PEDIATRIC EATING DISORDERS

BC'S PROVINCIAL COMMUNITY HOSPITAL GUIDELINE (A): RECOMMENDED CARE OF THE PATIENT WITH AN EATING DISORDER IN THE EMERGENCY ROOM

Identify patient with suspected or known eating disorder (B) & (C)

Current vital signs: (D)

Item	Record
1. Resting heart rate (Orthostatic HRs if possible) • If HR <50, place on cardiac monitor and do 12 lead ECG • If HR shift >30, place on cardiac monitor and do 12 lead ECG	________ BPM lying ________ BPM standing
2. Orthostatic BP: Shift in BP from lying to standing • If BP drop >20mmHg, rehydration required	________ mmHg
3. Temperature • If temperature <36 degrees, needs re-warming	________ degrees

Check Growth Parameters (Anthropometry): (E)

Item	Record
1. Premorbid weight (if h/o wt loss)	________ kg
2. Current body weight (in gown, shoes off)	________ kg
3. Calculate weight loss 1-2	________ kg
4. Plot body weight(s) on growth curve (page 4)	________ centile
5. Current height (shoes off)	________ cm
6. Plot height on growth curve (page 4)	________ centile
7. Calculate BMI: with online BMI calculator http://nhlbisupport.com/cmi • A BMI phone application or manually calculate: **weight (kg)/height (m^2)** • Plot BMI centile (page 5)	BMI ________ BMI centile ________

Investigations:

Item		
1. Electrolytes – Na, K, Cl, HC03, Urea, Creat, iCa, Phos, Mg, Aspartate transaminase (AST), Alanine transaminase (ALT), Alkaline phosphatase (ALP), UA, glucose		
2. CBC and ESR		
3. For purging – Amylase (specify to lab indication is not for pancreatitis, thus not lipase)		
4. 12 lead ECG: Resting HR & calculate QTc = QT/√ RR	HR ________	QTc ________
5. Consider BHcg, urine drug screen/toxicology panel		
6. If history of haematemesis, consider adding coagulation profile		

RATIONALE AND NOTES

A. This guideline is designed as an algorithm for treating the majority of children & youth presenting to the ER with a variety of complaints which fit with an underlying eating disorder. It cannot replace careful clinical observation & judgment in treating these very serious conditions. If you have questions related to the management of patients with eating disorders, please feel free to contact your on call Pediatrician, your local secondary care eating disorder program physician, the BC Children's Hospital Eating Disorders Intake Coordinator at 604-875-2106 or an Adolescent Medicine Physician On Call at BC Children's Hospital through the switch-board at 604-875-2345 during regular daytime hours

B. Red flags: Dramatic net weight loss (wt can be normal), underweight (calculate as % of pre-existing wt), food / fluid refusal, dizziness, syncope, chest pain or SOB, constipation, menstrual abnormalities including primary or secondary amenorrhea, history of bingeing or purging, parental concern about possible eating disorder

C. Special Historical Points to Query: timing of wt loss, recent /typical food intake, fluid intake, wt loss meds (PO/PR), bingeing, purging, menses, mental health issues (depression / anxiety common), self harm, suicidality. Beware of water loading /intoxication & over-exercising related injuries

D. Vitals done at triage should be repeated & followed in the ER once patient has a bed. If HR <50 at triage, patient should be immediately placed in a bed & on a cardiac monitor. ER focus is on screening for suicide risk, cardiac risk, substance abuse risk, establishing medical status (nutritional, cardiac, hydration, multi-system effects), stabilizing & connecting with appropriate resources for definitive diagnosis & treatment

E. Special Physical Exam Points: vitals & growth parameters, hydration status, muscular weakness, mental status (slowing / confusion), skin ulceration (check back/ spine), bruising, muscle wasting, lanugo, self harm scars

Management in Emergency Department

1. **Contact Pediatrician On Call at your facility or closest facility with Inpatient Pediatrics**

