



VA: VGH / UBCH / GFS  
VC: BP / Purdy / GPC

**ORDERS**

ADDRESSOGRAPH

**COMPLETE OR REVIEW ALLERGY STATUS PRIOR TO WRITING ORDERS**

**MITOCHONDRIAL STROKE ORDERS**

(items with check boxes must be selected to be ordered)

(Page 1 of 1)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

**ADMISSION INSTRUCTIONS:**

Admit under Dr: \_\_\_\_\_

Diagnosis:  Mitochondrial Myopathy

Mitochondrial Encephalomyopathy with Lactic Acidosis and Stroke-like Episodes (MELAS)

Patients should still be assessed as r-TPA (alteplase) candidates if they meet eligibility criteria

If the diagnosis of stroke is not clear, then it is safe to initiate IV arginine while other diagnoses are excluded (eg. seizures) as the arginine therapy is non-toxic and can be discontinued if an alternate diagnosis is found

Time Processed  
RN/LPN Initials  
Comments

**Body Surface Area (BSA) Calculation:**

Height: _____ cm	Actual Weight: _____ kg
$BSA(m^2) = \sqrt{\frac{Height(cm) \times Weight(kg)}{3600}}$	Round all BSA calculations to 1 decimal place BSA = _____ m <sup>2</sup>

**LABORATORY/ DIAGNOSTICS:**

STAT on admission: ECG, CBC, glucose, Na, K, HCO<sub>3</sub>, Cl, lactate, NH<sub>3</sub>

1 hour after each arginine IV dose: Na, K, Cl, HCO<sub>3</sub>, glucose

If HCO<sub>3</sub> level low: do arterial blood gas to check pH

24 hours and 48 hours after last dose of arginine IV given: Plasma amino acids – send STAT to BC Children's Hospital, Biochemical Genetics Lab (604-875-2307)

**INTRAVENOUS:**

Hydration with normal saline or other IV fluid appropriate to correct electrolyte disturbance (avoid Ringer's lactate due to the increased potential for lactic acidosis)

**MEDICATIONS:**

The following to be started within 6 hours\* of the onset of acute stroke:

arginine (3.3 g/m<sup>2</sup> rounded to the nearest 0.5 g) \_\_\_\_\_ g in D5W 100 mL IV Q8H x 3 doses infused over 30 minutes using an infusion pump

\* may be given outside this time frame, but most effective if given within 6 hours of onset of stroke symptoms

After IV arginine has been given, start the following supplements:

(Patient to use own supplies. Send to pharmacy to identify. Pharmacy may obtain additional supplies from BCCCH Special Products Department if needed)

arginine 1 g PO BID

citrulline \_\_\_\_\_

taurine \_\_\_\_\_

**PRECAUTIONS**

If patient requires general anaesthesia, apply principles of emergency room management. Patients may have prolonged response to doses of neuromuscular blocking agents (avoid proPOFol).

Because of the negative effects on the electron transport system (e.g. inhibition of mitochondrial protein synthesis), the following drugs should be avoided: barbiturates (e.g. phenobarbital), valproic acid, chloramphenicol, tetracycline, aminoglycosides

For assistance call: 604-875-4111 and ask for the neurologist on call

\_\_\_\_\_  
Prescriber's Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
College ID