

contact with the person, ideally within 96 hours but potentially beneficial up to 10 days.⁴⁸ However, most experts limit this recommendation to varicella- or zoster-exposed children with HIV who are considered to be severely immunocompromised (i.e., CDC Immunologic Category 3 or Clinical Category C with a high HIV RNA plasma viral load and/or a Clinical Stage 3-defining opportunistic infection)⁴⁸ because varicella complications are not increased in such children. Some experts prefer to see these children on ART for ≥ 3 months and have a CD4 count $\geq 200/\text{mm}^3$.

Passive immunization is achieved with VariZIG, a liquid which, when properly reconstituted, is a 5% solution of hyperimmune Immunoglobulin G that can be administered intramuscularly. VariZIG is commercially available in the United States from a broad network of specialty distributors (list available on the [VariZIG website](#)). The incubation period for varicella may be prolonged up to 28 days after VariZIG administration, thus also extending the period of potential infectiousness. VariZIG may attenuate, but not prevent varicella, in which case the patient will be potentially infectious.⁴⁹ Subsequent active immunization, provided the vaccine is not contraindicated (and if varicella does not develop), should be delayed for 5 months. If VariZIG is not available, intravenous immune globulin (IVIG), 400 mg/kg body weight, administered once as soon as possible (ideally within 96 hours after exposure), can be used. However, the titer of anti-VZV antibodies of any specific lot of IVIG is uncertain because IVIG is not tested routinely for anti-VZV antibodies. Patients who have received the specified dose of IVIG within 3 weeks prior to varicella- or zoster-exposure should be protected. When passive immunization is not possible for severely immunocompromised patients, some experts recommend oral acyclovir for post-exposure prophylaxis (see below).

Post-Exposure Antiviral Prophylaxis

Several small studies suggest that post-exposure prophylaxis with oral acyclovir often prevents or attenuates varicella in healthy children,⁵⁰⁻⁵² although this approach is predicated on adequate specific immune responses developing in the exposed child during the incubation period. When passive immunization is not possible, some experts recommend prophylaxis with oral acyclovir 20 mg/kg body weight (maximum dose 800 mg), administered 4 times daily for 7 days, beginning 7 days to 10 days after exposure.⁵³ The use of acyclovir for prophylaxis in VZV-exposed children with HIV has not been studied. For that reason, while some experts would recommend post-exposure prophylaxis with acyclovir beginning 7 days to 10 days after exposure, other experts consider it prudent to wait until rash appears to start acyclovir therapy in VZV-susceptible, VZV-exposed, children with HIV who were not given passive immunization.

Post-Exposure Prophylaxis with Varicella Vaccine

Post-exposure prophylaxis with varicella vaccine has been successfully used in children and adults without HIV.⁵⁴ However, this preventive approach is predicated on a prompt and robust immune response, which is why it has not been studied in patients with HIV and is not recommended.

Treatment Recommendations

Treating Disease

Based on controlled trials in children with malignancies,^{55,56} and response to therapy in children with HIV severely ill with varicella,²² acyclovir is the drug of choice for treating varicella infections. Acyclovir should be initiated as soon as possible after varicella lesions appear. In immune competent children, new lesions can continue to appear for 72 hours after initiation of acyclovir and crusting of all lesions may take 5 days to 7 days. In children with HIV, intravenous (IV) acyclovir is recommended to treat varicella in those with severe immunosuppression (CDC Immunologic Stage 3) and those who have high fever, abdominal pain, respiratory symptoms, or numerous or deep, necrotic, or hemorrhagic skin lesions. For children aged <1 year, the dose of acyclovir is 10 mg/kg body weight administered IV every 8 hours as a 1-hour infusion. Some health care providers administer the same dose to older children, while others base the dose of acyclovir in older children on body surface area (500 mg/m² IV every 8 hours as a 1-hour infusion).⁵³ Administration is for 7 days to 10 days, provided at least 48 hours have elapsed since the appearance of new lesions. The decision may be made