2. **Bedrest at all times:** (Assistance to washroom or commode if very unwell)

3. **Establish extent of dehydration:** look at vitals, capillary refill, weight change, and skin turgor (plus lytes & Hct)

4. **Fluid resuscitation:** using intravenous NSaline bolus at 10ml/kg over 1-2 hours if >3-5% (mildly) dehydrated

5. **Continue monitoring:** HR & BP closely while rehydrating & adjust intravenous rate as indicated to maintenance. Watch for induced tachycardia with stressed heart and a fluid bolus

6. **Correct any electrolyte imbalances:** e.g.
   - Low K+ (<3.5)» add 20-40mmol KCl/litre of NSaline, recheck in 4hrs
   - Low or high Na >> N Saline rehydration should suffice & recheck in 4 hrs (<130 or >150 check with Pediatrician)
   - Low Gluc » oral or NG correction with 200ml oral rehydration solution or juice and recheck in 30mins for rebound hypoglycemia. Intravenous glucose should only be used if seizing or unconscious
   - Low Phos (<.8) >> oral phosphate 500 mg po bid. If Phosphate <0.5, start intraveneous phosphate at 0.33-0.5mmol/kg over 6 hours, checking levels 1hour post infusion and 6 hours after that until stable and able to tolerate oral phosphate
   - Low Mg(<.7) » start oral magnesium gluconate 500 mg bid or if <0.5, use intravenous magnesium sulfate at 25-50mg/kg/dose q6h x3 doses, max rate 125mg/kg/hr magnesium gluconate of MgSO4, max single dose 2g

7. **Oral rehydration:** ORS or juice 250ml q4hourly while in ER if no intravenous is placed

8. **Nutritional resuscitation:** Offer meal or nutritional supplement (e.g. 1 can of Ensure or Boost) with supervision by family with staff support while in ER

9. Check laboratory parameters regularly:
   - Glucose should be checked 30mins post food (if eating/drinking)
   - Lytes especially Phos, K and Mg, should be checked 4hrs after starting intravenous fluids then qid to evaluate appropriateness of fluids used
   - ECG monitoring (with rehydration and electrolyte correction)

10. **Consults:**

If any evidence of suicidality, significant self harm, increasing distress from psychiatric comorbidities requiring immediate support, or refusal of medical treatment requiring certification under mental health act, contact hospital's On Call Psychiatry service for safety assessment & support.

Contact On Call Pediatrician at your facility or nearest admitting facility to request consult and ongoing care/follow-up plans. Note:

- Same day consult if HR 45-50
- Request admission if
  - HR <45
  - Rhythm disturbance
  - Prolonged QTc >0.45
  - Hypoglycemia on presentation
  - Presented with hypothermia (T <36 degrees Celsius)
  - Any other electrolyte derangement
  - Requiring intravenous resuscitation
  - Presented with uncompensated volume depletion: BP < 80/50, postural systolic drop >20 mm Hg, pulse differential of 30 or greater

The ERP or Pediatrician on call may consider consultation with their local eating disorders program or the BCCH Eating Disorders Program as needed.

11. **Disposition:** Confirm plans post ER visit. See Disposition bottom of next page (Page 3) "Prescriber's Orders"

PRESCRIBER'S ORDERS

FOR PEDIATRIC EATING DISORDERS IN THE COMMUNITY ER

Date: ____/____/________ (DD MM YYYY) **Time:** _____:_____ (HH MM) **Height:** _________ cm **Weight:** _________ kg **Allergies:** ____________________________

