

# GP MATTERS

## **Information pack for parents considering single immunisations for measles, mumps and rubella.**

**Prepared by Dr Carole McAlister - July 2009**

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### **1. Our “single MMR” programme**

GP Matters seeks to provide choice to parents who are anxious about the ongoing debate regarding the safety of the combined MMR vaccine. While re-iterating that the MMR vaccine is probably safe to the majority of children, we understand the worries caused by various scientific and observational studies that dispute its track record, and link it with autism and bowel disease. Due to the fact that vaccinating children is essential to prevent them contracting serious and sometimes fatal illnesses, we believe that an alternative choice that is more acceptable or reassuring to parents is worth providing. Thus, administering the inoculations as three separate injections at intervals of a few weeks or months appears to be preferable to leaving children completely unprotected as a result of doubts and fears.

Once you have decided to vaccinate your child, you are left with the dilemma of choosing the combined MMR or the single measles, mumps and rubella vaccines. I would therefore urge you to take into consideration the following points:-

The World Health Organisation recommends that live vaccines (all 3 are live vaccines), if not given on the same day, must not be given within 4 weeks of one another. Currently we are leaving about 6 weeks in between the vaccines, but ultimately the interval is up to you. Some parents prefer to leave a longer interval between the single vaccines. The interval allows the immune system to recover fully between jabs.

Boosters are recommended for all, as the first dose will only guarantee protection in 90% of those vaccinated. A second dose gives 99% protection. This is usually done as a pre-school booster. This is the case for MMR or the single vaccines.

Where possible, the strains of virus given are the same, or very close, to those in the MMR. The measles strains are the Schwarz, produced as Morbilvax by Chiron, also Rouvax by Aventis Pasteur MSD in France and Masern-Impfstoff by Merieux in Germany. Alternatively, the Edmonston-Zagreb strain is given via the Moraten Berna vaccination produced by Berna in Switzerland.

The mumps strain is the Jeryl Lynn via the Mumpsvax by Aventis Pasteur MSD (France) or Merck & Co from the USA.

The rubella vaccines that we use are Rubeaten Berna from Berna in Switzerland, Rudivax from Aventis Pasteur MSD (France) and Meruvax 11 by Merck & Co (USA) (where available). All are strain RA 27/3.

	Strain	Vaccine	Sourced From	Side Effects
<b>Measles</b>	Schwarz	Morbilvax	Chiron (Italy)	There are seldom side effects, but they can occur 7-10 days after administration and can include fever for 1-2 days, rash (non-contagious), swollen glands in the neck, cough, conjunctivitis and general malaise. About 10% of children vaccinated with measles will get these side effects. They are managed with paracetamol/ibuprofen and to seek help if the child remains unwell.
		Rouvax	Aventis Pasteur MSD (France)	
	Merieux	Masern-Impfstoff (Germany)		
Edmonston-Zagreb	Moraten Berna	Berna (Switzerland)		
<b>Mumps</b>	Jeryl Lynn	Mumpsvax	Aventis Pasteur MSD (France) or Merck & Co (USA)	Side effects are rare and mild. They can include fever, irritability, swollen glands in the cheeks, neck and abdomen resulting in sore ears, loss of appetite and abdominal pain.
<b>Rubella</b>	Wistar RA27/3	Rubeaten	Berna (Switzerland)	Side effects are mild and can include fever, rash, swollen glands behind the ears and occasionally redness at the injection site.
		Rudivax	Aventis Pasteur MSD (France)	
		Meruvax 11	Merck & Co (USA)	

Whilst the Department of Health is able to audit trail cold custody care for the MMR vaccination, the same quality of cold custody audit is not necessarily in place for single vaccines. Having said that, every effort is made to ensure that the vaccines are kept at the correct temperature.

