

## Should children have MMR?

Measles, mumps and rubella are easily spread infections that can be dangerous. To protect against them, children can be given the MMR vaccine. But recently there's been concern about whether this might cause autism in some children.

This issue of *Treatment Notes* is for anyone worried about their child having MMR. Because it's published by Consumers' Association, it can take an independent look at the pros and cons of MMR. And it discusses whether this vaccine is the best option for children.

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### Measles, mumps and rubella

Measles, mumps and rubella are potentially serious infections. They're caused by viruses and are easily passed on by close contact, coughing and sneezing.

#### Measles

Typical signs of measles include a high temperature and a rash. Often it can also lead to problems such as diarrhoea, ear infections, chest infections or fits. Less often, children can get brain inflammation or even die. Certain children are especially vulnerable to the serious problems caused by measles. These include children under 1 year, or who have a weak immune system or a long-term illness, or who are poorly nourished.

#### Mumps

Mumps causes painful swollen glands in the face and neck. It can also cause inflamed testicles in boys and inflamed ovaries in girls. Other possible problems include meningitis, brain inflammation or deafness.

#### Rubella

Rubella (German measles) usually causes a rash and swollen glands. But the main threat is when a woman catches rubella early in pregnancy. As a result, her baby might be stillborn, or born with problems such as damage to their brain, eyes, ears or heart. The risk is highest if women catch rubella within the first 8–10 weeks of pregnancy, in which case up to 9 in 10 babies are harmed.

#### Stopping the infections

There are no medicines that cure measles, mumps or rubella. So vaccinating children against them is sensible.



Photograph: Science Photo Library

The misery of measles

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## About MMR

The MMR vaccine is called that because it protects against **m**easles, **m**umps and **r**ubella. The box on the right explains how vaccines, such as MMR, work. Vaccination can have dramatic benefits. For example, in England and Wales, when no measles vaccine was available, hundreds of thousands of people got infected every year. But with widespread use of MMR, this fell to just a few hundred definite cases. And in Finland, for instance, measles, mumps and rubella have been virtually wiped out by widespread use of MMR.

### How and when is MMR given?

To work best, MMR must be given twice. After two doses, virtually all children are protected against measles, mumps and rubella. Whereas, if only one dose is given, up to 1 child in 10 isn't fully protected.

Children under 1 year aren't routinely given MMR because, in general, it doesn't work well in them. So, to protect them as soon as possible, they should have the first dose of MMR soon after their first birthday. The second dose is usually given at around 3–5 years old, with other preschool boosters.

If your child has any infection with a high temperature, they shouldn't have MMR until they're better. Also, the jab may need to be delayed for at least 3 weeks if they've had any other vaccinations recently. If you know your child is allergic to anything, discuss this with your doctor or nurse before the vaccination.

### Who shouldn't have MMR?

There are some children who shouldn't have MMR. These include certain children with cancer or a weak immune system, or who had a severe reaction to their first MMR jab.

## How vaccines work

A vaccine is typically an injection of all or part of a germ, such as a virus. The germ in the vaccine is similar to the real germ that actually causes the infection. But, usually, the germ in the vaccine is dead or weakened. So it can't cause the infection or be spread to other people.

The similarity between the germ in the vaccine and the real germ is crucial. It means that the vaccine triggers the body's immune system to prepare defences against the real germ. So, if you come into contact with the real germ from an infected person, your body will be able to fight it off without you becoming ill.

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## Side-effects

As with all medicines, children sometimes get side-effects from MMR, especially after the first jab. These may include a high temperature, a rash, or being irritable or sleepy. Much rarer side-effects include fits, sore joints, or bleeding or bruising very easily. But serious side-effects are more likely to happen with measles, mumps or rubella infections than they are from having MMR. And there's no evidence that giving the three viruses all at once, as MMR, is too much for a child's immune system to cope with.

### Why every child matters

It's crucial that as many children as possible are vaccinated against measles, mumps and rubella. If enough children are fully protected, there won't be enough unvaccinated children left to spread the infections around. This helps protect both the vaccinated child and everyone else who's vulnerable – for instance, children too young or unable to have MMR, or any pregnant women who could catch rubella.