On admission STAT Vitals, Growth Parameters (Anthropometry) & Investigations
☐ **Vital signs** (orthostatic HR & BP if possible) & temp on admission and q 4 hourly
☐ **Weigh & measure height** of patient (2 gowns – forward & backward for modesty & undergarments)
☐ If **HR <40 at triage**, immediate placement in a bed & attach cardiac monitor & place saline lock with bloodwork draw (see below)
☐ If **HR <50**, electively attach cardiac monitor
☐ If **temperature <36 degrees**, rewarming procedures as per institution
☐ **Capillary blood glucose** by fingerpoke initially, and 30 min post any meals offered in ER
☐ **Critical labs:** CBC, Na, K, Cl, HCO3, glucose, iCa, P, Mg, Amylase (not lipase), BUN,Cr, ALP (Alkaline phosphatase), urinalysis, 12 lead ECG
☐ **Other labs:** ____
☐ Attach **cardiac monitor** if ECG abnormalities of concern, irrespective of bradycardia
☐ Strictly monitor & record **input and output**
☐ **Activity level:** Bed rest. Commode if very unwell or assistance to washroom in case of collapse
☐ If HR <40, obvious severe dehydration, hypothermia, place intravenous saline lock while awaiting fluid orders
Fluid Resuscitation
☐ Bolus 10 mL/kg of Normal Saline IV, over 60 or 120 minutes if orthostatic or demonstrating clinical signs of shock
Deficit and Maintenance Oral Rehydration
☐ ORS or juice 250ml q4hourly while in ER if no intravenous is placed
Deficit and Maintenance Intravenous Rehydration – Please discuss with Pediatrician before selecting option
☐ Intravenous Normal saline __________ cc/hr
Nutrition
☐ **Boost**, **Ensure** equivalent __________ cc every __________ hours (if severe caloric restriction, try to give some calories in ER, aiming for 800-1200 kcal/24hrs)
☐ Order **food tray** & have family attempt to supervise meal with RN staff backup support, aiming for minimum 800-1200 kcal /24 hrs)
Electrolyte Stablization
☐ Add KCl to 0.9 % NaCl (normal saline) _______ 20 mEq/L _______40 mEq/L
☐ Na PO4 500 mg (16 mmol phosphate) orally _______ times daily (BID if P ≥ 0.8 mmol/L or TID <0.8 mmol/L)
☐ Na PO4 intravenous 0.33 mmol/kg over 6 hrs if P <0.5
☐ NaP04 intravenous 0.5 mmol/kg over 6 hrs if P <0.3
☐ Repeat phosphate level 1 hr post infusion
☐ Repeat phosphate level q6h if low P on initial lab results
☐ Potassium chloride 600 mg (8 mEq potassium) orally _______ times / day (2-4 x per day to maintain potassium levels WNL)
☐ Magnesium oxide 420 mg (252 mg elemental magnesium) orally _______ times / day (3-4 x / day)
☐ Magnesium sulfate _______ mg (25-50 mg/kg/dose, maximum 2 grams intravenous q6h x _______ doses (1-3 doses)
☐ Calcium carbonate 500 mg (200 mg elemental Ca) orally _______ times daily (2-4 times / day)
Disposition
☐ If decision after discussion with Pediatrician On Call is for discharge home, clear follow-up plans must include regular medical visits, consultation with Pediatrician arranged ASAP, information package for parents to facilitate connection with specialized supports
☐ Review community information package with parents (to facilitate connection with specialized supports, including: secondary eating disorders care program information, local dietitians and therapists
☐ Complete/fax referral to secondary and/or tertiary care eating disorders program (if deemed appropriate by ER Physician & Pediatrician)
☐ Include contact information of ER Physician & Pediatrician for future correspondence
☐ Give family the websites: www.keltyeatingdisorders.ca & www.keltymentalhealth.ca/blog/tags/71 & www.youtube.com/user/KeltyMentalHealth & www.tinyurl.com/mealsupport-video (meal support video) for helpful resources for families

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BOYS & GIRLS STATURE-FOR-AGE AND WEIGHT-FOR-AGE PERCENTILES CHARTS

2 to 20 years: Boys
Stature-for-age and Weight-for-age percentiles

NAME ____________

RECORD # ____________

Mother's Stature ________ Father's Stature ________

Date	Age	Weight	Stature	BMI*

***To Calculate BMI**: Weight (kg) ÷ Stature (cm) ÷ Stature (cm) x 10,000
or Weight (lb) ÷ Stature (in) ÷ Stature (in) x 703