Whilst in GP Matters care, the vaccines are kept in a special vaccine fridge at a temperature of between 2C and 8C, which is according to the manufacturers' recommendations. No liability can be accepted for loss of cold custody outside GP Matters care but we are reassured by the fact that the vaccines are delivered in refrigerated vans, or polystyrene & ice packs.

The MMR vaccination is separately batch tested by the National Institute for Biological Standards & Control. The same cannot be said for individual vaccines, which are batch tested by the company that produces them.

Please note that the MMR triple dose immunisation has a reasonable safety profile from the evidence available at the moment. According to Department of Health Guidelines, there is no increased incidence of Crohn's disease (an inflammatory disease of the bowel) or autism (a disorder frequently diagnosed in the second year of life), after giving the MMR vaccination. However, some of the concerns around MMR immunisation stem from a research group at the Royal Free Hospital led by Dr Andrew Wakefield, who suggested that both measles infection and measles vaccination can be associated with an increased risk of Crohn's disease and autism.

Please note that, as with any vaccines, there may be problems with availability of single measles, mumps and rubella. However, having a single immunisation does not prevent your child from subsequently being immunised with the MMR. In view of previous difficulties with the mumps vaccine supply, it would be possible for your child to have a single measles and rubella vaccine followed if necessary by an MMR vaccination. In this scenario, the MMR vaccine may well have less of a heavy impact on the immune system, as the measles and rubella immunity will in most children already have been stimulated by the single vaccines, leaving only the mumps immunity to be developed.

Another disadvantage with giving the immunisations separately is the time it takes for the full immunisation programme to be completed. Dr Andrew Wakefield, previously at the Royal Free Hospital, recommends a one-year gap between immunisations, because he feels that there is some evidence that having the wild measles and mumps within a year of each other in childhood predisposes to Crohn's disease. In order that a child should not remain unvaccinated for long periods of time, my own recommendation is that there should be no less than 6 weeks in between the vaccines, and we are currently leaving 6 or 8 weeks in between each immunisation. The current recommendations are dependent upon good supplies of the vaccines. GP Matters will do everything within it's power to provide the 3 separate vaccines, however this cannot always be guaranteed.

## **2. Why vaccinate?**

Measles has reappeared in the UK, with 449 confirmed cases to the end of May 2006 compared with 77 in 2005, and the first death since 1992. Cases are occurring in inadequately vaccinated children and in young adults, leading to concerns that endemic measles could re-emerge. But, as with smallpox, measles could be eradicated. It has been eliminated in the Americas since 2002. The World Health Organisation has set 2010 as the target for elimination in the European region, where 29000 cases were reported in 2004. Much ground will have to be regained in the UK if the 2010 target is to be met.

Measles virus is the most potentially damaging of the 3 viruses (more than rubella and mumps). It is among the most contagious of diseases. The virus remains transmissible in the air or on infected surfaces for up to 2 hours, so there is no need for person-to-person spread. Measles remains a leading cause of vaccine preventable death worldwide. In 2004 an estimated 454000 deaths were due to measles.

Up to the age of 1, maternal measles antibody is present in the baby, and measles vaccine does not reliably induce immunity in the presence of these antibodies. Vaccine efficacy increases to over 90% in the 12-15 month age group.

Even with 100% coverage, a single dose schedule allows the gradual accumulation of a pool of susceptible people. A second dose however reliably leaves about 99% of those vaccinated immune.

In the era before vaccines, cases peaked every 2-3 years, with on average 100 deaths annually. Routine immunisation of children with 1 dose of the single measles vaccine started in 1968. This was replaced in 1988 by immunisation against measles, mumps and rubella, and supplemented by a programme of measles and rubella immunisation of school age children and young people in 1994 to avert an impending measles epidemic. The preschool MMR booster dose was introduced in 1996. Increasing vaccination coverage was mirrored by a fall in notifications from around half a million cases annually in the 1960s and culminated in the interruption of endemic measles transmission. There was a peak in uptake of the vaccine in 1998, prior to the controversy surrounding the published paper in the Lancet by Dr Andrew Wakefield suggesting that MMR could contribute to the development of autism. Coverage with a first dose reached a nadir of 80% amongst 2 year-olds in England in 2003-4. Accordingly the likelihood of outbreaks of measles increased.

