



#### How will the vaccines affect my baby?

Needles hurt a bit and most babies cry for a few minutes afterwards. Your doctor or nurse can do some things to make getting needles easier for your baby. They can give your baby the vaccine drops before giving the needles. The sugar used to sweeten these drops is a pain relieving medicine for babies<sup>1</sup>. The doctor or nurse will be as quick and gentle as they can. They will even try to give both needles at once if they can.

There are some things you can do to help, too. Wrapping your baby firmly, cuddling them in an upright position, facing you, or breastfeeding during (or straight after) the needles are given reduce pain for babies<sup>1</sup>. If you'd prefer not to be in the room when your baby gets the needles, you can bring someone with you to do the cuddling. If you can't bring someone else, let your doctor or nurse know. They may be able to arrange someone to help.

Vaccines contain either parts of a germ or germs that have been weakened so they can't make babies sick. They work by showing the baby's immune system what the germs look like before they catch



### 宝宝现在4个月了,建议注射哪些疫苗呢?

What vaccines are recommended now my baby is

# 4 months?

SKAI:分享关于免疫的知识

现在宝宝已经四个月大了,建议再次接种一剂六周大时接种过的疫苗(百白破、乙型流感嗜血杆菌、灭活脊髓灰质炎、乙肝混合疫苗(DTPa-Hib-IPV-HepB)、13价肺炎球菌多糖结合疫苗(13vPCV 和轮状病毒疫苗)。每一剂都能增强宝宝对八种疾病的免疫力(见下页)。其中两种疫苗是注射的,通常是在腿部,另外一种是滴剂,滴入宝宝口中吞服。

#### 疫苗会如何影响宝宝?

打针会有点儿疼,大多数宝宝注射后会哭几分钟。医生或护士可以做一些事情,让宝宝打针更容易些。他们可以在打针前给宝宝滴疫苗滴剂,因为用来使滴剂变甜的糖分对宝宝来说是一种可以缓解疼痛的药物1。医生或护士将尽可能快速轻柔地注射。如果可以的话,他们甚至会尝试两针同时注射。

宝宝打针时你也可以做些事情帮忙。把宝宝包好,直立抱着面向你,或在 打针时或打完后立即给宝宝喂母乳,以减轻宝宝的疼痛1。如果宝宝打针 时你不想在房间里,可以带个人来抱着宝宝。如果不能带别人来,请告诉 医生或护士,他们可能会安排人来帮忙。

疫苗中含有减毒的病菌部分或病菌,因此不能使宝宝生病。疫苗的作用原理是在宝宝感染之前向宝宝的免疫系统显示病菌是什么样子的。接种疫苗后,如果其中一种病菌确实进入宝宝体内,则免疫系统就会早已知道该如何清除这些病菌,这样就不会让宝宝生病了。有些(但不是所有)宝宝在接种疫苗后几天会感觉有点不适是正常的。

疫苗可能会让某些孩子在一两天内感到有点不适。最常见的反应是注射部位发红、疼痛或肿胀、不太想吃东西、轻微发烧(发热)、啼哭或难安抚,有时还会出现呕吐或腹泻。这些症状大多数会持续12到24小时,然后就会好转。有时打了一针或两针的地方会形成一个小硬块(结节),可能需要几周才会消失。尽管这些反应会让人不舒服,但比疫苗接种所能预防宝宝患上的疾病要轻得多。

#### 如果宝宝有其中一种反应, 该怎么办?

如果宝宝感觉发热,给宝宝穿着轻薄(夏天)的衣服会有些帮助。还可以给宝宝多喂几次母乳,或者如果不是母乳喂养,可尝试在一天中更频繁地喂食小份量配方奶。如果宝宝打针部位有一个疼痛的红点,在上面敷块冷布会有些帮助。医学研究发现,拥抱确实会让宝宝感觉更好些。对于不想被放下的宝宝,用婴儿背带可以在抱着宝宝的同时更轻松地做些事情。扑热息痛(Panadol®、Dymadon®)也可以帮助缓解发烧和疼痛。(请务必遵循包装上的说明。)今天可以提醒医生或护士给你一份宣传单,帮助你记住这些事情。如果担心宝宝对疫苗接种的反应,可以向医生或最近的急诊科寻求帮助,或者可以在白天或晚上的任何时间拨打健康直通服务(Health Direct)电话1800 022 222

#### 疫苗有效吗?

疫苗几乎总能预防宝宝患上下述疾病。有时,接种过的宝宝会患上其中某种疾病,但与没有接种疫苗的孩子相比,症状会轻得多,恢复得也更快。







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them. After having a vaccine, if one of those germs does get into the baby's body, the immune system will already know how to clear the germs away so they don't make the baby sick. It is normal for some (but not all) babies to feel a little unwell for a few days after they've had a vaccine.

