

BCCH DIABETIC KETOACIDOSIS PROTOCOL TOOLKIT

The *BCCH DKA Protocol Toolkit* contains the following documents:

- the *BCCH DKA Protocol Toolkit* cover document (2024/12/10 version)
- the *BCCH DKA Medical Protocol* (2024/12/10 version) plain PDF format*
- the *BCCH DKA Nursing Protocol* (2024/12/10 version)
- the *BCCH DKA Sample Prescriber Order Sheet* (2024/05/14 version)
- the *BCCH DKA Flowsheet* (2024/05/14 version)
- the *BCCH DKA Recipes for Making Solutions* handout (2024/05/14 version)
- the *BCCH DKA Glucose, Insulin and Fluid Management* handout (2024/12/10 version)

Each of these documents is also available individually for download from our website:

www.bcchildrens.ca/health-professionals/clinical-resources/endocrinology-diabetes/dka-protocol

*The BCCH DKA Medical Protocol can also be downloaded in **fillable PDF format** from our website:

www.bcchildrens.ca/endocrinology-diabetes-site/documents/dkaprtfill.pdf

Following the publication of the *PEKARN DKA FLUID Trial* [*New Engl J Med* 2018;378(24):2275-2287], which demonstrated the safety of more-aggressive fluid replacement regimens than are used in current DKA protocols, the Division of Pediatric Endocrinology & Diabetes has updated the BCCH DKA Protocol. Our 2024 revision aligns closely with the protocol developed by *TREKK (Translating Emergency Knowledge for Kids)*, which is designed for the initial management of pediatric DKA in most Canadian emergency departments, as well as with the DKA algorithm developed by the *Canadian Pediatric Endocrine Group*, which is designed for ongoing inpatient management of DKA. The 2024 revision is also aligned with the *Clinical Practice Consensus Guidelines 2022* of the International Society for Pediatric and Adolescent Diabetes (ISPAD).

The major modifications from the previous version (dated 2019/10/08) of the protocol include:

- DKA is now defined as blood glucose ≥ 11.1 mmol/L, moderate-large ketonuria ($\geq 2+$) or plasma β -hydroxybutyrate ≥ 3.0 mmol/L, and venous pH < 7.3 or plasma bicarbonate < 18 mmol/L (previously 15 mmol/L).
- More-aggressive fluid boluses are suggested at the start of therapy: most patients with DKA should receive a 20-mL/kg bolus of normal saline at the beginning, those with poor cardiovascular function will require additional fluid boluses until stable.

We hope that you will find these materials to be helpful in managing pediatric cases of diabetic ketoacidosis. Please do not hesitate to contact the Endocrinology & Diabetes Unit at BCCH for any help in implementing this protocol at your health-care centre in British Columbia. We also welcome any suggestions to make this material more useful to your practice.