London COVID-19 dexamethasone and hyperglycaemia: diabetes de-escalation guidance

Version 1

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This document will continue to be reviewed and re-released to reflect new and emerging evidence. Please email england.diabetes-ldncn@nhs.net to request the most recent version.

This London guide is designed to complement and not replace local guidance and professional judgement. It will be updated to align with other national and regional guidance once published.

Dexamethasone in COVID-19 and hyperglycaemia

COVID-19 Diabetes De-escalation

What is Dexamethasone?

Dexamethasone is a corticosteroid with predominant glucocorticoid (and minimal mineralocorticoid) effect. It has a long half-life and is proven to be of benefit in patients requiring oxygen with COVID-19 (ref: RECOVERY)

Corticosteroid	Dose	Half-life
Dexamethasone	6mg	36-72hrs
Prednisolone	40mg	12-36hrs
Hydrocortisone	160mg	6-12hrs

(ref:BNF)

Why does it matter?

Corticosteroid can cause hyperglycaemia, both in those with pre-existing diabetes and in those at risk of diabetes. COVID-19 also induces hyperglycaemia in many patients. COVID-19 infection coupled with corticosteroid treatments are causing an increase in hyperglycaemia and use of insulin. Some patients appear to have high insulin requirements during illness, which may continue beyond the cessation of their corticosteroid treatment.

What happens when Dexamethasone is stopped?

Usually when corticosteroids are stopped blood glucose levels return to their pre-COVID state. For some this may take up to a couple of weeks, is unpredictable and is often rapid, running the risk of sudden severe hypoglycaemia. Therefore stopping additional (steroid-related) diabetes medications on cessation of corticosteroids is recommended in most cases, except for those with pre-existing suboptimal glycaemic control (HbA1c ≥70mmol/mol).

For this reason measurement of HbA1c on admission is recommended to define discharge strategy.

On discharge:

COVID-19 Diabetes De-escalation is designed to help teams define discharge care plan and follow-up. This is a guide and clinical judgement is needed.

On discharge provide patients with:

- *Dexamethasone for COVID-19 letter (Appendix 1)* to ensure they are aware of osmotic symptoms and have direct access to clinical advice if required.
- Local hypoglycaemia guidance or ‘having a hypo’ guidance by Diabetes UK
- Diabetes team contact details

COVID-19 Diabetes De-escalation

NHS London Clinical Networks

Presentation with DKA/HHS or known Type 1 Diabetes?

YES → Will require insulin on discharge and bespoke diabetes care plan

NO

HbA1c available?

YES → Discharging on steroids?

NO → Table 1 – Diabetes discharge care plan

NO → Discuss diabetes care plan with diabetes team before discharge

YES → Continue current dose of steroid-related diabetes treatments

Specialist care follow-up within 48 hrs OR day before steroid-cessation (whichever is sooner)

On cessation of steroids use **Table 1** to determine discharge diabetes care plan

Table 1 – Diabetes discharge care plan

HbA1c on admission	Glucose monitoring on discharge	Continue steroid related diabetes treatment	Immediate follow up	Long term follow up
≤ 48mmol/mol	No	No	• Not required • Give patient covid-19 and dexamethasone leaflet	GP follow-up • Codes patient as 'drug-induced hyperglycaemia' • Repeat HbA1c at 3/6 months • Manage according to local guidelines
49mmol/mol – 69mmol/mol	• Yes • Twice daily	No and return to pre-admission diabetes medication unless contra-indicated	• Specialist care 48hrs and 5-7 days post discharge (focus on hyperglycaemia and osmotic symptoms) • Give patient covid-19 and dexamethasone leaflet	Specialist care follow up • Optimise diabetes and review care plan accordingly • Repeat HbA1c at 3/6 months
≥70mmol/mol	• Yes • 4 times daily	Yes and return to pre-admission diabetes medication unless contra-indicated	• Specialist care 48hrs and 5-7 days post discharge (focus on insulin titration and hypoglycaemia avoidance • Give patient covid-19 and dexamethasone leaflet	Specialist care follow up • Optimise diabetes and review care plan accordingly • Repeat HbA1c at 3/6 months

Appendix 1 - patient letter

Dexamethasone for Covid-19

During your stay, you have been given a corticosteroid called Dexamethasone for Covid-19. These drugs are commonly used and are safe but the potential side effect is high blood glucose levels. Mostly this will not cause any symptoms, however the possible symptoms include:

- **increased urination (weeing)**
- **weight loss (sudden onset)**
- **fungal infection (Thrush)**
- **increased thirst**
- **increased tiredness and lack of energy**

As these symptoms are usually associated with diabetes, if you have any of these symptoms, please contact your diabetes team's helpline so that we can arrange a blood test.

If your blood glucose levels have become high on this drug you will need to book a blood test with your GP 3 months after your discharge from hospital to check that your blood glucose levels have returned to normal.

If you are discharged on insulin or Gliclazide tablets, this could lead to low blood glucose levels (hypoglycaemia) after the Dexamethasone has stopped. You are most at risk of low blood sugar levels from 36 hours after stopping the Dexamethasone.

If your blood glucose levels are lower than 4 mmol/l treat this using the hypoglycaemia or low blood glucose guidance (sometimes called sick day rules) provided by your diabetes team before discharge. If you are unable to treat your low blood glucose levels, contact your diabetes team's helpline.

If your blood glucose levels are higher than 18 mmol/l, contact your local diabetes helpline.

Driving

If you drive a motor vehicle and are now taking insulin or Gliclazide tablets you will need to follow the DVLA guidelines. For further advice please contact the diabetes team helpline.