Vaccines can make some children feel a little unwell for a day or two. The most common reactions are redness, soreness or swelling where the needles went in, not wanting to eat very much, mild fever (temperature), grizzly or unsettled behaviour and sometimes vomiting or diarrhoea. Most of these symptoms last between 12 and 24 hours and then get better. Sometimes a small hard bump (nodule) develops in the spot where one or both of the needles went in, and this can take a few weeks to go away. Although these reactions can be unpleasant, they are a lot less serious than the diseases vaccinations protect babies from.

#### What can I do if my child gets one of these reactions?

If your baby feels hot, it can help to dress them in light (summer) clothes and offer lots of extra breastfeeds or, if your baby isn't breastfed, lots of small formula feeds through the day. If your baby has a sore, red spot where the needle went in, it can help to put a cool cloth on it. Research has found that cuddles really do make babies feel better. Using a baby sling makes it easier to get things done while cuddling a baby who doesn't want to be put down. Paracetamol (Panadol®, Dymadon®) can help ease a fever and relieve soreness. (Follow the instructions on the packet.) You can remind your doctor or nurse to give you a leaflet to help you remember these things today. If you are worried about your baby's reaction to a vaccination, you can get help from your doctor, or the nearest emergency department, or call Health Direct on 1800 022 222 at any time of the day or night.

#### Do vaccines work?

Vaccines almost always prevent babies from getting the diseases described below. Sometimes babies who have been vaccinated catch one of the diseases but they usually get much milder symptoms and recover more quickly than children who haven't had the vaccine.

## What are the diseases these vaccines protect my baby from?

These vaccines protect babies from diphtheria, tetanus, pertussis, Hib, polio, hepatitis B, pneumococcus and rotavirus. You may not have heard of them because they are less common than they were before vaccines were available in Australia but children can still get these diseases, especially if they aren't vaccinated.

#### Are the diseases serious?

**Diphtheria** is a serious disease that can cause a membrane (or skin) to grow over a child's throat and stop them from breathing. Diphtheria is very rare in Australia now, but the vaccine is still used to protect children from catching diphtheria from people who have travelled to places where it is more common<sup>2</sup>.

**Tetanus** (sometimes called lockjaw) affects all the muscles in the body, including the ones used for breathing. The germ that causes it lives in the soil, which means children can get it through a cut, a burn, a bite or even a prick<sup>2</sup>.

**Pertussis** is usually called whooping cough. It spreads very easily from one person to another through the air when someone who has it coughs or sneezes. The germ that causes it irritates the airways causing coughing fits that can be very severe. Small babies can die from whooping cough<sup>2</sup>.

#### 这些疫苗可以预防宝宝患上哪些疾病?

这些疫苗可预防宝宝患上白喉、破伤风、百日咳、乙型流感嗜血杆菌、脊髓灰质炎、乙型肝炎、肺炎球菌和轮状病毒。你可能没有听说过这些疾病,因为它们已经不像澳大利亚还没有这些疫苗时那么常见了,但儿童仍可能会患上这些疾病,特别是如果没有接种疫苗的话。

#### 这些疾病严重吗?

白喉是一种严重的疾病,会导致孩子的咽喉生出粘膜(或皮)并阻碍呼吸。白喉现在在澳大利亚非常罕见,但该疫苗仍在使用,以预防儿童从曾去过白喉更常见的地方的人身上感染白喉<sup>2</sup>。

破伤风(有时称为牙关紧闭症)会影响身上所有肌肉,包括用于呼吸的肌肉。引起破伤风的病菌生活在土壤中,这意味着儿童可能通过割伤、烧伤、咬伤甚至是刺伤而感染<sup>2</sup>。