AGE (YEARS)

STATURE

WEIGHT

Published May 30, 2000 (modified 11/21/00).
SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).
http://www.cdc.gov/growthcharts

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2 to 20 years: Girls
Stature-for-age and Weight-for-age percentiles

NAME ____________

RECORD # ____________

Mother's Stature ________ Father's Stature ________

Date	Age	Weight	Stature	BMI*

***To Calculate BMI**: Weight (kg) ÷ Stature (cm) ÷ Stature (cm) x 10,000
or Weight (lb) ÷ Stature (in) ÷ Stature (in) x 703

AGE (YEARS)

STATURE

WEIGHT

Published May 30, 2000 (modified 11/21/00).
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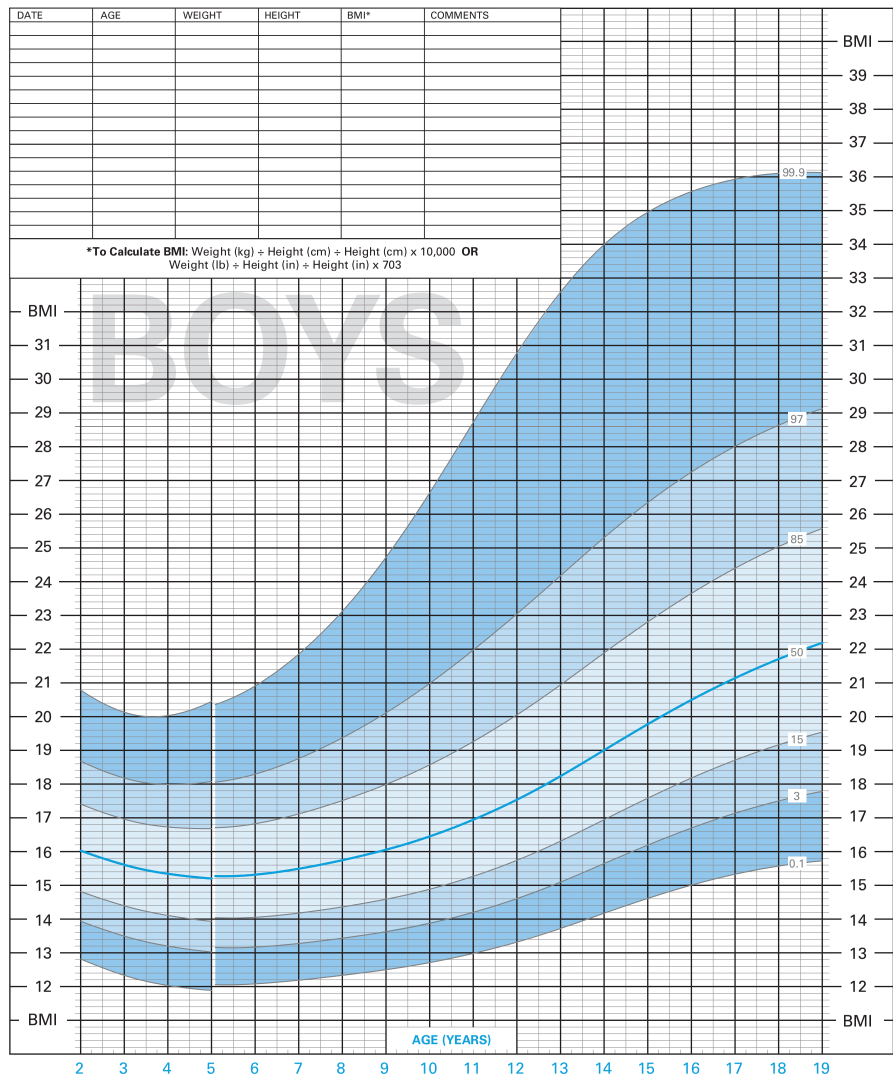
BOYS & GIRLS BOYS BODY MASS INDEX-FOR-AGE PERCENTILES CHARTS

WHO GROWTH CHARTS FOR CANADA — BOYS

2 TO 19 YEARS: BOYS
Body mass index-for-age percentiles

NAME: ______________
DOB: ____________ RECORD # ________



SOURCE: Based on the World Health Organization (WHO) Child Growth Standards (2006) and WHO Reference (2007) adapted for Canada by Dietitians of Canada, Canadian Paediatric Society, the College of Family Physicians of Canada and Community Health Nurses of Canada.

