



FACT SHEET

General guidelines for stress dosing and sick day management

Healthy adrenal glands are able to quickly release cortisol into the blood stream to help the body cope instantly with the demands of extreme physical and mental stress. People with adrenal insufficiency may need to take **extra cortisol** in addition to their daily doses when they are sick, injured, before any kind of surgery or when undergoing times of physical or emotional stress. This is called **stress dosing or sick day dosing**.

Keep the following stress dosing guidelines handy and review them regularly

Examples below are for people taking hydrocortisone tablets. Consult your medical practitioner if you take a different medication for adrenal insufficiency.

Stress	
Mild injury	With no temperature, able to complete usual daily activities, no change is usually needed. Some individuals take a small dose of hydrocortisone for these events, but it is not universally required. The precise dosing is not known, but should not exceed 4-10mg hydrocortisone. Advice may vary at the discretion of the endocrinologist
Exhausting, strenuous physical exercise if person is not used to it (e.g. hiking, mountain climbing for several hours).	
Major emotional or mental stress (eg: death of a close relative, funeral, before an important uni exam)	
Infection / fever <i>Note: Infections are the most frequent cause of adrenal crisis, including gastroenteritis. Maintain the extra doses until recovery, then reduce to the standard doses within 1–2 days.</i>	
Fever of more than 38°C	Double normal daily dose(s) for at least 2 days
Fever of more than 39°C	Triple normal daily dose(s) for at least 3 days
Severe infections (eg: pneumonia)	Early on: hydrocortisone IV every 6 hours until condition stabilises, then 2-3x normal dose
Vomiting / diarrhoea <i>Note: Vomiting and diarrhoea pose a particularly high risk as the absorption of hydrocortisone is compromised while the demand for cortisol is increased.</i>	
Any illness that includes vomiting and/or diarrhoea	Triple normal daily dose(s), sip rehydration/electrolyte fluids. If vomiting persists and medication cannot be kept down, use emergency injection kit (100mg IM/SC Solu-Cortef). Then call a doctor or go to the nearest emergency department. Call 000 for an ambulance if needed.
Severe illness or injury <i>Note: Go to the nearest emergency department for hydrocortisone injection and fluids.</i>	
Severe infections, illness (e.g.: pneumonia) or injury	Early on: hydrocortisone IV every 6 hours until condition stabilises, then 2-3x normal dose

See over: Medication Requirements for Surgery and special diagnostic procedures



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Medication requirements for surgical procedures

Always inform your doctor, dentist or any specialist of your condition before undergoing procedures. This includes invasive diagnostic tests such as a colonoscopy or barium enema, procedures under general anaesthesia, dental treatment or minor outpatient surgery.

Ensure your surgical team is aware of your need for extra cortisol/medication and that they have checked the surgical guidelines for stress dosing!

Type of Procedure	Peri-procedure needs (before surgery begins)	Post-procedure needs (after surgery)
Major surgery with long recovery time e.g. cardiothoracic surgery, oesophagectomy, Whipple's procedure.	50mg hydrocortisone IV with induction (at time the anaesthetic is given)	Continue 50mg hydrocortisone IV every 8 hours for 24 hours. Taper to normal dose over 2-3 days or longer depending on progress
Moderate surgery e.g. open cholecystectomy, total joint replacement, hysterectomy, caesarean section. Includes dental surgery under general anaesthesia.	50mg hydrocortisone IV with induction	Hydrocortisone 25mg IV 8 hourly for 24 hours. Then return to normal oral dose depending on progress. For day case dental surgery, double oral dose for 24- 48 hours.
Minor surgery e.g. cataract surgery, hernia repairs, laparoscopy with local anaesthetic, endoscopy. Includes dental surgery >1hr and with local anaesthetic.	50mg hydrocortisone IV or 20mg oral at commencement of procedure	Double oral dose for 24-48 hours after surgery then continue with normal dose.
Labour and vaginal birth	25mg hydrocortisone IV at onset of labour, then 6 hourly until delivery. 50mg IV at time of delivery.	Double oral dose for 24-48 hours after delivery.
Invasive bowel procedures requiring laxatives e.g. colonoscopy, barium enema	Hospital admission overnight can be considered. Double the usual oral doses of steroid during the bowel preparation phase. 50 mg IV hydrocortisone at time of procedure.	Double oral dose for 24-48 hours then return to normal dose.

Sources:

Nenke MA, Torpy DJ. Royal Adelaide Hospital.

Endocrine Society of Australia *Adrenal Insufficiency Advice for Doctors and Patients*

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