百日咳通常被称为哮咳。在患病者咳嗽或打喷嚏时,很容易就会经由空气 从一个人传播给另一个人。引起百日咳的病菌会刺激呼吸道引起咳嗽发 作,且可能非常严重。小婴儿可能会因哮咳而死亡<sup>2</sup>。

乙型流感嗜血杆菌可引起多种严重疾病,包括脑部肿胀(脑膜炎)、血液中毒(败血症)、咽喉肿胀和肺部感染(肺炎)。婴儿可能会因乙型流感嗜血杆菌引起的疾病而死亡,而幸存者则往往会有脑损伤。乙型流感嗜血杆菌就像普通感冒一样在人与人之间传播<sup>2</sup>。

脊髓灰质炎可导致四肢肌肉麻痹,还可能会影响呼吸肌和心脏。该病在澳大利亚很罕见,但在附近一些国家更常见。儿童如果将被有该病(但可能还没有生病)的人碰过的手或玩具放进嘴里会感染脊髓灰质炎<sup>2</sup>。

乙型肝炎是一种肝脏感染,通常在刚感染时甚至不会让孩子生病。即使最初没有任何体征,但乙型肝炎却可能导致今后患上严重的肝脏疾病,包括肝癌。乙型肝炎通常会在患者甚至完全不知情的情况下从一个人传播给另一个人<sup>2</sup>。

肺炎球菌是一种可导致大脑周围肿胀(脑膜炎)、肺部感染(肺炎)或其他严重疾病的病菌。此病就像感冒一样在儿童之间互相传染。。

轮状病毒可导致腹泻和呕吐(胃肠炎),往往使孩子病得非常重,以至于不得不住院治疗。儿童如果将被有该病毒的人(但可能还没有生病)碰过的东西放进嘴里会感染该病<sup>2</sup>。

#### 听说疫苗会有严重的副作用。是真的吗?

严重的副作用可能会发生,但非常罕见。在接种疫苗后的几天内,每3000名儿童中约有一名会出现热性惊厥2(抽风或抽搐)。当孩子的体温突然升高(发烧)时可能会发生这种情况。当孩子体温不再上升时,就会停止。当幼儿患上会导致发烧的疾病(如感冒)时会比接种疫苗后更常出现热性惊厥。有这种反应的孩子通常很快就会恢复,且没有任何长期影响<sup>2</sup>。

接种轮状病毒疫苗(滴剂)的每一百万(1,000,000)个儿童中约有59人会患上导致肠道阻塞的严重疾病(称为肠套叠)<sup>2</sup>。患有该病的宝宝会看起来病得非常严重,通常肚子会有间歇性的剧烈疼痛。宝宝可能会呕吐,而且通常会看起来脸色苍白、虚弱或困倦。有这些体征的孩子需要赶快去医院,以便获得帮助让他们好转起来。肠套叠是非常罕见的。

大约百万(1,000,000)分之一的儿童会对其中某种疫苗中的某种成分有严重的过敏反应(称为过敏症)<sup>2</sup>。如果有这种反应,通常会在你和孩子离开诊所前发生。医务人员是接受过相关培训的,会帮助有这种反应的儿童快速恢复。过敏症很可怕,但极为罕见。

持续超过几小时或几天的副作用极为罕见,所占比例不到接种儿童的百万(1,000,000)分之一<sup>2</sup>。如果你担心宝宝,可以向医生或最近的急诊科寻求帮助或拨打健康直通服务 (Health Direct) 电话1800 022 222

#### 在哪里可以获得更多信息?

如果想要获得更多信息,了解儿童疫苗接种或疫苗接种可预防儿童患上哪 些疾病,你可以:

- ·访问SKAI网站: talkaboutimmunisation.org.au
- ·或者在下面空白处写下你的问题,在见医生或护士时询问他们。





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**Hib** causes a variety of serious illnesses, including swelling around the brain (meningitis), blood poisoning (sepsis), swelling in the throat and infection in the lungs (pneumonia). Babies can die from the diseases caused by Hib and those who survive often have brain damage. Hib spreads from person to person just like a common cold<sup>2</sup>.