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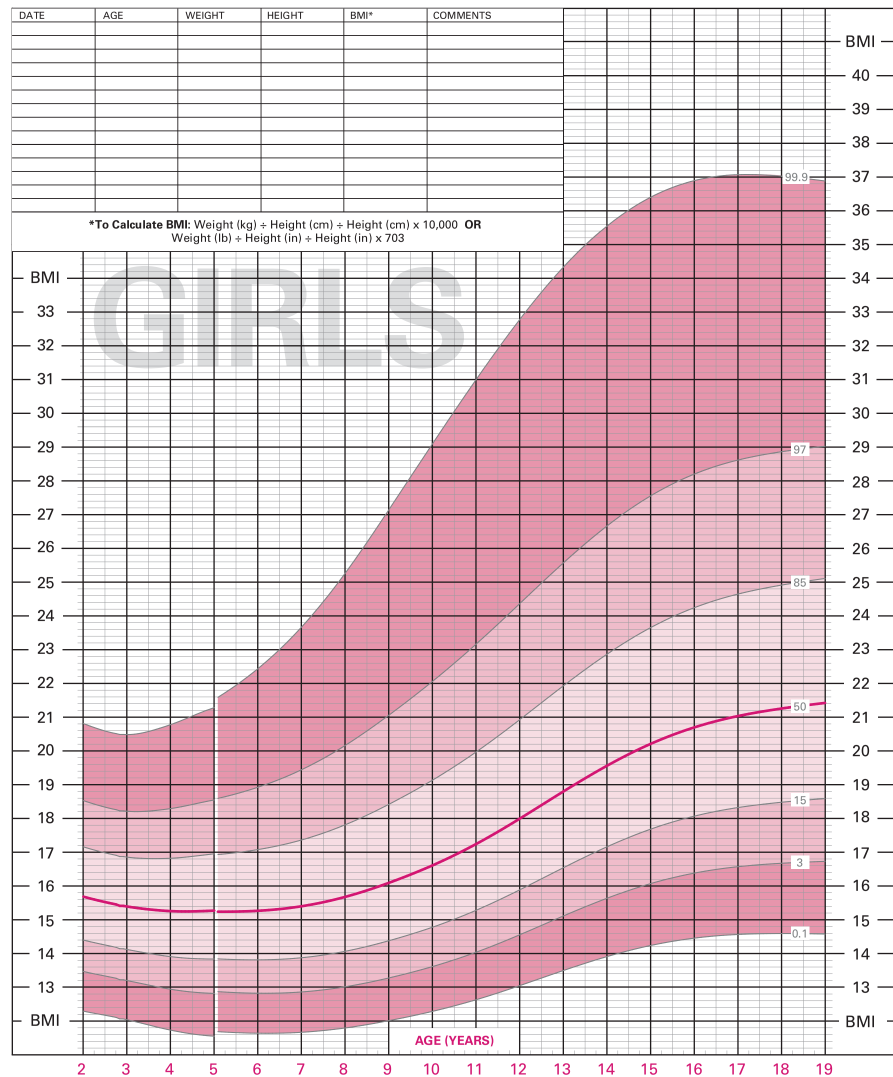
WHO GROWTH CHARTS FOR CANADA — GIRLS

2 TO 19 YEARS: GIRLS
Body mass index-for-age percentiles

NAME: ______________
DOB: ____________ RECORD # ________



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