

Questions and Answers on Vaccination

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Questions on Immunization and Vaccination and Short Answers

Bağışıklama ve Aşı ile İlgili Sorular ve Kısa Cevaplar

Aslıhan Coşkun¹(**İD**), Pervin Özelçi¹(**İD**), Ateş Kara^{1,2}(**İD**)

¹ Presidency of the Health Institutes of Türkiye, Turkish Vaccine Institute, Aziz Sancar Research Center, Ankara, Türkiye
² Division of Pediatric Infectious Diseases, Department of Pediatrics, Hacettepe University Faculty of Medicine, Ankara, Türkiye

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Question 1: What is the administration schedule of the Rotarix[®] vaccine?

The first dose of Rotarix[®] vaccine can be administered as early as six weeks of age. Two doses are administered, with a minimum interval of four weeks between vaccine doses.

The first dose of Rotarix[®] vaccine should be administered before the baby is 16 weeks old. The vaccination schedule must be completed until the baby is 24 weeks and six days old.

In any event, if infants older than 15 weeks have received the first dose of Rotarix[®] vaccine, the next dose of the vaccine can be administered as soon as four weeks later. However, the completion of the vaccination schedule must be before 24 weeks and six days of age, as the maximum age at which the last vaccine dose can be administered is this.

Question 2: What is the administration schedule of the RotaTeq[®] vaccine?

The first dose of RotaTeq[®] vaccine can be administered as early as six weeks of age. Three doses are administered, with a minimum interval of four weeks between vaccine doses.

The first dose of RotaTeq[®] vaccine should not be administered later than 12 weeks. The rotavirus vaccination schedule using RotaTeq[®] is administered as a total of three doses and must be completed until the baby is 32 weeks and six days old.

If the first dose of RotaTeq[®] vaccine has been given to babies older than 12 weeks in any way, the second and third doses of the vaccines can be administered with at least four weeks between vaccines to complete the vaccination schedule. The last dose of the vaccine should be administered before the baby is 32 weeks and six days old.

Question 3: Can the rotavirus vaccination schedule be completed with vaccines from different manufacturers?

It is recommended that the rotavirus vaccination schedule be completed with the same vaccine as much as possible. However, if the vaccine administered for previous doses is not available or unknown, since any dose of the vaccine schedule will contain RotaTeq[®], at least three doses of rotavirus vaccine must be administered to complete the vaccine schedule.

Question 4: What should be the approach if the child spits up or vomits after receiving the rotavirus vaccines?

If spit out or ejected after administration of rotavirus vaccines, a repeat dose is not recommended. There are no data on the risk or benefit of re-administering the removed dose.

Correspondence Address / Yazışma Adresi

Ateş Kara Hacettepe Üniversitesi Tıp Fakültesi, Çocuk Sağlığı ve Hastalıkları Anabilim Dalı, Çocuk Enfeksiyon Hastalıkları Bilim Dalı, Ankara-Türkiye

E-mail: ateskara@hacettepe.edu.tr

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The routine vaccination schedule of the baby is completed in accordance with the schedule of the rotavirus vaccine administered with the remaining doses. Repetition is not recommended in the electronic form of Plotkin's Vaccines, one of the main source books of the vaccine, dated 2023, and after the recommendation of the United States Advisory Board on Immunization Practices (ACIP) in 2009, without a different recommendation. However, the UK Immunization Advisory Board states that the dose can be repeated and the Australian Immunization Advisory Board states that the dose can be repeated depending on the amount of ejection of the baby. Dose repetition is generally not recommended in our country.

Question 5: When can rotavirus vaccines be given to premature babies?

Vaccination of premature babies is based on their chronological age.

Question 6: Can rotavirus vaccines be administered to children with a family history of immunosuppression?

Since rotavirus vaccines are live attenuated vaccines, the presence of immunocompromised individuals in the same household should be questioned. However, this does not constitute an obstacle to the administration of rotavirus vaccines. Gastrointestinal excretion of the vaccine virus occurs for at least 14 days (about 21 days on average) after administration of the rotavirus vaccine. For this reason, considering the theoretical risk, it is recommended that people with severe immunosuppression after rotavirus vaccine. If an individual has a rotavirus infection, vaccination of infants should be preferred, since the risk of transmission to immunocompromised persons in the same household is much higher.

Question 7: Can OPA and rotavirus vaccines be administered at the same time?

In general, orally administered live virus vaccines do not interact with parenterally or orally administered live virus vaccines.