Complications of measles infection are many and include febrile seizures (0.5%), ear infections (7-9%), pneumonia (1-6% in developed countries and accounts for 56-86% of measles associated deaths worldwide), encephalitis (measles is associated with 3 distinct encephalitic diseases ie inflammation of the lining of the brain) (0.1%), diarrhoea (8%), blindness (rare), hospitalization (1%) and death (1 per 5000 in the UK). In developing countries, fatality rates of up to 25% have been described. (Frequency in developed countries given in brackets)

Prior to MMR vaccination, there were almost 1,000 cases of mumps per year. There was a risk of orchitis (inflammation of the testes) in 35% of adolescents and adult males. 50% of cases involve inflammation of the meninges (the surroundings of the brain) with signs of meningitis in between 1% and 10% of these. Mumps causes unilateral deafness in a small number of cases.

Rubella is a danger in pregnancy. Prior to the MMR vaccine, there were about 20 cases of congenital rubella reported annually with resultant heart defects, eye changes and problems in the central nervous system. Fortunately, this condition is now extremely rare. Giving rubella vaccine is not just about protecting the unborn foetus from congenital rubella, as although rubella is usually a mild illness in children, rare neurological complications such as encephalitis can occur and can cause significant morbidity.

#### *Disclaimer*

*This information is believed to be correct at the time of dispatch. It does not claim to answer all questions relating to the subject. If you have any queries about the information, please contact either your GP or make an appointment with Dr McAlister.*

*You are advised to discuss the issue of single vaccines with your GP/Health Visitor prior to your visit here.*

### **3. MMR Questions & Answers**

#### **From what age should children be vaccinated against measles, mumps and rubella?**

The child must be at least 13 months old and there is no upper age limit.

#### **What order are the vaccines given in?**

We usually offer the measles vaccine first (because this illness poses more of a risk to your child than mumps or rubella), followed by rubella and then mumps. The doctor will, however, review each case individually.

Boosters are given in the same order as the primary course.

#### **How long an interval should there be between the three different inoculations?**

The World Health Organisation recommends that live vaccines (all 3 are live vaccines), if not given on the same day, must not be given within 4 weeks of one another. Currently we are leaving about 6 weeks in between the vaccines but the timing is your decision. Some parents prefer to leave a longer interval between the single vaccines.

#### **Will my child need a second course (boosters) of the single vaccinations?**

Yes. After the first course of vaccines a patient will usually be about 90% immune to the disease. A booster is recommended either as single vaccines or MMR. A second dose gives 99% protection. Dr McAlister will be happy to discuss this with you.

#### **Is there a risk of autism if I vaccinate with the MMR at the booster stage?**

As a parent you can choose at the second dose stage to do this with single vaccines or with MMR. There have been anecdotal reports of a small number of children who have developed a regressive autistic condition following revaccination.

#### **Do the vaccines contain mercury?**

No. They are live attenuated vaccines and therefore do not need mercury which is a preservative. This is the same for MMR.

#### **When is it not safe for my child to be vaccinated?**

If your child is running a high temperature. Minor illnesses such as colds/coughs or teething pose no problems and vaccination will proceed.

If they have received or are due to receive another vaccination within 4-6 weeks of your appointment i.e. HIB.

If they have taken antibiotics less than 2 weeks prior to their appointment date. They must have a clear 2 weeks (14 days) before vaccination can take place.

#### **What are the fees?**

£395 for the full course (Measles £110, Mumps £175, Rubella £110). This includes the consultation, supply and administration. Boosters are not included in the fee.

#### **My child has started a course of single vaccinations elsewhere. Can they complete the course at GP Matters?**

Yes.

