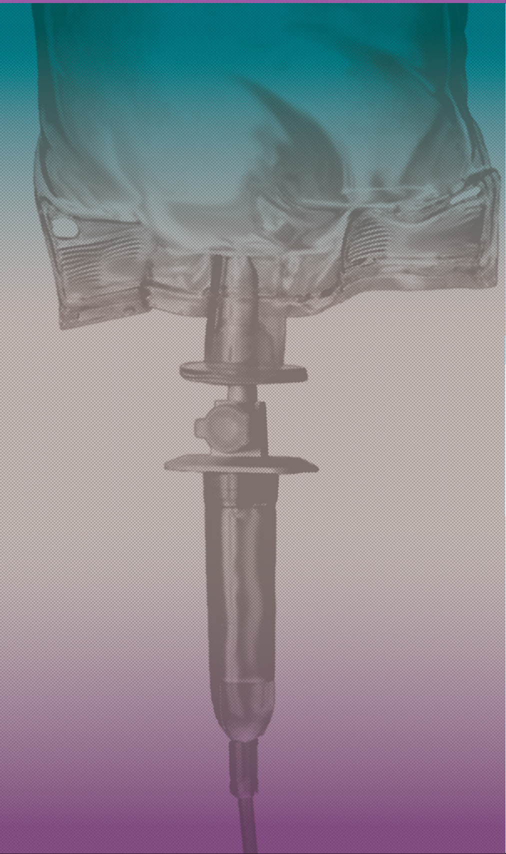
SURGICAL GUIDELINES FOR ADDISON'S DISEASE AND OTHER FORMS OF ADRENAL INSUFFICIENCY

POTENTIALLY LIFE-THREATENING STEROID DEPENDENCY: PATIENTS REQUIRE CONTINUOUS STEROID COVER



STEROID AND SALINE REQUIREMENTS FOR SURGERY AND DENTISTRY

Addison's Self Help Group

Addison's Clinical Advisory Panel

Available online at **www.addisons.org.uk/surgery**

STEROID-DEPENDENT PATIENT REQUIRES CONTINUOUS/PARENTERAL STEROID COVER

See Surgical Guidelines:
www.addisons.org.uk/surgery

TYPE OF PROCEDURE	PRE-OPERATIVE AND OPERATIVE NEEDS *(See Notes 1, 2)*	POST-OPERATIVE NEEDS *(See Notes 6, 8, 9)*
LENGTHY, MAJOR SURGERY WITH LONG RECOVERY TIME ***eg. open heart surgery, major bowel surgery,***	100mg hydrocortisone IM or IV just before anaesthesia. *(See Notes 2, 3, 7)* Immediately followed by: ■ 100mg IM or IV 6 hourly **or** ■ continuous infusion 200mg/24 hours	100mg IM or IV every 6 hours **or** continuous IV infusion 200mg/24 hours *(See Notes 3, 5)* or until able to eat & drink normally *(discharged from ITU)* If well, then double oral dose for 48+ hours. Then taper the return to normal dose
MAJOR SURGERY WITH RAPID RECOVERY ***eg. caesarean section, joint replacement***	100mg hydrocortisone IM or IV just before anaesthesia. *(See Notes 2, 6, 7)* Immediately followed by: ■ 100mg IM or IV 6 hourly **or** ■ continuous infusion 200mg/24 hours	100mg IM or IV **or** continuous infusion 200mg/24 hours for 24 - 48 hours *(See Notes 3, 5)* for 24 - 48 hours *(or until able to eat and drink normally)* If well, then double oral dose for 24 - 48 hours. Then return to normal dose
LABOUR AND VAGINAL BIRTH	100mg hydrocortisone IM or IV at onset of active labour. *(See Note 4-7)* Immediately followed by continous IV infusion 200mg/24 hours or 100mg IM or IV 6 hourly until delivery	Double oral dose for for 24 - 48 hours after delivery. If well, then return to normal dose
MINOR SURGERY ***eg. cataract surgery, hernia repairs, laparoscopy with local anaesthetic***	100mg hydrocortisone IM just before anaesthesia *(See Note 6)*	Double oral dose for 24 hours. Then return to normal dose
MINOR PROCEDURE ***eg. skin mole removal with local anaesthetic***	Take an extra oral dose, 60 minutes ahead of the procedure	An extra dose 60 minutes after the procedure. Then return to normal dose
INVASIVE BOWEL PROCEDURES REQUIRING LAXATIVES ***eg. colonoscopy, barium enema***	Hospital admission overnight with IV fluids and 100mg hydrocortisone IM during preparation. *(See Notes 3, 5, 6)* 100mg hydrocortisone IM at commencement *(See Notes 1, 6)*	Double dose oral medication for 24 hours. Then return to normal dose
OTHER INVASIVE PROCEDURES ***eg. endoscopy, gastroscopy***	100mg hydrocortisone IM just before commencing	Double dose oral medication for 24 hours. Then return to normal dose
MAJOR DENTAL SURGERY ***eg. dental extraction/s with local or general anaesthetic***	100mg hydrocortisone IM just before anaesthesia *(See Notes 6, 7, 8)*	Double dose oral medication for 24 hours. Then return to normal dose
DENTAL SURGERY ***eg. root canal work with local anaesthetic***	Double oral dose *(up to 20mg hydrocortisone)* one hour prior to surgery	Double dose oral medication for 24 hours. Then return to normal dose
MINOR DENTAL PROCEDURE ***eg. replace filling, scale and polish***	Take an extra oral dose, 60 minutes ahead of the procedure	An extra dose where hypoadrenal symptoms occur afterwards. Then return to normal dose

