



## FACT SHEET ON

# PREGNANCY AND POSTPARTUM VACCINATION: Bangladesh



### ✔ Why are vaccinations important during pregnancy?

Vaccinations during pregnancy are crucial for protecting both the mother and their babies (fetus and infant state) from potentially harmful infections. Certain vaccines can prevent serious complications and diseases that may arise during pregnancy or affect the health of the newborn.

### ✔ What vaccines are recommended during pregnancy?

The vaccines recommended during pregnancy include:

1. Tetanus, Diphtheria, Pertussis (Tdap) Vaccine
2. Influenza (Flu) Vaccine

### ✔ Are these vaccines safe during pregnancy?

Inactivated flu and Tdap vaccines are safe during pregnancy. One must not take live vaccines during pregnancy.

### ✔ Which Vaccines are contraindicated during Pregnancy?

Vaccines	Reason for contraindication
<b>BCG</b> (live attenuated virus)	Contains live culture preparation of the BCG strain of <i>Mycobacterium bovis</i> .
<b>Human papilloma virus</b> (recombinant virus-like particle)	No safety data is available to support use in pregnancy. Not recommended by the CDC for administration during pregnancy
<b>Measles, mumps, and rubella</b> (live attenuated virus)	Contains live attenuated mumps, measles, and rubella viruses.
<b>Varicella</b> (live attenuated virus)	Contains live attenuated varicella-zoster virus.
<b>Zoster</b> (recombinant glycoprotein)	No safety data is available to support use in pregnancy. Not recommended by CDC for administration during pregnancy.

### ✔ What does the Tdap vaccine protect against?

The Tdap vaccine protects against tetanus, diphtheria, and pertussis (whooping cough). Pertussis can be particularly severe in infants; therefore, vaccinating during pregnancy ensures passive immunity transfer to the newborn, offering protection until they are old enough to receive their own vaccinations.

### ✔ What is the schedule of Tdap vaccine?

EPI schedule of Government of Bangladesh offers 5 doses of Tetanus-diphtheria (Td) vaccination for all women from 15-49 years age: if someone has not received these vaccines they may take one Td and one Tdap vaccine (between weeks 27-36) 4 weeks apart during pregnancy. If the pregnant woman has received 1-4 doses of Tetanus vaccine in the past, administer one dose of Tdap vaccine before delivery for protecting both mother and child from devastating consequences of infectious diseases. If the subsequent pregnancy occurs within 5 years only one booster of Tdap is to be given. The last dose of Tdap must be administered at least two weeks before delivery.

### ✔ Why is flu vaccine recommended during pregnancy?

The flu vaccine is recommended for pregnant women to prevent influenza infection, which can lead to severe complications such as pneumonia, hospitalization, and even death. Additionally, vaccination provides passive immunity to the newborn during the first few months of life.

### ✔ Does flu vaccine protect both mother and baby?

Yes. Flu vaccine gives protection to both mothers and their unborn babies till 6 months of their age.

### ✔ Is one flu shot enough to give protection?

One flu shot during pregnancy is enough to protect mother and their baby but everyone from 6 months of age should receive one flu vaccine annually.

### ✔ What vaccines are recommended after pregnancy?

The vaccines recommended after pregnancy include:

1. Pneumonia Vaccine
2. Influenza Vaccine
3. Hepatitis B
4. Varicella (Chickenpox) Vaccine
5. Rubella Vaccine
6. Human Papillomavirus (HPV) Vaccine

### ✔ Why is the pneumonia vaccine recommended postpartum?

Pneumonia vaccination postpartum is recommended to prevent pneumonia in mothers.

### ✔ Why is the influenza vaccine recommended postpartum?

Annual Influenza vaccination is recommended for everyone and especially high-risk group people to prevent influenza. After giving birth, mothers have weakened immune system and are susceptible to influenza and various influenza related complications. Moreover, Influenza vaccination of the pregnant and parturient woman reduces the risk of respiratory illness including laboratory-confirmed influenza in their infants up to 6 months of age as a result of both trans-placental maternal antibodies and increased anti-influenza antibodies in breast milk.

### ✔ What does the varicella vaccine prevent?

The varicella vaccine prevents chickenpox infection. Vaccination postpartum is advised to prevent potential complications from chickenpox infection during subsequent pregnancies, as varicella infection during pregnancy can cause severe illness in both the mother and the baby.

### ✔ Why is the Rubella vaccine recommended after pregnancy?

The Rubella vaccine is recommended postpartum to prevent rubella infections in mothers. These infections after pregnancy can lead to serious complications for both the mother and the baby. Vaccination against Rubella will continue to protect Rubella Infection in future pregnancies. Rubella infection may cause Congenital Rubella Syndrome with devastating complications to fetus and baby.

### ✔ Who should receive the HPV vaccine after pregnancy?

The HPV vaccine is recommended for individuals who have not completed the series before pregnancy. Vaccination postpartum reduces the risk of HPV-related complications in future pregnancies, such as genital warts and respiratory papillomatosis in the newborn.

### ✔ Which International Organizations Recommend these vaccines during and after pregnancy?

World Health Organization (WHO), Centre for Disease Control (CDC), International Federation of Gynecology and Obstetrics (FIGO), American College of Obstetricians and Gynecologists (ACOG), The Federation of Obstetric and Gynaecological Societies of India (FOGSI) and organizations world-wide recommends these vaccines during and after pregnancy.