### **Does my child have to have all three vaccinations?**

In order to conform to Government policy, we advise parents who opt for the single vaccination programme that they should finish the course of all three vaccines (measles, mumps and rubella) subject to availability, and we ask them to sign a consent form to this effect.

### **Are pregnant mothers put at risk?**

Pregnant women are not at risk from contact with vaccinated children. The data sheets (information supplied by the manufacturer) clearly state that there is no chance of cross-infection with any of the single vaccines.

### **Can my child have the single vaccinations if they are due to have another vaccination around the same time?**

The measles, mumps and rubella vaccines are live viral vaccines. Live vaccines can be administered simultaneously, but should not be administered less than three weeks before or after other live vaccines. Your child can be immunised within three weeks of the single vaccinations, as long as the other vaccination is not a live viral vaccine.

### **Are the single vaccines licensed in the UK?**

The single rubella is licensed in the UK, as it is given to women prior to conception to avoid congenital rubella in the foetus. The single measles and mumps have not been given a license as Government policy is MMR.

### **What are the implications of the vaccines being unlicensed?**

This means that they have not passed through the Department of Health quality control procedures. It also means that they have to be ordered on a 'named patient' basis, giving the clinical reasons for which the vaccine is needed.

### **Are unlicensed vaccines safe?**

Yes. The word 'unlicensed' means that the Department of Health have not renewed the licenses for these single vaccines to be produced in the UK. Single measles and rubella vaccines were used pre-MMR, and 50% of paediatric medicines currently used in the NHS are unlicensed.

### **Have the single vaccines always been unlicensed in the UK?**

No. The single measles vaccine was used in this country from 1968-1988, when the MMR was introduced. It then continued to be available as an alternative to the MMR until the Department of Health withdrew it in 1998.

The single rubella vaccine had been available for adult women who are not immune to rubella until the end of 2003. The single vaccine is no longer available on the NHS. The Department of Health recommends adult women who need protection against rubella receive the MMR.

### **Are they 'licensed' for use in other countries?**

Yes. They are all licensed for use in other countries in Europe including Scandinavia, as well as Japan and in some parts of the USA.

### **Are doctors allowed to give the single vaccines for measles, mumps and rubella (German measles) in the UK?**

Yes, doctors are legally allowed to obtain and give these vaccines, provided they comply with the Department of Health regulations on unlicensed medicines.

Dr McAlister subscribes to the General Medical Council (GMC) and is covered by the Medical Defence Union to carry out the administration of single vaccines.

### **How will my GP know that my child has been immunised?**

We will give you the details of the immunisation carried out at GP Matters including the batch numbers and expiry dates to pass on to your GP. This will be an insert for your child's medical book.

### **Will I be able to travel abroad or go on holiday after my child has been given the vaccine?**

Yes, but this should be at least 10 days from the date of vaccination to allow for the appearance and management of side effects.

### **Will I be able to travel home from the clinic after my child has been given the vaccine?**

Yes. Unless your child shows immediate signs of a bad reaction to the vaccine (which is extremely unlikely), you will be allowed to leave shortly after your child has received the immunisation.

### **Where will my child be injected?**

The child will be injected in the upper arm for the measles and mumps, and the thigh for the rubella.

### **My child has had the MMR. It is now time for his 'booster'. Is he able to have the single vaccines?**

Yes. Having the MMR once does not prevent your child from receiving any or all of the single vaccines.

### **Is there a link between the combined MMR and autism or inflammatory bowel disease (e.g. Crohn's Disease)?**

The causes of autism or inflammatory bowel disease (e.g. Crohn's Disease) have not yet been fully elucidated. By offering the single antigen vaccination course, we are not implying that there is any proven link with these conditions and the combined MMR vaccine. Reviews by both the Committee for the Safety of Medicines (CSM) and the Medical Research Council (MRC) did not identify a causal link between MMR and measles/rubella vaccines, autism and inflammatory bowel disease. The websites included in section 6 of this document give more information about the debate regarding this.