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NOTES

1. Give the steroid-dependent patient first-on-the-list status (alongside insulin-dependent diabetes) to minimise the risks of dehydration.

2. For any nil-by-mouth regimen, arrange an intravenous saline infusion (0.9% saline or equivalent) to prevent dehydration and maintain mineralcorticoid stability, eg. 1000ml every 8 hours if >50kg.

3. Continous IV hydrocortisone infusion is preferable to 6 hourly IM or IV injection as it gives more stable cover. Arrange as 100mg bolus followed by 8.33mg per hour or 200mg per 24 hours.

4. Active labour is cervical dilation >4cm.

5. Arrange continuous IV infusion cover for steroid-dependent patients taking CYP3A4 accelerants, eg. anticonvulsants, rifampicin and antifungal drugs, to minimise the risk of decompensation.

6. IM hydrocortisone is preferable to IV injection for its more sustained duration.

7. Administer bolus hydrocortisone over a minimum of 10 minutes to prevent vascular damage.

8. Hydrocortisone acetate cannot be used due to its slow-release, microcrystalline formulation. Ensure parenteral drug is hydrocortisone sodium phosphate or hydrocortisone sodium succinate, 100mg.

9. Monitor electrolytes and blood pressure post-operatively for all procedures requiring parenteral steroid cover. If the patient becomes hypotensive, drowsy or peripherally shut down, administer 100mg hydrocortisone IV or IM bolus immediately.

10. If any post-operative complications arise, eg. fever, delay the return to normal dose.

11. Ensure back-up supplies of oral and injectable hydrocortisone are available for resuscitation before commencing surgery. Even at full steroid cover, post-operative resuscitation may occasionally be required.

12. A pre-assessment meeting with the anaesthetist is advisable for all steroid-dependent patients, to ensure any comorbidities and potential drug interactions are taken into account.

13. Patients who have been taking 5mg prednisolone or more long-term should be regarded as potentially suppressed and managed with perioperative supplemental steroid cover, on a precautionary basis.

ADDISON'S CLINICAL ADVISORY PANEL (ACAP)

These surgical guidelines were authored by Professor John Wass of the Churchill Hospital, Oxford, Dr Trevor Howlett of Leicester Royal Infirmary, Leicester *(now retired)*, **Professor Wiebke Arlt, University Hospital, Birmingham, Professor Simon Pearce, Royal Victoria Hospital, Newcastle, Professor Will Drake, St Bartholomew's Hospital, London and Dr Frankie Swords, Norfolk and Norwich Hospital, Norwich.**

They have been endorsed by

Professor Stafford Lightman, Royal Bristol Infirmary, Dr Karen Mullan, Royal Victoria Hospital, Belfast, Dr John Newell-Price, Royal Hallamshire Hospital, Sheffield, Professor Marcus Quinkler, Praxis Endocrine Clinic, Berlin Dr Aled Rees, University Hospital of Wales, Cardiff, Dr Mark Sherlock, Tallaght Hospital, Dublin, Professor Jeremy Tomlinson, Oxford Centre for Diabetes and Endocrinology, Churchill Hospital, Oxford and Professor Brian Walker, Edinburgh Royal Infirmary.

ACAP is a group of endocrinologists with an interest in adrenal medicine.

It advises the Addison's Disease Self-Help Group on clinical matters. Further information about ACAP is available on the ADSHG website at ***www.addisons.org.uk***

ACAP has also issued emergency treatment guidance for adrenal crisis, and other patient information leaflets, available at ***www.addisons.org.uk/publications****.*

ADDISON'S Self Help Group

Addison's Clinical Advisory Panel

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The Addison's Disease Self-Help Group works to support people with adrenal failure and to promote better medical understanding of this rare condition.

Registered charity 1106791
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