Rotarix and RotaTeq vaccines do not affect the immune response to any of the three antigens of OPA when administered concomitantly with OPA. It has been observed that OPA affects the immune response after the first dose of the rotavirus vaccine, but this effect is largely eliminated with the completion of the vaccine series.

Rotavirus vaccines can be administered simultaneously with other vaccines of the childhood immunization program.

Oral rotavirus vaccines have been shown to have a pain-relieving effect due to the sucrose content. For this reason, it may be preferable to administer the rotavirus vaccine before the vaccines administered by injection at the same time.

References

- Tate JE, Cortese MM, Offit PA, Parashar UD. Rotavirus Vaccines. In: Orenstein WA, Offit PA, Edwards KM, Plotkin SA eds. Plotkin's vaccines. 8th ed. ISBN: 978-0-32379058-1.
- 2. World Health Organization (WHO). Polio vaccines: WHO position paper. Wkly Epidemiol Rec 2022;97(25):277-300. Available from: https:// www.who.int/teams/immunization-vaccines-and-biologicals/policies/position-papers/polio
- 3. Bandyopadhyay AS, Zipursky S. A novel tool to eradicate an ancient scourge: The novel oral polio vaccine type 2 story. Lancet Infect Dis 2023;23(2):e67-e71.
- World Health Organization (WHO). Update on vaccine-derived poliovirus outbreaks - worldwide, January 2021-December 2022. Wkly Epidemiol Rec 2023;98(14):145-57. Available from: https://apps.who.int/iris/ handle/10665/366721
- World Health Organization (WHO). Fact Sheet: Vaccine-Derived Poliovirus, Global Polio Eradication Initiative. Available from: https://www. who.int/docs/default-source/documents/gpei-cvdpv-factsheet-march-2017.pdf?sfvrsn=1ceef4af_2
- GPEI. Two years since rollout of novel oral polio vaccine type 2 (nOPV2): How's it all working out? An interview with co-leads of GPEI's nOPV Working Group on nOPV2 field use to date. Available from: https://polioeradication.org/news-post/two-years-since-rollout-of-novel-oralpolio-vaccine-type-2-nopv2-hows-it-all-working-out. (Accessed date: 17.04.2023).
- Martin J, Burns CC, Jorba J, Shulman LM, Macadam A, Klapsa D, et al. Genetic characterization of novel oral polio vaccine type 2 viruses during initial use phase under emergency use listing - worldwide, March-October 2021. MMWR Morb Mortal Wkly Rep 2022;71(24):786-90.
- World Health Organization (WHO). Recommendation For An Emergency Use Listing (EUL) of Novel Oral Polio Vaccine Type 2 (nOPV2) Submitted by PT BIOFARMA (PERSERO). Available from: https://extranet.who. int/pqweb/sites/default/files/documents/nOPV2_EUL_recommendation_0.pdf
- 9. World Health Organization (20 April 2023). Circulating vaccine-derived poliovirus type 2 (Cvdpv2) Burundi. Available at: https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON457 (Accessed date: 24.04.2023).
- 10. GPEI. Statement on cVDPV2 detections in Burundi and Democratic Republic of the Congo (16 March 2023). Available from: https:// polioeradication.org/news-post/gpei-statement-on-cvdpv2-detections-in-burundi-and-democratic-republic-of-the-congo/ (Accessed date: 24.04.2023).
- 11. GOV.UK. Immunisation against infectious disease. Rotavirus: The Green Book, Part 2: The disease, vaccinations and vaccines, Rotavirus chapter 27b. Last update 27 November 2020. Available from: https://www.gov. uk/government/publications/rotavirus-the-green-book-chapter-27b (Accessed date: 12.04.2023).
- 12. RotaTeq[®]. Kısa Ürün Bilgisi, Onay Tarihi: 25.02.2019. Available from: https://www.titck.gov.tr/kubkt (Accessed date: 17.04.2023).
- 13. Rotarix[®]. Kısa Ürün Bilgisi, Onay Tarihi: 12.04.2023. Available from: https://www.titck.gov.tr/kubkt (Accessed date: 17.04.2023).
- 14. World Health Organization (WHO). Rotavirus vaccines: WHO position paper. Wkly Epidemiol Rec 2021;96(28):301-219. Available from: https://www.who.int/teams/immunization-vaccines-and-biologicals/policies/position-papers/rotavirus (Accessed date: 18.04.2023).