### **Are the single vaccines safe?**

They are at least as safe as the MMR. And they are much safer than if your child were to contract measles, mumps or rubella and experience rare but potentially damaging side effects.

### **Do the vaccines have side effects?**

All vaccines have side effects. The vaccines offered by GP Matters have no additional side effects to those occurring with the MMR vaccine. There is an additional advantage in that any side effects are only from the one virus vaccine.

### **Who is liable if something goes wrong?**

We, the doctors at GP Matters, remain responsible for any advice and treatment that we offer. The pharmaceutical companies remain responsible for the quality of their product.

### **Do you keep a record of the batch number of the vaccines?**

Yes. We keep a record of the batch number of the vaccine in our own records. We also give this information to you for your records and also to pass on to your GP.

### **What are the disadvantages of giving the vaccines separately?**

The Department of Health has several concerns about giving the MMR as separate vaccines.

1. There will be a period when your child will be unprotected against one or more of the illnesses whilst waiting to have the next vaccine.
2. The single vaccine route requires your child to have more injections.
3. The Department of Health is concerned that you may not bring your child back to have all the vaccines.

### **Are the single vaccines as effective as the MMR?**

Individually they are at least as effective as the MMR. However, your child will not be protected against all three illnesses at the same time with the single vaccines.

### **Do the three separate vaccines contain the same strength as the MMR?**

They contain the identical or equivalent strength of vaccine. The same doses and strains are given as go into the combined MMR.

### **Is there a problem with delaying the administration of the mumps vaccine?**

Yes, the main issue is that your child will remain unprotected. However the interval between the rubella and mumps vaccines is irrelevant. The vaccines will be equally effective regardless of the time interval.

### **Is it necessary for my son to be given the rubella vaccine?**

It is given primarily to prevent him from catching rubella and passing it on to a pregnant woman, who may not be protected. This could cause serious damage to her unborn baby. However as mentioned above, rubella can cause rare neurological complications such as encephalitis which can result in significant morbidity. If you wish to discuss this further, please book a consultation.

### **Can my child have the single vaccinations if they have a known allergy or are prone to allergic reactions?**

All children should be vaccinated against measles, mumps and rubella. The vast majority of children can be safely given the vaccine regardless of whether they are allergic to eggs. The exception would be children who have previously had a life-threatening reaction to eggs, or those who have an egg allergy and active chronic asthma. These 2 groups should be vaccinated in a hospital paediatric department with appropriate precautions.

### **Can I have a blood test to check if my child needs the booster?**

No. A blood test can be done for community-acquired infection but not for vaccine acquired immunity. This takes into account that there is limited understanding about the correlation between the actual memory antibody level (IgG) and the degree of protection for any particular child. In other words, it is not understood what level of antibody response actually means that the child will not develop measles when exposed to natural measles virus in the community. This sort of information is much more secure for other viruses such as hepatitis B.

On top of that, it is well recognised that a proportion of vaccinated children who did develop an antibody response first time round, will subsequently lose their level of protection over the years of childhood and make them vulnerable to infection as adolescents and young adults.

The consensus is to endorse revaccination against measles, mumps and rubella, usually done around the age of school entry, although this can be done after an interval of 3 months from the last vaccine.

## **4. Procedure for registration for single vaccines**

1. Print out and complete the “Single MMR Registration Form” (last page of this document).
2. The cost is £395 for the 3 vaccines (Measles £110, Rubella £110, Mumps £175).  
Due to the lack of availability of the mumps vaccine the methods of payment are now as follows:
  - a) Two separate cheques for £110 (one for measles and one for rubella) to be cashed individually after each appointment. These should be made payable to Dr C McAlister.  
Once the mumps vaccine becomes available we will contact you to schedule the next appointment
  - b) Credit/Debit card payment of £230 (Measles £115, Rubella £115).  
The charge for mumps once it becomes available will be £185.
  - d) Cash payment at the first appointment.
3. Send the “Single MMR Registration Form” and cheque/s to:  
Dr Carole McAlister, GP Matters, 87 Barrington Drive, Glasgow G4 9ES.