### ✔ Who should not get the vaccines?

Vaccine should not be given if a person has had a severe allergic reaction (anaphylaxis to a previous particular vaccine or a constituent of the vaccine). As a precaution, vaccinations with live vaccines are not recommended in pregnancy due to a lack of evidence from well-controlled studies in pregnant women.

### ✔ Should a breastfeeding mother get vaccination?

Yes. A breastfeeding mother can get vaccination with Pneumonia, Influenza, Hepatitis B, Varicella (Chickenpox), Rubella, Human Papillomavirus (HPV).

### ✔ Are there known side effects / adverse reaction from getting these Vaccines?

Vaccines, like any medicine, can have side effects. Some people who get a vaccine may have side effects which are mostly minor. Common side effects are: pain, redness, or swelling at the injection site; fever; headache or feeling tired; nausea; muscle or joint pain.

### ✔ What is the role of OBGYN in Vaccination program?

The biggest predictor for vaccine uptake is effective recommendation from a health care provider. Roles of Obstetricians and Gynaecologists are many:

- Must strongly recommend vaccination.
- Help in determination of the correct doses, timings and schedules of the vaccines.
- Educate people with child bearing potential and the whole community.
- Help in mass campaign.
- Be vocal against myths and rumors.
- Help to detect, collect, report and analyses adverse effect through AEFI.
- Stock the vaccines in private chamber, strictly assuring cold chain, and vaccinate women in private sector.

It's essential for pregnant individuals to discuss vaccination recommendations with their obstetrician or healthcare provider to ensure the best possible protection for themselves and their babies. Vaccination not only safeguards maternal and fetal health but also contributes to the overall well-being of the community by reducing the spread of infectious diseases.

## References

1. Paget J, Spreuwenberg P, Charu V, Taylor RJ, Iuliano AD, Bresee J, Simonsen L, Viboud C; Global Seasonal Influenza-associated Mortality Collaborator Network and GLaMOR Collaborating Teams\*. Global mortality associated with seasonal influenza epidemics: New burden estimates and predictors from the GLaMOR Project. *J Glob Health*. 2019 Dec;9(2):020421. doi: 10.7189/jogh.09.020421. PMID: 31673337; PMCID: PMC6815659.
2. Retrieved from : Influenza (who.int) on September 4, 2023; 3. Steinhoff, M. C., Omer, S. B., & Roy, E. (2020). Influenza in pregnancy and future directions for maternal immunization. *Vaccine*, 38(50), 7997-8002. 4. CDC - Centers for Disease Control and Prevention. (2021). Flu and Pregnancy. Retrieved from <https://www.cdc.gov/flu/highrisk/pregnant.htm> 5. Nunes MC, Madhi SA. Review on the effects of influenza vaccination during pregnancy on preterm births. *Hum Vaccin Immunother*. 2015;11(11):2538-48. doi: 10.1080/21645515.2015.105997 6. Epub 2015 Aug 12. PMID: 2626770; PMCID: PMC4685674. Retrieved from Review on the effects of influenza vaccination during pregnancy on preterm births - PMC (nih.gov) 7. Steinhoff MC, Omar SB. A review of fetal and infant protection associated with antenatal influenza immunization. *AJOG* 2012; 207(3): S21-27 8. Schlaudecker EP, Steinhoff MC, Omer SB, McNeal MM, Roy E, Arifeen SE, Dadd CN, Raqib R, Breiman RF, Zaman K. IgA and neutralizing antibodies to influenza A virus in human milk: a randomized trial of antenatal influenza immunization. *PLoS One*. 2013 Aug 14;8(8):e70867. doi: 10.1371/journal.pone.0070867. PMID: 23967126; PMCID: PMC3743877. 9. K Zaman et al, Effectiveness of Maternal Influenza immunization on infant health, *NEJM*;2008 Jefferson TO, Rivetti D, DiPietrantonj C, et al. Vaccines for preventing influenza in healthy adults. *Cochrane Database Syst Rev*.2007;2:CD001269. 10. Rochat R, Akhter HH. Tetanus and pregnancy-related mortality in Bangladesh. *Lancet*. 1999 Aug 14;354(9178):565. doi: 10.1016/S0140-6736(98)05193-9. PMID: 10470703. <https://www.worldlifeexpectancy.com/bangladesh-tetanus> 11. Updated recommendations for use of tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine (Tdap) in pregnant women—Advisory Committee on Immunization Practices (ACIP), 2012. Centers for Disease Control and Prevention (CDC). *MMWR Morb Mortal Wkly Rep* 2013;62:131–5. 12. Dandinarasiah M, Vikram BK, Krishnamurthy N, Chetan AC, Jain A. Diphtheria Re-emergence: Problems Faced by Developing Countries. *Indian J Otolaryngol Head Neck Surg*. 2013 Dec;65(4):314-8. doi: 10.1007/s12070-012-0118-5. Epub 2012 Feb 25. PMID: 24427590; PMCID: PMC3851500. 13. American College of Obstetricians and Gynecologists. (2022). Update on Immunization and Pregnancy: Tetanus, Diphtheria, and Pertussis Vaccination. Committee Opinion No. 718. Retrieved from: Update on Immunization and Pregnancy: Tetanus, Diphtheria, and Pertussis Vaccination | ACOG