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research**

**NHS Highly Specialised
Services for Rare
Mitochondrial Disorders**

At a glance guidelines:

Varicella (chicken pox) vaccination in Children with Mitochondrial Disease

For full guideline visit:

<http://www.mitochondrialdisease.nhs.uk/professional-area/care-guidelines>

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Mitochondrial diseases are a diverse group of conditions presenting in many different ways and at varying ages. The genetics, clinical features, progression and prognosis are equally variable. We recommend referral to a specialist mitochondrial centre in all cases www.mitochondrialdisease.nhs.uk

Routine childhood immunisations are advised in all children with mitochondrial disease, unless they have had a significant adverse reaction to a previous vaccination. In those who have proven immunodeficiency (weakened immune systems), live vaccines should be avoided. Consultation with your mitochondrial specialist and local paediatrician is advised.

Most children will catch chicken pox at some point during childhood, although adults can also catch it if they didn't have chicken pox as a child. The rash associated with chicken pox usually starts between 1 and 3 weeks after becoming infected. Chicken pox is contagious until all the spots have scabbed over, usually 5-6 days after they first appeared. Children should not attend school, clubs or childcare during this time, and should avoid contact with pregnant women, newborn babies and those with a weakened immune system.

The chicken pox (varicella zoster) vaccine is not part of the UK routine childhood immunisation schedule but may be offered to vulnerable people who are in close contact with those with chicken pox. There are two chicken pox vaccines currently available: VARIVAX and VARILRIX. Both are live vaccines and contain a small amount of weakened varicella-zoster virus. The vaccine is given in 2 separate injections 4-8 weeks apart. 90% of children vaccinated with a single dose will develop immunity against chicken pox; the vaccine is not as effective in teenagers or adults.

Specific measures may be required if your child has the chicken pox vaccine. We recommend the following:

1. Planning and preparation

- a. Ensure your GP and practice nurse are aware that your child has a mitochondrial disease
- b. Ensure that there are no contraindications to your child being immunised including signs of intercurrent illness such as fever, vomiting, diarrhoea or other signs of infection

2. Maintaining hydration

- a. Ensure your child is adequately hydrated
- b. If they have a fever after the vaccination (this may occur) they will need more fluids than usual
- c. Offer drinks (or give fluids via gastrostomy) regularly to maintain hydration

- d. If fluids are not tolerated seek medical attention; intravenous fluids may be required.
- 3. **Maintaining blood sugar**
 - a. Maintain your child's normal diet following vaccination
 - b. If your child is not interested in meals, offer small frequent snacks
 - c. If your child is unable to tolerate their usual diet, consider using electrolade / dioralyte for up to 24hrs
 - d. If your child is still unable to tolerate food after 24hrs, or is not tolerating electrolade / dioralyte, seek medical attention
- 4. **Continue all regular medication**
 - a. Continue all regular medication as usual
 - b. If your child is unable to tolerate medication due to vomiting or other reasons, seek medical attention
- 5. **Controlling temperatures**
 - a. Consider using either paracetamol (unless contraindicated by liver disease) in children with fever who appear distressed
 - b. Tepid sponging is not recommended
 - c. Children with fever should not be under-dressed or over-wrapped
 - d. Ibuprofen is not advised in children with chicken pox
- 6. **Should complications develop**
 - a. Seek medical attention if your child:
 - i. has an uncontrollable fever
 - ii. has a fit (seizure) but would not usually / usually has well controlled epilepsy
 - iii. is unable to eat/drink
 - iv. is vomiting or has persistent diarrhoea
 - v. develops a non-blanching rash
 - vi. is behaving oddly compared to usual
 - vii. is unduly lethargic or unrousable
 - viii. is becoming more unwell or you have other concerns

Sources of further information

www.nhs.uk

www.mitochondrialdisease.nhs.uk

Or contact your GP / Paediatrician for further advice

References

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