

Patient information from BMJ

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DTP vaccine (diphtheria, tetanus, polio)

The DTP vaccine is a single injection designed to protect against three diseases. It boosts the vaccinations that children were given first as babies, and again as preschool children, against diphtheria, tetanus, and polio.

In the UK, the DTP vaccine is usually given to children at the age of 14 years old. But vaccination schedules can vary between countries. So in some countries children may get this vaccine, or a similar one, at a different age.

What is the DTP vaccine?

People are usually given their first vaccinations against **diphtheria, tetanus, and polio** as young babies, as part of what is sometimes called the **6-in-1 vaccine**.

As well as the three diseases mentioned above, the 6-in-1 vaccine covers:

- hepatitis B
- Hib (Haemophilus influenzae type B), and
- pertussis (whooping cough).

Some vaccines give protection for life. But others only protect against infection for a number of years. By the time children become teenagers, they need to have some of their vaccinations boosted.

For this reason, the DTP vaccination is sometimes called the **3-in-1 teenage booster**.

What is diphtheria?

Diphtheria is an infection that can cause breathing problems, heart failure, paralysis, and death.

Because of vaccination programmes it has almost disappeared from developed countries including the UK, the US, and Western Europe. But it is still common in developing countries where vaccination rates are low.

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What is tetanus?

Infection with **tetanus** causes symptoms including muscle pain and breathing problems. You may sometimes hear it called **lockjaw**, because it can make it hard to open your mouth.

You can become infected with tetanus if bacteria get into a wound. Because of vaccination programmes, tetanus is now very rare in developed countries.

What is polio?

Polio is an infection that can cause muscle weakness and paralysis. It used to be common all over the world.

Because of successful vaccination programmes, polio has disappeared from most of the world and is now only found in a few countries in Asia.

Who needs the DTP vaccination?

For the best overall protection from these diseases, people need five doses of vaccination during their life.

You should have had three of these doses as a **baby**, and another as a **pre-school booster** about the age of 3 years old.

The DTP vaccine at age 14 is the final stage of protection for most people. But you might need another booster later if you:

- travel to certain countries
- have certain types of injury, or
- are not sure of your previous vaccination history. If you think you might not have had your five lifetime doses, it won't do you any harm to have another.

Is there anyone who shouldn't have the vaccine?

Most people can have this vaccine. But your child should not have it if they:

- have had a severe allergic reaction to a previous dose of the vaccine, or to any ingredients of the vaccine
- are ill with a fever. If this happens you can arrange for your child to have the vaccine once they have recovered.

Is it safe?

Many people have this vaccine without any problems. But most vaccines can cause mild side effects in some people. The most common side effects of the DTP vaccine are:

- pain, tenderness, or redness where they had the injection (called the injection site)
- slight swelling or a lump at the injection site
- dizziness

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- nausea and vomiting fever, and
- headache.

Less common side effects can include:

- swollen glands
- muscle pain
- joint pain
- diarrhoea
- rash, and
- fainting.

Rarely, children can have an allergic reaction to the vaccine. But the medical staff giving the vaccine are trained in how to treat this.

If your child has a fever after the vaccine, you can give them **paracetamol** or **ibuprofen**. But be careful to give the correct dose for their age. But you should **never give aspirin to children under 16**.

If their symptoms don't get better, talk to your doctor.

How is the vaccination given?

Like many vaccines, the DTP booster is given as an injection into the upper arm.

How well does the vaccine work?

People who have had all five doses of the vaccine, including the booster at age 14, have a very high level of protection.

Because of these vaccines, diphtheria, tetanus, and polio are now almost unheard of in developed countries, and polio has disappeared from all but a few countries.

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