



First Nations Health Authority
Health through wellness

Babies and Young Children with CPT1 Variant



- On Vancouver Island and coastal regions of BC many First Nations babies, children (and adults) have something called CPT1 variant.
- Children with this common CPT1 variant are healthy. However, rarely, babies and young children with CPT1 variant can get low blood sugar when they are sick. Most babies and children with CPT1 variant will never have low blood sugar.
- This information sheet is about CPT1 variant and how to protect babies and young children from the risks of low blood sugar.

Everyone has CPT1. It helps our bodies use fat to make energy. People with CPT1 variant have a gene that changed thousands of years ago.

Traditional foods from cold coastal waters such as whale, fish, seal and shellfish are rich in fats. There is evidence that CPT1 variant helped First Nations people use these fats efficiently.

People with CPT1 variant had a survival advantage. They passed this variant to the next generations in their DNA. Many First Nations people from coastal BC communities, Inuit/Inuk from Arctic Canada, and Inupiaq and Yu'pik people from Alaska and Greenland have this variant.

If you, your children, or family members have CPT1 variant this is something that was passed down from the Ancestors who adapted to the food available on their territories.

CPT1 variant is also called:

- Arctic variant
- CPT1a variant
- CPT1A p.P479L variant
- Carnitine palmitoyl transferase type 1 (CPT1) variant

CPT1 variant is not:

- CPT1 deficiency
- This information sheet is not about CPT1 deficiency which is a rare genetic disorder.

- CPT1 variant is not a disease and will not change into a disease later in life.
- Babies and young children with CPT1 variant make their energy from breastmilk/chestmilk/formula and regular foods and snacks, just like other babies and children.
- When they are sick and not eating and drinking very much, babies and young children with CPT1 variant can run out of energy faster than other children.
- When babies and young children run out of energy, this can cause low blood sugar.

Be prepared

- **Babies and young children with low blood sugar need urgent medical care.** This happens rarely, but it's good to know the signs. Read "*Caring For Your Sick Baby Or Young Child*".

For more information on: *Caring For Your Sick Baby Or Young Child*, please scan this QR Code:



- Ask your nurse or doctor help you plan for when your baby or young child is sick. Your nurse or doctor can help you know which foods and drinks are good for your baby or young child when they are sick.
- If you call a first responder or go to hospital, tell them your baby or child has CPT1 variant and show them a copy of this info sheet. Ask them to check your child's blood sugar.

When a baby or young child is sick whether the baby/child has CPT1 variant or not it is important that they eat and drink regularly

Fasting

If your baby or young child needs to fast (not eat for hours) for surgery, dental work, or blood tests, tell your doctor, dentist, or nurse that your child has CPT1 variant. Generally, they can have clear fluids up to 1 hour before surgery (3 hours for breast/chest milk) and glucose (a form of sugar) during surgery, if needed. Check with the doctor or dentist or nurse when your child would need to stop drinking fluids.

Testing

Sometimes, children are tested for CPT1 variant. Your doctor, nurse or midwife can tell you more about this.