Every child who isn't protected is one more that could suffer from and spread measles, mumps and rubella. This could make epidemics of these infections more and more likely. This is a real worry in the UK at the moment, with the recent drop in the number of children having MMR.

## Does MMR cause autism?

In recent years, there's been concern about whether MMR causes autism. The box, right, explains more about autism.

The initial worries about MMR were mainly because of a single study published in 1998. This looked at a small

## About autism

Autism is a serious problem in a child's development. There are different types, but typical symptoms include problems with learning to talk and in relating to other people. The child usually becomes very withdrawn. They may also have repetitive behaviour and strongly resist any change in routine.

Symptoms of autism are usually first noticed by parents before the child is 2 years old. However, autism can usually only be diagnosed for certain by a specialist. Often they can't be sure that it's really autism until 2–3 years after symptoms started.

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group of children who had developed autism and bowel problems. Their parents or doctors recalled that the first signs of autism had started within two weeks of MMR vaccination. Because the symptoms were said to have followed so soon after the jab, the researchers wondered if the two were connected. However, they never claimed to have proved this. There's been a lot of media interest around this study and other related research. But, crucially, none of these studies have proved that giving MMR can make children develop autism.

Because of the concern about MMR, researchers in many countries have collected relevant information about millions of children. But none of this research has found evidence of any link between MMR, autism or bowel problems. What's more:

- although the number of cases of autism has been rising, this increase had already started before MMR was introduced in the UK.
- this rise in autism has outstripped any rise in the use of MMR. And, in fact, the rise in autism continued even as use of MMR levelled off.
- because signs of autism are usually first noticeable in children at around the same time that MMR is given, the two are bound to coincide by chance in some children. But this doesn't mean that MMR causes the autism.
- if MMR did cause autism, the symptoms might start to show up earlier in children's development, nearer the time of the first MMR jab. But research has shown no sign of this.

## What about single vaccines?

Some people think the NHS should offer single (separate) vaccines for measles, mumps and rubella. However, such

### Find out more

Your doctor, health visitor or practice nurse will be able to discuss the pros and cons of MMR with you.

You can also find out more from:

- the NHS website [www.mmrfacts.nhs.uk](http://www.mmrfacts.nhs.uk)
- NHS Direct ☎ 0845 46 47 [www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk)
- National Autistic Society [www.nas.org.uk](http://www.nas.org.uk)
- JABS [www.jabs.org.uk](http://www.jabs.org.uk)

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vaccination would be very risky because:

- unlike MMR, widespread use of the three single vaccines in young children hasn't been tested. So nobody knows how effective or safe this is, nor even when children should be given the single vaccines.
- to try to protect against all three infections, children would need six injections instead of the two with MMR. And with each jab they could suffer side-effects.
- the gaps between the six injections mean a child might go several years before being fully protected.
- with six jabs rather than two, it's more likely for one or more to be missed. So more children wouldn't be fully protected. And this would make epidemics of measles, mumps and rubella more likely – a big risk to vulnerable children and pregnant women.

Some parents only get their child vaccinated against measles because they don't think mumps and rubella are serious infections. But this leaves their child vulnerable to getting and spreading these potentially harmful infections.

## To sum up

Many parents worry about their child having MMR. But it's the most effective and safe way of protecting against measles, mumps and rubella. There's no convincing evidence that MMR causes autism or bowel problems. Using single vaccines instead of MMR is a risky substitute.

The box, left, suggests places to find out more about MMR.



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The original *DTB* article is called *MMR vaccine – how effective and how safe?* and was published in April 2003. For information on *Treatment Notes* or *DTB*, ☎ 0845 983 0082, email [dtb@which.net](mailto:dtb@which.net) or visit [www.dtb.org.uk/dtb/tnotes/index.html](http://www.dtb.org.uk/dtb/tnotes/index.html)

*Treatment Notes* contains general medical information that will not always apply to your child. Don't start, or stop, prescribed medicines without speaking to your doctor or pharmacist first.

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