



ABOUT LPV/R PELLETS

Why LPV/r Pellets are Recommended for Young Children

In 2015, the United States Food and Drug Administration tentatively approved a new formulation of lopinavir/ritonavir (LPV/r), a pediatric antiretroviral: [See Latest Research](#).

- The pellets are approved only for use in children 3 months or older and weighing 5 kilograms or more. See [Fact Sheet on Lopinavir and Ritonavir \(LPV/r\) Pellets \[PDF, 713KB\]](#).
- Caregivers should give infants and young children living with HIV LPV/r pellets two times each day. See [Weight Dosing Tool](#).
- For younger children, the pellets are easier to swallow than tablets. Both pellets and tablets must be swallowed fully intact. They cannot be stirred, broken, crushed, chewed, or dissolved.
- The pellets' taste can be masked by food or breast milk, unlike the LPV/r solution.
- The pellets do not require refrigeration unlike the LPV/r solution.

Current WHO-Recommended Pediatric Optimal First Line ART Regimen

	0 – 2 weeks old	2 weeks – 3 months old	3 – 36 months old
Preferred	AZT + 3TC + NVP	(ABC or AZT) + 3TC + LPV/r Solution	(ABC or AZT) + 3TC + LPV/r Pellets
Alternative	AZT + 3TC + NVP	AZT + 3TC + NVP	(ABC or AZT) + 3TC + LPV/r Pellets
Special circumstances	AZT + 3TC + NVP	(ABC or AZT) + 3TC + RAL	

3TC: lamivudine, ABC: abacavir, AZT: zidovudine, LPV: lopinavir, NVP: nevirapine, r: ritonavir, RAL: raltegravir

Children Eligible to Take Pellets

LPV/r pellets are appropriate for infants and children who:

1. **Weigh \geq 5 kilograms, and**
2. **Are \geq 3 months old, and**

3. Are able to swallow pellets that are taken with liquid (such as breast milk) or for older infants (beginning at age 6 months), are able to swallow pellets with age-appropriate soft foods that do not require chewing.

Appropriate LPV/r Formulations

The table below provides a side-by-side comparison to help determine the appropriate LPV/r formulation.

Side-by-Side Comparison of LPV/r Solution, Pellets, and Tablets

	Solution 80mg/20mg	Pellets 40mg/10mg	Tablet 100 mg/25mg
Who should get this formulation?	<ul style="list-style-type: none"> Patients weighing 3 kilograms or more. Patients who are 14 days or older. 	<ul style="list-style-type: none"> Patients weighing 5 kilograms or more. Patients who are 3 months or older. Patients who are able to swallow pellets. 	<ul style="list-style-type: none"> Patients weighing 10 kilograms or more. Patients who are able to swallow the whole tablet.
What are the advantages of this formulation?	<ul style="list-style-type: none"> Solution can be taken with or without food. 	<ul style="list-style-type: none"> Pellets do not need to be stored in a refrigerator like the LPV/r solution does. Pellets can be taken with age-appropriate soft food or liquid to ease administration. 	<ul style="list-style-type: none"> Tablets are heat stable and do not need to be stored at cold temperatures. Tablets can be taken with or without food.
What are the disadvantages of this formulation?	<ul style="list-style-type: none"> Solution has a very unpleasant taste. Solution should be stored in a refrigerator until given to the patient. 	<ul style="list-style-type: none"> Multiple capsules may be required for older children in a single dose. Caregivers may not be familiar with the required way to administer pellets. Pellets cannot be removed from their container. They will discolor, become brittle, and stick to your hands. Pellets must be taken whole. They cannot be stirred, broken, crushed, chewed, or dissolved. 	<ul style="list-style-type: none"> Tablets must be taken whole; they cannot be stirred, broken, crushed, chewed, or dissolved.

Additional Resources

- [Fact Sheet on Lopinavir and Ritonavir \(LPV/r\) Oral Pellets](#) [PDF, 713KB] IATT, UNICEF, and WHO fact sheet from September 2015 that provides simplified information to facilitate proper dosing and administration of lopinavir and ritonavir 40mg/10mg oral pellets.
- [Consolidated Guidelines on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection: Recommendations for a Public Health Approach](#) - Second edition:[PDF, 5.3MB] June 2016 guidelines that provide guidance on the diagnosis of human immunodeficiency virus (HIV) infection, the use of antiretroviral (ARV) drugs for treating and preventing HIV infection and the care of people living with HIV. They are structured along the continuum of HIV testing, prevention, treatment and care.