Measles, Immunizations and Finding Accurate Health Information with

Andrew Plumer  
Health Information Products Unit  
References & Web Services Division  
Public Services Division  
U.S. National Library of Medicine

Aimee Gogan  
Office of Engagement & Training  
U.S. National Library of Medicine
Warm-up

• Have you had a patron come to you seeking health information?

• How comfortable do you feel responding to health information questions from your patrons?
What is being said. How will you respond?

• Vaccines can cause autism.
• Vaccines contain mercury, that’s poison!
• Measles isn’t that bad, and it is better than the dangers of a vaccine.
• NIH and CDC are in the pockets of big pharma, so why trust them?
• I’m so confused, what should I do about vaccinating my child?
• [Insert celebrity names here] has doubts about vaccinations.
What is MedlinePlus?

“The National Institutes of Health's Web site for patients and their families and friends.”
MedlinePlus Then

Debuted October 1998

22 health topics pages

116,000 hits in the first month
Why MedlinePlus?

- Content from trusted sources: NIH, CDC, AMA, AAP, Mayo Clinic
- Licensed content especially for consumers
- Accurate and up to date
- Reviewed by MedlinePlus staff regularly
- Spanish mirror site
- No advertising
MedlinePlus Quality Guidelines

• Quality, authority & accuracy
  • Accurate, science-based information
  • Should publish a list of advisory board members on its site
  • Information is well-organized and easy to use
  • MedlinePlus links only to original content

• Purpose: educational not commercial
  • Not designed to sell a product or service
  • Preference is given to pages with no advertising and the site should have an advertising policy

• Availability & maintenance
  • Links to only reliable sources and maintains these links
  • Information is current or an update date is given
Evaluating Health Information

https://medlineplus.gov/evaluatinghealthinformation.html

https://medlineplus.gov/webeval/webeval.html
Which of the following is not part of the MedlinePlus Quality Guidelines:

1. Information is current or an update date is included.

2. The source for the contents of the Web page(s) and the entity responsible for maintaining the Web site (webmaster, organization, creator of the content) is clearly identified.

3. An advertising policy on the site is optional. Advertisers or sponsors can play a role in selecting or editing health information as long as it is clearly designated who edits the content.

4. The Web site is available consistently and lacks technical issues.
Health Topic Tour

Childhood Immunization
Also called: Shots

Summary
Today, children in the United States routinely get vaccines that protect them from more than a dozen diseases such as measles, polo, leukemia, diphtheria, and pertussis (whooping cough). Most of these diseases are now at their lowest levels in history, thanks to years of immunization. Children must get at least some vaccines before they may attend school.

Vaccines help make you immune to serious diseases without getting sick first. Without a vaccine, you must actually get a disease in order to become immune to the germ that causes it. Vaccines work best when they are given at certain ages. For example, children don’t receive measles vaccine until they are at least one year old. If it is given earlier it might not work as well. The Centers for Disease Control and Prevention publishes a schedule for childhood vaccines.

Although some of the vaccines you receive as a child provide protection for many years, adults need immunizations too.

Centers for Disease Control and Prevention
Childhood Immunization

Also called: Shots

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Centers for Disease Control and Prevention
Start Here

- For Parents: Vaccines for Your Children (Centers for Disease Control and Prevention)
- Frequently Asked Questions about Immunizations (Nemours Foundation)
- Immunization Schedule (Nemours Foundation)
- Immunization Schedules for Infants and Children (Centers for Disease Control and Prevention) - PDF
- Immunization Schedules for Preteens and Teens (Centers for Disease Control and Prevention) - PDF
- Instant Childhood Immunization Schedule (Centers for Disease Control and Prevention)
- Recommended Immunizations for Children from 7 Through 18 Years Old (Centers for Disease Control and Prevention) - PDF

- Vaccines for Your Children: Protect Your Child at Every Age (Centers for Disease Control and Prevention)
- Vaccines.gov (Department of Health and Human Services)
- What is a Vaccine (National Institute of Allergy and Infectious Diseases)

Latest News
- New! Vaccination Is the Best Protection Against Measles (05/03/2019, Food and Drug Administration)