**Polio** causes muscle paralysis in the limbs and can also affect the breathing muscles and the heart. It is rare in Australia but more common in countries nearby. Children catch polio when they put their hands or toys in their mouths after someone who has the disease (but may not be sick yet) has touched them<sup>2</sup>.

**Hepatitis B** is a liver infection that often doesn't even make children sick when they first get it. Even if there are no signs at first, hepatitis B can cause serious liver diseases, including liver cancer, later in life. It spreads from one person to another, usually without either of them even knowing they have it<sup>2</sup>.

**Pneumococcal** is a germ that can cause swelling around the brain (meningitis), infection in the lungs (pneumonia), or other serious disease. Children can catch it from each other just like they catch colds<sup>2</sup>.

**Rotavirus** causes diarrhoea and vomiting (gastroenteritis) that often makes children so sick they need to be admitted to hospital for treatment. Children catch it when they put something in their mouths that has been touched by someone who has the virus (but might not be sick yet)<sup>2</sup>.

### I've heard vaccines can have serious side effects. Is this true?

Serious side effects can happen but they are very rare. About one child out of every 3000 have febrile convulsions² (fits or seizures) in the days after a vaccination. This can happen when a child's temperature (fever) goes up suddenly. They stop happening when the child's temperature stops going up. Febrile convulsions happen more often when toddlers have an illness (like a cold) that give them a fever, than they do after vaccination. Those who have this reaction usually recover quickly without any long-term effects².

About 59 in one million (1,000,000) children who get the rotavirus vaccine (drops) get a serious condition that causes a blockage of their intestine (called intussusception)². Babies who have this illness look very sick. They usually have strong pain in their tummies that comes and goes. They may vomit and they usually look pale and seem weak or sleepy. Babies who have signs of this illness need to go to hospital quickly so they can get the help they need to get better. Intussusception is very rare.

About one in one million (1,000,000) children have a severe allergic reaction (called anaphylaxis) to one of the ingredients in one of the vaccines<sup>2</sup>. If this happens, it usually happens before you and your baby leave the clinic and the medical staff are trained to help children who have this reaction to recover quickly. Anaphylaxis is frightening but extremely rare.

Side effects that last more than a few hours or a few days are extremely rare and happen for less than one in one million (1,000,000) vaccinated children<sup>2</sup>. If you are worried about your baby, you can get help from your doctor or the nearest emergency department or call Health Direct on 1800 022 222.

#### 下一步是什么?

宝宝六个月大时会建议接种更多疫苗。建议四月龄宝宝接种的疫苗中有两种需要在六月龄时再次接种。再次接种13价肺炎球菌多糖结合疫苗(13PCV)和六价疫苗有助于确保宝宝获得可能的最强大、最持久的保护。婴儿和儿童按时接种疫苗很重要,因为研究发现,在这些年龄接种效果最好。

#### 在给孩子打针之前,你有什么问题需要解答吗?

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#### 参考资料

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- 2.《澳大利亚免疫手册》第10版(2015年6月更新)。澳大利亚政府卫生部: 堪培拉。

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#### Where can I get more information?

If you would like more information about childhood vaccination or the diseases they protect children from you can:

- go to the SKAI website, talkingaboutimmunisation.org.au
- or you can write your questions in the space below and ask your doctor or nurse when you see them.

#### What is next?

More vaccinations are recommended when your baby is six months old. Two of the vaccines recommended for babies who are four months old need to be given again when they are six months old. Repeating the 13PCV and the hexavalent vaccines helps make sure babies get the strongest and most long-lasting protection they can. It is important that babies and children get vaccinated on time because research has found they work best when they are given at these ages.

# What questions would you like answered before getting your child's needles?

☐ I have no questions

#### References

- Taddio A, et al. Reducing pain during vaccine injections: clinical practice guideline. Canadian Medical Association Journal 2015;187:975-982.
- Australian Immunisation Handbook 10th Edition (Updated June 2015). Australian Government Department of Health: Canberra.

This information sheet was written by a group of researchers called the SKAI Collaboration. It was developed by Nina Chad PhD and Julie Leask PhD from the University of Sydney, Margie Danchin PhD from the University of Melbourne, Tom Snelling PhD from the Telethon Kids Institute, and Kristine Macartney MD and Melina Georgousakis PhD from NCIRS. The project is funded by the Australian Government Department of Health.





