# Learn simply

## Immunization

**Passion Profession same**

### Immunization in women of childbearing age[1,2]

**Non-pregnant women**

**Low-risk women**

**All women of childbearing age should be immune to:**

- **Measles**
- **Mumps**
- **Rubella**
- **Tetanus**
- **Diphtheria**
- **Varicella**
- **Influenza**

All such women should be checked for immunity at their annual physical examination

Vaccination should be recommended if non-immune, **Influenza vaccination is recommended annually.**

**High-risk women[4]**

**Women at high-risk should also be immunized against:**

- **Hepatitis A**
- **Hepatitis B**
- **Pneumococcus**
- **Meningococcus**
- **Influenza**

**Pregnant women[3]**

**Low-risk women**

All women should be screened at their first prenatal visit for immunity against rubella and hepatitis B

**High-risk women[4]**

*Consider screening for immunity against varicella*

If non-immune, consider vaccination in pregnancy or immediately postpartum if the only available vaccine is live-attenuated[3, 5]

**Influenza vaccination is recommended to all pregnant women (regardless of gestational age).[3] Tdap should be administered in each pregnancy.[6]**

Women who are traveling should have updated general immunity and be immunized against specific diseases endemic in those areas

**General immunity**

- Measles
- Mumps
- Rubella
- Tetanus
- Diphtheria
- Pertussis
- Varicella
- Hemophilis influenzae

**Specific immunity**

- Hepatitis A
- Hepatitis B
- Typhoid
- Pneumococcus
- Rabies
- Yellow fever
- Meningococcus
- Japanese encephalitis
- Human Papilloma virus

**Immunization**

KAWITA BAPAT

1. Immunization can be
    1. active (vaccines, toxoid) or
    2. passive (immunoglobulin, antiserum/antitoxin).
2. In active immunity, the immune response is induced by wild infection or vaccination, which is generally robust and long-lasting.
3. As such, subsequent exposure to the vaccine-preventable infection will result in the release of antibodies and the prevention of illness.
4. In passive immunity, antibodies are acquired passively through maternal transfer across the placenta or breast milk or through the receipt of exogenous immunoglobulins.
5. Protection is temporary and fades within a few weeks to months. The immune system of the recipient is therefore not programmed, and subsequent exposure to vaccine-preventable infections can lead to active infection.
6. Vaccination works by inducing antibodies in recipients that protects them against infection after future exposure to specific disease-causing microbes.
7. The level of protection varies according to the strength and durability of the immune response induced by the vaccine as well as the virulence, prevalence, and ease of transmission of the infection itself.
8. Vaccination programs may have different goals:
    - (i) to protect at-risk individuals (e.g., meningococcal disease);
    - (ii) to establish control by minimizing the overall prevalence of the infection (e.g., measles, varicella); or
    - (iii) to attain global elimination of an infection (e.g., neonatal tetanus, polio).

1. Vaccination in pregnancy is of benefit and at times poses concern relative to the increased vulnerability of the mother and fetus.
2. Inactivated vaccines are approved for use in pregnancy. The inactivated influenza vaccine should be given to all pregnant women during the influenza season (October through May in the northern hemisphere), regardless of gestational age.
3. It is clear that there are significant maternal benefits including fewer cases of fever and respiratory illness and substantial neonatal protection through the transplacental passage of antibodies that provide months of protection at a time when the infant is vulnerable and could not be directly vaccinated.
4. However, live-attenuated vaccines (including rubella, MMR, varicella) are not recommended for pregnant women despite the fact that no cases of congenital anomalies have been documented.
5. Exceptions include yellow fever and polio, which can be given to pregnant women when traveling to high prevalence areas.
6. In addition, women should be advised not to get pregnant within 1 month of receiving a live-attenuated vaccine.
7. The live-attenuated influenza vaccine is available as an intranasal spray, which is considered safe in the postpartum period.
8. Vaccines considered safe in pregnancy include tetanus, diphtheria, hepatitis B, and influenza. Tetanus immunization during pregnancy is a common strategy used in the developing world to combat neonatal tetanus

# 1. Risk factors for specific vaccine-preventable illnesses include:

- Illicit drug users (hepatitis A and B, tetanus)
- men who have sex with men (hepatitis A) or >1 sexual partner in the past 6 months (hepatitis A, human papilloma virus)
- travel to or immigration from areas where infection is endemic (hepatitis A and B, measles, meningococcus, rubella, tetanus, varicella)
- healthcare workers (hepatitis B, influenza, varicella)
- nursing home residents (meningococcus, pneumococcus, varicella) or ≥50 years of age (influenza)
- chronic medical diseases: diabetes, asthma, HIV, liver disease and/or renal disease (hepatitis A, influenza, pneumococcus)
- adults who have had their spleens removed (meningococcus, pneumococcus)
- accidental or intentional puncture wounds (tetanus)

1. One of the ongoing controversies about vaccination in pregnancy is whether vaccines containing thimerosal pose a risk to the fetus.
2. Thimerosal is a mercury-containing preservative that has been used in multidose vaccines since the 1930s.
3. Although there has been concern about the cumulative levels of mercury, the current scientific evidence does not consider thimerosal to be associated with adverse outcomes in children exposed in utero.
4. The Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices (ACIP) does not recommend avoiding thimerosal containing vaccines. Although the ACIP does not recommend any specific formulation, there are newer trivalent and quadrivalent influenza vaccines (containing two A and two B influenza strains) that are available for use.
5. The following adult vaccines are thimerosal-free: Tdap (but not Td), Recombivax hepatitis B vaccine (but not Engerix-B), and some influenza vaccines (Fluzone with no thimerosal).
6. Tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccine (Tdap) may be given at any time of pregnancy or the postpartum period but ideally is administered between 27–36 weeks to confer the best passive immunity through the transfer of antibodies to the fetus.
7. This recommendation has developed to address the significant impact of pertussis disease in the newborn.