Related Issues
- After the Shots... What to Do If Your Child Has Discomfort (Immunization Action Coalition) - PDF

Related Health Topics
- Chickenpox
- Diphtheria
- Flu Shot
- Haemophilus Infections
- Hepatitis B
- Immunization
- Measles
- Mumps
- Polio and Post-Polio Syndrome
- Tetanus
- Tetanus, Diphtheria, and Pertussis Vaccines
- Whooping Cough

Other Languages
- Find health information in languages other than English on Childhood Immunization

NIH MedlinePlus Magazine
- Back-to-School Health Tips: Immunizations
- Vaccines Stop Illness
- Vaccines: What You Need to Know
# Vaccines for Your Children: Protect Your Child at Every Age

## Vaccines by Age

Vaccines are recommended throughout your child’s life to protect against serious, sometimes deadly diseases. Find out which vaccines are recommended for your child based on their age.

<table>
<thead>
<tr>
<th>Age</th>
<th>Vaccines Recommended</th>
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<tbody>
<tr>
<td>Pregnancy</td>
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<tr>
<td>Birth</td>
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<td>1-2 Months</td>
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<td>11-12 Years</td>
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<tr>
<td>13-18 Years</td>
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</tbody>
</table>

Stay on track with your child's vaccines.

Get Email Updates

To receive email updates about this page, enter your email address:

Email Address: [Input Field]

Warns child? [Submit]
Vaccination Is the Best Protection Against Measles

Measles is one of the most contagious respiratory diseases in the world that has the potential to be life-threatening. It is caused by a virus and is still common in many countries.

There are FDA-approved vaccines that provide lasting protection against measles that are proven both safe and effective. Most people who get the recommended two doses of the vaccine will never get sick with measles, even if they're exposed to the virus.

Still, outbreaks in the United States continue to occur. One main reason is because of unvaccinated people who are exposed to the virus abroad and bring it into the United States. Another is because of the spread of measles in communities that include unvaccinated individuals.

According to the Centers for Disease Control and Prevention (CDC), before the U.S. measles vaccination program started in 1963, about 3 million to 4 million people nationwide got measles each year. Of those, 300 to 500 people died, 48,000 were hospitalized, and 1,000 developed encephalitis (swelling of the brain) because of measles. In the United States, widespread use of the vaccine has led to a 99 percent reduction in measles cases compared with before the vaccination program began.

The measles virus is very skillful at finding vulnerable people and infecting them. Particularly at risk are people who cannot get vaccinated because they are too young or have certain health conditions. After an infected person leaves a location, the virus can remain in the air and on surfaces for up to two hours and infect others. Measles spreads so easily that if one person has it, 90 percent of the people close to that person who are not vaccinated or otherwise immune will also become infected.
Related Issues

- After the Shots... What to Do If Your Child Has Discomfort (Immunization Action Coalition) - PDF
  Also in Spanish
- Community Immunity: How Vaccines Protect Us All (National Institutes of Health)
- Current Vaccine Shortages and Delays (Centers for Disease Control and Prevention)
- Do Vaccines Cause Autism? Is it OK to Skip Certain Vaccines? Get the facts (Mayo Foundation for Medical Education and Research)
- Frequently Asked Questions about Thimerosal (Ethylmercury) (Centers for Disease Control and Prevention)
- Immunizations: Active vs. Passive (American Academy of Pediatrics)
- Ingredients of Vaccines (Centers for Disease Control and Prevention)
- Is There a Connection Between Vaccines and Autism? (Nemours Foundation)
  Also in Spanish
- Possible Side-Effects from Vaccines (Centers for Disease Control and Prevention)
- Questions Parents Ask about Baby Shots (Immunization Action Coalition) - PDF
- Travelers' Health: Vaccine Recommendations for Infants and Children (Centers for Disease Control and Prevention)
- Understanding Thimerosal, Mercury, and Vaccine Safety (Centers for Disease Control and Prevention) - PDF
- Vaccinating Your Preteen: Addressing Common Concerns (American Academy of Pediatrics)
- Vaccination Records for Kids (Centers for Disease Control and Prevention)
- Vaccine Safety (Centers for Disease Control and Prevention)
- What Would Happen If We Stopped Vaccinations? (Centers for Disease Control and Prevention)
  Also in Spanish

