduce to usual dose over the next 1-2 weeks as you recover.

Hospital Treatment - If you are admitted to hospital unwell, we recommend:

1) 100 mg of Hydrocortisone by IV or IM injection followed by a continuous IV infusion of 200 mg Hydrocortisone over 24, or 50 mg of Hydrocortisone IV or IM every 6 hours.

Sick Day Rules - Steroid Adjustment			
Steroid medication	Normal Dose	Unwell with fever	COVID - suspected or confirmed
Prednisolone	3-10mg daily	5mg twice daily	10mg twice daily
Prednisolone	10 mg or more daily	Split daily dose to twice daily	Split daily dose to twice daily, e.g. 20mg daily - take 10mg twice daily
Hydrocortisone	>10mg daily	20mg immediately, then 10mg 6 hourly	20mg every 6 hours
Other steroid preparation	N/A	20mg hydrocortisone immediately, then 10mg 6 hourly	Hydrocortisone 20mg every 6 hours

If you are at risk of adrenal insufficiency due to long term and/or high dose steroid use

- **Carry a Steroid Emergency Card** <https://www.endocrinology.org/media/3873/steroid-card.pdf>
- Ensure you have a supply of oral Prednisolone or Hydrocortisone. You will need to take this in addition to your normal steroid medication if you are unwell in accordance with sick day rules
- A one month reserve of steroid medication is recommended, for example Hydrocortisone 10mg tablets x 2 boxes of 28 tablets

RESOURCES:

Adrenal Insufficiency Leaflet

<https://www.endocrinology.org/clinical-practice/patient-information/>

Adrenal Crisis Information

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

Covid Information

<https://www.endocrinology.org/clinical-practice/covid-19-resources-for-managing-endocrine-conditions/>

Guidelines for the management of glucocorticoids during the peri-operative period for patients with adrenal insufficiency

<https://associationofanaesthetists-publications.onlinelibrary.wiley.com/doi/full/10.1111/anae.14963>



Further Information for Clinicians

1. OptimiseRx

The current messages are as follows:

▼ Oral corticosteroids: ensure a Steroid Emergency Card is issued to all patients with adrenal insufficiency Comment

Headline:
Ensure a Steroid Emergency Card is issued to all patients with adrenal insufficiency.

Details:
NHS Improvement (NatPSA/2020/005/NHSPS; Aug 2020) states that patients with adrenal insufficiency, who are steroid dependent, should be issued with a Steroid Emergency Card and should be encouraged to carry it with them at all times.

Local Text:	References: NHS England	Description of Rule Logic: Patients with adrenal insufficiency, prescribed corticosteroid oral preparations.
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View Trigger Products View Audit History ID: 25753

▼ Hydrocortisone oral preparations: ensure a Steroid Emergency Card is issued to patients with adrenal insufficiency Comment

Headline:
Ensure a Steroid Emergency Card is issued, if appropriate, to patients with adrenal insufficiency.

Details:
NHS Improvement (NatPSA/2020/005/NHSPS; Aug 2020) states that patients with adrenal insufficiency, who are steroid dependent, should be issued with a Steroid Emergency Card and should be encouraged to carry it with them at all times.

Local Text:	References: NHS England	Description of Rule Logic: Patients without adrenal insufficiency, prescribed hydrocortisone oral preparations.
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View Trigger Products View Audit History ID: 25758

▼ High-strength inhaled corticosteroids: ensure a Steroid Emergency Card is issued Comment

Headline:
Ensure a Steroid Emergency Card is issued to all patients prescribed high-strength inhaled corticosteroids.

Details:
NHS Improvement (NatPSA/2020/005/NHSPS; Aug 2020) states that patients with adrenal insufficiency, who are steroid dependent, should be issued with a Steroid Emergency Card and should be encouraged to carry it with them at all times.

Local Text:	References: NHS England	Description of Rule Logic: Patients prescribed high-strength inhaled corticosteroids, not previously prescribed high-strength inhaled corticosteroids within 18 months.
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View Trigger Products View Audit History ID: 25761

2. Ardens Searches

See separate documents for identifying patients on SystemOne and EMISweb practice systems.