

## **Newborn Jaundice**

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Newborn Jaundice is a common condition in newborn babies (up to one month old) that causes yellowing of the skin and whites of the eyes. It is the result of excessive pigment (bilirubin) in the blood.

### **Metabolism of red blood cells and production and excretion of bilirubin**

1. Bilirubin and other by-products are produced when red blood cells are broken down in the body.
2. Bilirubin is converted into a harmless substance in the liver.
3. The harmless substance is then excreted through faeces and urine.

### **Causes for excessive bilirubin**

Bilirubin is released during the normal breakdown of red blood cells in the body. The newborn's liver may not be able to cope with the amount of bilirubin produced. Therefore, bilirubin is accumulated in the baby's body, resulting in a condition known as **"physiological jaundice"**.

Most cases of newborn jaundice belong to this category where the jaundice disappears without treatment within 1 to 2 weeks, so parents should not be overly concerned. However, if the blood bilirubin rises rapidly to an unusually high level, it may enter the brain cells and cause damage, the condition is known as **"kernicterus"**. In this scenario, hearing loss, mental retardation, spasticity, or even death may occur. Therefore, parents are advised to bring their newborn back to his/her Paediatrician, Union Hospital Specialist Out-patient Clinic, or a nearby Maternal and Child Health Centre for assessment soon after discharge from the hospital. If necessary, follow-up treatment(s) should be continued until the jaundice has subsided.

### **Parents Please Pay Attention**

If Blood bilirubin rises rapidly, damage to brain cells may occur, the possible consequence is hearing loss, mental retardation, or spasticity. Please consult your doctor immediately if the baby has any of the following symptoms:

1. Rapidly increasing jaundice (yellowing of the skin and whites of the eyes).
2. Disinterest in feeding.
3. Signs of dehydration, such as a noticeable decrease in urine production.
4. A noticeable decrease in activity level.

### **Jaundice caused by G6PD deficiency**

Glucose-6-phosphate dehydrogenase (G6PD) is an important enzyme for stabilizing red blood cells. G6PD deficiency is inherited. In Hong Kong, around 4.5% of baby boys and 0.5% of baby girls are G6PD deficient. When exposed to broad beans, certain Chinese herbal medicines or drugs, mothballs (Naphthalene) and Naphthalene-containing products, or infected by certain viruses, their red blood cells may be damaged to a large degree and forced to produce excessive bilirubin, thus overloading the liver and resulting in severe jaundice. Babies born in Hong Kong have to undergo umbilical cord blood tests. Parents will be informed if the baby is found to have G6PD deficiency.

Children with G6PD-deficiency normally require no special care, however, lifelong avoidance of certain Chinese herbal medicines and drugs is essential.

**The following Chinese herbal medicines should be avoided:**

Rhizoma Coptidis(黃連), Calculus Bovis(牛黃), Flos Chimonanthi Praecox(臘梅花), Flos Lonicerae(金銀花), and Margarita(珍珠末).

**The following drugs should be avoided:**

Nitrofurantoin, Nalidixic Acid, Sulphonamides, Primaquine, and Phenazopyridine.

The above drugs should be avoided if breastfeeding. **When a G6PD-deficient child is ill or admitted to a hospital, please inform the medical staff of such a deficiency** for proper prescription. In addition, G6PD-deficient children and their caregivers should avoid close contact with mothballs (Naphthalene) and Naphthalene-containing products. And eating broad beans should be avoided.

**Frequently asked questions by parents**

**Q1. When my baby was discharged from hospital, the doctor said he/she was healthy.**

**Why is my baby jaundiced a few days later?**

In most cases of “**physiological jaundice**”, the bilirubin level reaches its peak 3 to 5 days after birth. A newborn may develop jaundice after discharge if the hospital stay is short (1 to 2 days).

**Q2. Is newborn jaundice caused by excessive personal contact?**

No. Jaundice is not a communicable disease. It has nothing to do with personal contact.

**Q3. Why are daily follow-ups at a Maternal and Child Health Centre necessary?**

**When does a jaundiced baby need phototherapy?**

As the degree of jaundice may fluctuate considerably in the first few days, close monitoring of the condition by a paediatrician or at a Maternal and Child Health Centre is required. If necessary, the baby will be admitted to hospital for treatment such as phototherapy.

**Q4. Can sunbathing help to decrease jaundice?**

Sunbathing is not an effective treatment for jaundice. Besides, it can burn the skin or damage the eyes of newborn babies.

**Q5. Does glucose solution help?**

Glucose solution cannot alleviate jaundice. It may even worsen by decreasing the baby's appetite for milk.

**Q6. Do I have to stop breastfeeding and feed the baby with infant formula in order to alleviate the jaundice?**

Newborn babies, whether breastfed or formula-fed, may develop jaundice. For babies who are breastfed, getting sufficient breast milk will help in alleviating the degree of jaundice and prevent dehydration. Correct feeding techniques and feeding as often as the baby wants are the fundamentals of breastfeeding. Six or more soaked nappies a day will assure you that they are having enough milk / fluid intake. Some breastfed babies may have mild prolonged jaundice, but you can continue breastfeeding if your baby shows satisfactory weight gain (about 125g per week).

**Q7. What should I do if my baby's jaundice persists?**

If your baby's jaundice does not subside after 2 to 3 weeks or the baby's faeces turn an abnormal colour (light gray), he/she may need to see a paediatrician for further examinations in order to rule out any other underlying health problems such as congenital bile duct obstruction. When in doubt, please seek advice at the Out-patient Clinic of Union Hospital.

Produced by Union Hospital

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