Specifics

- Immunizations for Preterm Babies (American Academy of Pediatrics)
  Also in Spanish
- Your Baby's First Vaccines (Centers for Disease Control and Prevention)
Measles
Also called: Rubella

Summary
Measles is an infectious disease caused by a virus. It spreads easily from person to person. It causes a bluish red rash. The rash often starts on the head and moves down the body. Other symptoms include:

- Fever
- Cough
- Runny nose
- Conjunctivitis (pink eye)
- Feeling sick and run down
- Tiny white spots inside the mouth

Sometimes measles can lead to serious problems. There is no treatment for measles, but the measles-mumps-rubella (MMR) vaccine can prevent it.

“German measles”, also known as rubella, is a completely different illness.

Centers for Disease Control and Prevention
- **Phone of Measles and People with Measles** (Centers for Disease Control and Prevention)
  - Available in Spanish

**Statistics and Research**
- **FastTrack Measles** (Centers for Disease Control and Prevention)

**Clinical Trials**
- **Clinical Trials.gov Measles** (National Institutes of Health)

**Journal Articles**
- Articles on Measles and Related Topics:
  - Measles: Using unvaccinated and having a recent history increases the risk of...

**Find an Expert**
- Centers for Disease Control and Prevention
- American Academy of Pediatrics
- National Foundation for Infectious Diseases
- National Institute of Allergy and Infectious Diseases

**Children**
- Measles (Centers for Disease Control and Prevention)
- Measles (World Health Organization)
- Measles - Educational Resources for Parents and Childcare Providers (Centers for Disease Control and Prevention)
- Measles: Make Sure You Child is Fully Immunized (Centers for Disease Control and Prevention)

**Teens**
- Measles (World Health Organization)

**Women**
- Measles, Mumps, Rubella, and the MMR Vaccine during Pregnancy (Centers for Disease Control and Prevention)
- Available in Spanish

**Adults**
- Facts about Measles for Adults (Centers for Disease Control and Prevention)

**Patient Handouts**
- Measles (American Academy of Family Physicians)
- Measles: Information for Parents (Centers for Disease Control and Prevention)
- MMR (Measles, Mumps, and Rubella) Vaccine: What You Need to Know (Centers for Disease Control and Prevention)
- Subcutaneous mengoniophenothet (Live Inactivated Viruses)
Measles, Mumps, Rubella and the MMR Vaccine

This sheet talks about exposure to measles, mumps, rubella, and the MMR vaccine in pregnancy or while breastfeeding. This information should not take the place of medical care and advice from your health care provider.

What are measles, mumps and rubella? How do they spread?

Measles (rubella), mumps, and rubella (German measles) are viruses that can spread from person to person through coughing, sneezing, or sharing cups or utensils with an infected person. Measles, mumps, and rubella used to be common in the United States, but vaccination programs have greatly lowered the number of cases. These viruses are still common in some parts of the world where people have not been vaccinated. Outbreaks of measles and mumps still happen in the U.S., especially in areas where vaccination rates are not high enough to protect the population. Once a person has been infected with measles, mumps, or rubella, it is rare to get the virus again.

What are the symptoms of measles, mumps, and rubella?

Measles causes rash, high fever, cough, sore throat, runny nose, and red, watery eyes. The person can spread the virus to other people from 4 days before the rash appears until 4 days after it goes away.

Mumps causes fever, headache, body aches, and swelling of the salivary glands under the ears, which can cause puffiness and tender cheeks and jaw.

Rubella (German measles) usually causes a mild rash with a fever. Other symptoms may include headache, achy joints, runny nose, and red eyes.

Rarely, serious problems can occur with these viruses, including pneumonia, meningitis, deafness and death.

What is the MMR vaccine?

The MMR vaccine is a mixture of live but weakened viruses from measles, mumps, and rubella. The vaccine causes a person to develop antibodies to these viruses and gives protection against the viruses in the future. These antibodies usually last for life. The vaccine may cause mild side effects including rash or joint aches.