If the chosen method of payment is by Credit/Debit card, just send the completed “Single MMR Registration Form” to the above address.

4. Once the registration form and payment are received, we will contact you within 3 working days to make the first appointment for a mutually convenient time.

At the consultation the doctor will discuss the vaccine to be given, go through a questionnaire to obtain your consent, complete your child’s health record book (red book), give you an information sheet about possible side-effects of the vaccination and complete a form giving the vaccine details. This will be photocopied for you on completion of all three vaccines to give your child’s GP, so that your child’s medical record can be updated.

After your child has had his or her vaccination you will be asked to remain in the waiting room for 10-15 minutes in the unlikely event of an allergic reaction that would require immediate medical attention.

## **5. Refund/Cancellation policy**

If for any reason you fail to inform us of a cancellation within 24 hours, or if you fail to attend without re-scheduling the appointment, there will be an administration fee of £50. This is to cover the time for booking and allocating an appointment, ordering the vaccines on a named child basis, registering your child (children) on our database, and confirmation of the first appointment by phone.

## **6. Useful websites**

For further information concerning the MMR vaccination debate, please consult the Department of Health website ([www.doh.gov.uk](http://www.doh.gov.uk)). It gives references and internet links to published studies.

Other sites of interest: [www.jabs.org.uk](http://www.jabs.org.uk), [www.immunisation.org.uk](http://www.immunisation.org.uk), [www.mrc.ac.uk/index.htm](http://www.mrc.ac.uk/index.htm) (search “autism”), [www.visceral.org.uk](http://www.visceral.org.uk), [www.nhsdirect.nhs.org.uk](http://www.nhsdirect.nhs.org.uk), [www.mmrthefacts.nhs.uk](http://www.mmrthefacts.nhs.uk), [www.autism-spectrum.com/vaccine.htm](http://www.autism-spectrum.com/vaccine.htm) .

## **7. Single MMR Registration Form** - See next page

# GP MATTERS – Single MMR Registration Form

Child's first name:	Child's surname:	Child's DoB:	Sex: M / F
Mother's name:		Father's name:	
Parent's Tel (H): Parent's Tel (M): Parent's Email:		Address (home):  Postcode:	
Child's NHS GP: Address:			
Please advise of any significant illnesses?		Please advise of any allergies?	
Are all childhood immunisations up to date? Y / N. If not, please specify reasons.  Any reaction to previous vaccinations?			
Are both parents in agreement about their child receiving separate vaccines? Y / N? If not, please discuss with the doctor prior to any consultation.			
My child has had at least one of the components so far:  Measles <input type="checkbox"/> Mumps <input type="checkbox"/> Rubella <input type="checkbox"/>			
I would like to request the following vaccines for my child:  Measles <input type="checkbox"/> Mumps <input type="checkbox"/> Rubella <input type="checkbox"/>			
Please detail reason(s) for choosing single MMR vaccines:			
Chosen method of payment: a) One cheque for £220 <input type="checkbox"/> b) Two separate cheques <input type="checkbox"/> c) Credit/Debit card <input type="checkbox"/> d) Cash payment at first appointment <input type="checkbox"/>			
The completed registration form together with a cheque for £220 or two separate cheques (£110, £110) made payable to Dr C McAlister, should be sent to GP Matters, 87 Barrington Drive, Glasgow, G4 9ES. Credit/Debit card payment fee is £230 (Measles £115, Rubella £115) payable at the time of the first appointment.  The vaccinations are subject to availability. Currently there is a shortage of mumps vaccine. GP Matters have no control over the vaccine quantities that are manufactured or available for importation into the UK. As a result, there may be delays in the completion of the course (30 Jun. 09)			
Signature:			Date: