

**CHEO PEDIATRIC ENDOCRINOLOGY REFERRAL FORM**

**Patient Demographics:**

**Referring Physician's contact information (Name, address, fax # if outside of CHEO)**

**Referral Question (specify question for pediatric endocrinologist):**

***\*Attach any additional relevant medical history***

**Mandatory for Triage:**

1. Attach growth curve even if only one height and weight is available
2. If referral is for assessment of growth or puberty, include pubertal (Tanner) staging or description of pubertal findings (breast and pubic hair for girls, testicular size and pubic hair for boys; Note: Testicular length of 2.5cm = pubertal):

3. Please attach all relevant investigations. Inclusion of hormonal testing results is mandatory if the question is about a possible hormone excess or deficiency (see table of REQUIRED lab investigations for common *outpatient* questions below).

***Referrals with missing mandatory information will be rejected and delay time to consultation.***

Additional considerations:

- 1) Suspected or confirmed **new onset Type 1 Diabetes is a medical emergency**. Please page the CHEO endocrinology team on call for urgent referral at 613-737-7600 x 0.
- 2) Suspected or confirmed **new onset Type 2 Diabetes WITH KETONES or A1C greater to or equal to 9% requires urgent referral**. Please page the CHEO endocrinology team on call for urgent referral at 613-737-7600 x 0.
- 3) E-Consultation is available through econsult Ontario ([www.eConsultOntario.ca](http://www.eConsultOntario.ca)). E-consultations are available from CHEO and CHEO affiliated endocrinologists for a) general pediatric endocrinology and b) pediatric type 2 diabetes, hyperlipidemia, PCOS and obesity. Please ensure that e-consultations are sent to the appropriate category as described by a and b above.
- 4) Many referral questions can be answered by a community pediatric endocrinologist. Dr. Zach Zytner is a community partner with CHEO and runs a pediatric endocrinology clinic in Orleans. Contact: Orleans Family Health Clinic, 210 Centrum Blvd #110 Orléans, ON K1E 3V7. You can fax your referral to him at (613) 837-3781.
- 5) Gender Diversity Patients: Please see the CHEO Gender Diversity Website for referral requirements - <https://www.cheo.on.ca/en/clinics-services-programs/gender-diversity-clinic.aspx>. The endocrinology Gender Diversity Clinic only accepts referrals from Adolescent Health. Please send Gender Diversity referrals to CHEO's Adolescent Health Gender Diversity Clinic.
- 6) Type 2 Diabetes Referrals (non-urgent): See table below for glucose / A1C value thresholds *required* for referral.
- 7) Lipid Clinic: See table below for lipid value thresholds *required* for referral.
- 8) Obesity: Please see "Centre for Healthy Active Living (CHAL)" on the CHEO website for program and referral information. <https://www.cheo.on.ca/en/clinics-services-programs/centre-for-healthy-active-living.aspx>. Referrals for obesity should be made directly through CHAL.

**REQUIRED INVESTIGATIONS FOR TRIAGE**

**This table does not replace clinical evaluation of patients prior to referral; in many cases the referring physician will have completed additional investigations for comprehensive evaluation**

Condition	Mandatory Investigations for Triage	Additional considerations
<b>ADRENAL</b>		
Adrenal Suppression	First morning cortisol (8am)  <i>All systemic and inhaled corticosteroids should be held x 24 hours prior to testing unless respiratory status prevents this</i>	Symptomatic or severe (cortisol <100nmol/L) AS requires urgent referral – page endocrinology on call  See CPS Practice point about AS for guidance: <a href="https://www.cps.ca/documents/position/adrenal-suppression">https://www.cps.ca/documents/position/adrenal-suppression</a>
Adrenal insufficiency (AI)	First morning cortisol (8am)  Lytes, glucose, ACTH (if PRIMARY AI is suspected)	Strongly suspected AI or 8am cortisol <100nmol/L requires urgent referral – page endocrinology on call
Cushing’s Syndrome	Low dose dexamethasone suppression test (ideal) <b>OR</b> 24 hour urinary free cortisol	Low dose dexamethasone suppression test: 1) Single dose of Dexamethasone taken between 11pm-12am: <ul style="list-style-type: none"> <li>• For weight &gt;70kg - 1mg</li> <li>• For weight &lt;70kg - weight (kg) x 0.015mg</li> </ul> 2) 8am cortisol drawn the following morning 3) Cortisol <50nmol/L <i>usually</i> rules out Cushing’s Syndrome
<b>GROWTH</b>		
Short stature with NORMAL growth velocity	No mandatory investigations. GROWTH CHART and PUBERTAL STAGING mandatory for all referrals.	
Short stature with ABNORMAL growth velocity	TSH  Chronic illness work-up if poor weight gain	Hypothyroidism is the most common hormonal cause of poor growth. Consider evaluation for central etiology if TSH is normal (including clinical evaluation, FT4, and IGF1) <i>IGF1 is not covered by OHIP (approx. \$80-100)</i>  Random Growth Hormone is NOT useful

		Bone age is useful only IF done at CHEO but not mandatory prior to referral
<b>HYPOGLYCEMIA</b>		
Hypoglycemia	Documented biochemical hypoglycemia <b>OR</b> Fasting labs: Blood glucose Beta-hydroxybutyrate 8am cortisol Lactic Acid Venous blood gas Insulin	<i>The following should be added to the fasting labs IF patient has coverage (not covered by OHIP):</i> Acyl carnitine profile Plasma amino acids
<b>LIPIDS</b>		
Hyperlipidemia/ Lipid	Lipid profile values <i>required</i> for referral to lipid clinic: LDL-C greater than or equal to 4.20 mmol/L OR non-HDL-C greater than or equal to 4.9 mmol/L OR sustained fasting triglycerides 5.0 – 10 mmol/L OR fasting triglycerides >10 mmol/L  Additional required investigations prior to referral: fasting or random blood sugar, A1C, ALT, CK, TSH and urinalysis	<b>Fasting triglycerides &gt;10 mmol/L requires urgent referral (at risk for pancreatitis)</b>
<b>PITUITARY</b>		
Diabetes Insipidus	First morning (before drinking): Serum Na and Osmolality Urine Osmolality Urinalysis  Serum (first morning or random): Glucose, K, Calcium, Urea, Creatinine	Ideally labs are done first thing in the morning after not drinking overnight to reflect a period of water deprivation. However, if the patient normally drinks overnight, a safe approach would be to have the patient refrain from drinking for 2 hours longer than their norm.

Hypopituitarism	TSH, FT4, FT3, 8am cortisol, Na, IGF1*, Prolactin, LH, FSH	*If labs being done outside of CHEO, IGF1 is not covered by OHIP and therefore not mandatory
<b>PUBERTY</b>		
Delayed Puberty	No mandatory investigations  GROWTH CHART and PUBERTAL STAGING mandatory for all referrals.	Consider TSH, LH and FSH
Oligomenorrhea Or Secondary amenorrhea	Date of menarche Hirsutism/ virilization +/- Total testosterone TSH, prolactin, HCG LH, FSH, estradiol  GROWTH CHART mandatory for all referrals.	Additional tests to consider (depending on clinical presentation): DHEAS, androstenedione 17-OHP Obesity related screening (if associated obesity) CBC, ferritin (if heavy menstrual bleeding) Abdominal-pelvic US
Precocious Puberty	No mandatory investigations. GROWTH CHART and PUBERTAL STAGING mandatory for all referrals.	
<b>THYROID</b>		
Hyperthyroidism	TSH, FT4, FT3	Consider repeating thyroid tests if initial TSH is borderline
Hypothyroidism (Primary)	TSH	Consider repeat TSH, FT4 and Anti-TPO antibodies if initial TSH abnormal  TSH <10 is rarely associated with true hypothyroidism and generally only requires a repeat level  Thyroid ultrasound is NOT recommended for thyroid dysfunction or goiter (only for palpable nodules)  <b><i>Hypothyroidism in a neonate or infant is an urgent referral</i></b>

Hypothyroidism (Central)	TSH, FT4, FT3	
Thyroid nodule	Thyroid ultrasound TSH	
<b>TYPE 2 DIABETES</b>		
Type 2 Diabetes Clinic	Glucose / A1C criteria required for referral to T2D clinic: fasting blood sugar $\geq 6.1$ mmol/L OR random blood sugar $\geq 11.1$ mmol/L OR 2 h blood sugar on OGTT $\geq 7.8$ mmol/L OR A1C greater than or equal to 6%.	Additional helpful investigations to consider: <i>Fasting glucose, A1C lipid profile, ALT, TSH and urine ACR</i>  <b>URGENT referral for A1C of <math>\geq 9\%</math> OR hyperglycemia with positive ketones</b>