People who have had severe reactions to the antibiotic called neomycin or to the MMR shot in the past should not receive the vaccine. People who take certain medications or have health conditions that severely lower their immunity (such as HIV/AIDS or steroid treatments), or who have cancer, should not receive this vaccine until their immunity improves. Talk to your health care provider if you have concerns about getting this vaccine.

How can I lower the chance of getting measles, mumps or rubella?

Measles, mumps, and rubella are very contagious (easily spread from person to person). Getting the MMR vaccine provides protection against these. Two doses of the vaccine are recommended for the most protection. All members of a household should be vaccinated. Non-vaccinated people who are exposed to someone with a confirmed case of measles may be given the MMR vaccine within 72 hours of exposure. This can provide some protection against the disease. If measles still develops, the illness usually has milder symptoms and lasts for a shorter time.

Other ways to lower the chance of spreading these viruses are to isolate and avoid those who are sick, properly wash hands with soap and water, and avoid sharing cups or utensils with someone who has been exposed.
Photos of Measles and People with Measles

Measles Skin Rash

Young child with moderate illness, running nose, itchy eyes caused by measles infection.
Source: "Measles Clinical Features" video

Young boy five to six days into illness, with rash and cough, runny nose, and itchy eyes.
Source: "Measles Clinical Features" video

Young, dark-skinned child with itchy eyes, runny nose, and reduced rash.
Source: "Measles Clinical Features" video

Rash of boy after three days with measles rash.
Source: CDC

Skin of a patient after three days with measles rash.
Source: CDC

Child with a classic measles rash after four days.
Source: CDC

Related Links
Measles and Rubella Initiative
World Health Organization
Pan American Health Organization

Some of these photos might be unsuitable for children. Viewing discretion is advised.
Drugs & Supplements

Drugs, Herbs and Supplements

Drugs

Learn about your prescription drugs and over-the-counter medicines. Includes side effects, dosage, special precautions, and more.

Browse by generic or brand name:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 0 9

For FDA approved labels included in drug packages, see DailyMed.

Herbs and Supplements

Browse dietary supplements and herbal remedies to learn about their effectiveness, usual dosage, and drug interactions.

All herbs and supplements

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Drugs Database: Sample page

Drugs: C

C-Phen ® (as a combination product containing Chlorpheniramine, Phenylephrine) see Phenylephrine
C-Phen DM ® (as a combination product containing Chlorpheniramine, Dextromethorphan, Phenylephrine) see Phenylephrine
C-Phen DM ® (as a combination product containing Chlorpheniramine, Dextromethorphan, Phenylephrine) see Dextromethorphan
C-500 © Chewable Tablet see Ascorbic Acid
CT/CS see Clobetasol Topical
C™️Time see Ascorbic Acid
cA2 see Infliximab, Infliximab-dx, Infliximab-obsa Injection
Cabazitaxel Injection
Cobergoline
Cobomox D see Cabozantinib (advanced renal cell carcinoma)
Cabozantinib (advanced renal cell carcinoma)
Cabozantinib (thyroid cancer)
Caduet ® (as a combination product containing Amlodipine, Atorvastatin) see Atorvastatin
Caduet ® (as a combination product containing Amlodipine, Atorvastatin) see Amlodipine
Cafetoline ® Rectal Suppository see Ergotamine and Caffeine
Ergotamine and Caffeine
pronounced as (er got’ a meen) (kaf’ een)

Why is this medication prescribed?

What should I know about storage and disposal of this medication?

How should this medicine be used?

In case of emergency/overdose

Other uses for this medicine

What other information should I know?

What special precautions should I follow?

Brand names

What special dietary instructions should I follow?

Other names

What side effects can this medication cause?

IMPORTANT WARNING:

Do not take ergotamine and caffeine if you are taking antifungals such as itraconazole (Sporanox) and ketoconazole (Nizoral), clarithromycin (Biaxin), erythromycin (E.E.S., E-Mycin, Erythrocin); HIV protease inhibitors such as indinavir (Crixivan); nefazodone (Serzone); and nizatidine (Nor-Pril); or troglitazone (Rezulin).

Why is this medication prescribed?

The combination of ergotamine and caffeine is used to prevent and treat migraine headaches. Ergotamine is in a class of medications called ergot alkaloids. It works together with caffeine by preventing blood vessels in the head from expanding and causing headaches.

How should this medicine be used?

The combination of ergotamine and caffeine comes as a tablet to take by mouth and as a suppository to insert rectally. It is usually taken at the first sign of a migraine headache. Follow the directions on your prescription label carefully, and ask your doctor or pharmacist to explain any part you do not understand. Take ergotamine and caffeine exactly as directed. Do not take more or less of it or take it more often than prescribed by your doctor.
Herbs & Supplements Database: Sample page

- Hawthorn (National Center for Complementary and Integrative Health)
- Hibiscus (Natural Medicines Comprehensive Database)
- Honey (Natural Medicines Comprehensive Database)
- Hoodia (National Center for Complementary and Integrative Health)
- Hops (Natural Medicines Comprehensive Database)
- Horny Goat Weed (Natural Medicines Comprehensive Database)
- Horse Chestnut (National Center for Complementary and Integrative Health)
- Horsetail (Natural Medicines Comprehensive Database)
- Hydrazine Sulfate (PDQ) (National Cancer Institute)
Horny Goat Weed

What is it?

Horny goat weed is an herb. The leaves are used to make medicine. As many as 15 horny goat weed species are known as "yin yang huo" in Chinese medicine.

Horny goat weed is commonly used by mouth for sexual performance problems, such as erectile dysfunction (ED) and low sexual desire. It is also used for weak back and knees, joint pain, arthritis, mental and physical fatigue, and memory loss along with many other conditions. But there is limited scientific research to support any of these uses.

How effective is it?

Natural Medicines Comprehensive Database rates effectiveness based on scientific evidence according to the following scale: Effective, Likely Effective, Possibly Effective, Possibly Ineffective, Likely Ineffective, Ineffective, and Insufficient Evidence to Rate.

The effectiveness ratings for HORNY GOAT WEED are as follows:

Insufficient evidence to rate effectiveness for...

- Osteoporosis: Taking a specific extract of horny goat weed for 24 months in combination with calcium supplements decreases bone loss of the spine and hip in women who have passed menopause better than taking calcium alone. Chemicals in the extract act somewhat like the hormone estrogen.
- Postmenopausal conditions: Taking horny goat weed water extract for 6 months can decrease cholesterol and increase estrogen levels in postmenopausal women.
Exercises: Is this site acceptable for MedlinePlus?

Open a new window.
Go to https://medlineplus.gov/criteria.html
Open a new tab in this window and go to: https://vaxopedia.org
Our mission is to end the epidemic of children's chronic health conditions by working aggressively to eliminate harmful exposures, hold those responsible accountable, and establish safeguards so this never happens again.
Connect with NNLM

• Create a free nnlm.gov account
  • Sign-up for online webinars and trainings
• Find your Regional Medical Library (RML)
  • Funding opportunities
  • Partner with other NNLM members
• Order free educational and print materials
  • NLM resources, Libraries Transform posters, Book Club kits, and more!
• Membership certificates
Consumer Health Information Specialization (CHIS)

• What is the CHIS?
  – In partnership with NNLM, a program provided by the Medical Library Association (MLA)
  – Offers free training for librarians in providing health information to consumers

• Why get a CHIS?
  – Acquire skills and knowledge needed to become a confident, expert provider of health information to your community
  – Show your commitment to consumer health information services

• How do I get a CHIS?
  – Complete one 12 CE-hour CHIS-eligible course or any combination of CHIS-eligible courses
  – Once you’ve taken the necessary coursework, NNLM sponsors the $75 application fee!
Evaluation and Medical Library Association (MLA) Continuing Education (CE) Credit

https://dev.nnlm.gov/ZJf
Thank you!

Andrew Plumer  
plumera@nih.gov  

Aimee Gogan  
aimee.gogan@nih.gov

Medlineplus.gov  
Medlineplus.gov/spanish