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Evaluating the Pegylated Interferons Used to Treat:

## **Hepatitis C**

Comparing Effectiveness, Safety, Side Effects, and Price

**Pegylated interferons are a class of drugs** used to treat hepatitis C virus infection, usually in combination with another medication called ribavirin. This combination is the treatment of choice because it's the most effective. But you should know that combination therapy is very expensive and can cause a wide range of side effects, some serious.

To help you and your doctor choose a pegylated interferon treatment if you need one, *Consumers Reports* has evaluated the drugs in this category based on their effectiveness, safety, and cost. This 2-page brief is a summary of a 19-page report you can access on the Internet at ConsumerReportsHealth.org/BestBuyDrugs. You can also learn about other drugs we've analyzed on this *free* Web site.

## DO YOU NEED PEGYLATED INTERFERON TREATMENT?

More than 4 million people in the U. S. are estimated to be infected with hepatitis C, a virus that attacks the liver and can lead to liver failure and even death. It is transmitted by contact with blood and other body fluids from an infected person, most often by sharing needles used for injecting illicit drugs like heroin. It can also be transmitted sexually, by contaminated needles used for tattoos and piercings, from mother to child during birth, and by accidental needle pricks occurring in health-care workers. People who received transfusions of blood products before 1992 are also at risk. The only way to know for certain you are infected is a blood test.

Pegylated interferon when combined with ribavirin is the most effective hepatitis C treatment, reducing the virus in the blood below detectable levels for at least six months in 55 to 60 percent of people. The likelihood of your treatment success may be higher or lower depending on the strain of virus you have. Although favorable evidence is growing, there isn't enough long-term research to know for certain if treatment decreases the risks from complications from chronic hepatitis C infection, such as liver cirrhosis, liver cancer, the need for liver transplantation, or death.

Our independent evaluations are based on scientific reviews conducted by the Oregon Health and Science University-based Drug Effectiveness Review Project. Grants from the Engelberg Foundation and the National Library of Medicine help fund Consumer Reports Health Best Buy Drugs. These materials were made possible by a grant from the state Attorney General Consumer and Prescriber Education Grant Program, which is funded by the multi-state settlement of consumer fraud claims regarding the marketing of the prescription drug Neurontin (gabapentin).

## **Our Recommendations**

There are two pegylated interferons available: peginterferon alfa-2a (Pegasys) and peginterferon alfa-2b (PegIntron). Neither is available as a generic, and neither has been shown to be clearly more effective or safer than the other. So the choice comes down to cost. Taking into account the evidence for effectiveness and safety, as well as cost, for people with chronic hepatitis C infection who meet the criteria for combination therapy, we have chosen the following as Consumer Reports Health Best Buy Drugs:

■ PegIntron + generic ribavirin tablets

Peglntron could save you \$72 to \$820 a month over Pegasys, depending on the formulation you need. Most people will be treated for at least 24 weeks—about five and half months—and potentially up to 48 weeks, or just over 11 months. So the average savings with Peglntron could be significant, from \$403 to \$4,592 over 24 weeks to \$806 to \$9,184 over 48 weeks. Generic ribavirin tablets are your best bet because they are significantly less expensive. A month's supply will save you \$600 to \$2,310 over brand name ribavirin tablets, depending on the dose.

The most common side effects of combination therapy include flu-like symptoms such as muscle aches, fever, fatigue, drop in red blood cell count (anemia), depression, diarrhea, nausea, a drop in white blood cell count (neutropenia), and rashes or other skin-related problems. Life-threatening or fatal problems are rare but include suicide, relapse of drug abuse or overdose, and liver failure. If you have any signs of liver failure or a history of serious mental disorders, including major depression, bipolar disorder, or psychosis, you might not be able to take these medicines.

Most doctors will not treat you with them if you drink alcohol or use illicit drugs. Ribavirin can cause birth defects, so you should not take it if you're pregnant or if you're a man whose partner is trying to become pregnant. And if you are treated with ribavirin, make sure to use reliable birth control while you're taking the drug and for six months afterward.

This report was published in July 2010.

	Pegylated Interferon Therapy-Cost Comparison <sup>1</sup>					
	Generic Name and Strength	Brand Name	Typical Dosing Schedule <sup>2</sup>	Cost per unit	Average cost per 30 days of use <sup>3</sup>	
	Pegylated interferon alfa-2a 180 mcg	Pegasys	180 mcg once weekly	\$929	\$3,716	
<b>5</b> BEST BUY	Pegylated interferon alfa-2b 50 mcg	PegIntron	1.5 mcg/kg once weekly	\$724	\$2,896	
<b>S</b> BEST BUY	Pegylated interferon alfa-2b 80 mcg	PegIntron	1.5 mcg/kg once weekly	\$746	\$2,984	
<b>S</b> BEST BUY	Pegylated interferon alfa-2b 150 mcg	PegIntron	1.5 mcg/kg once weekly	\$911	\$3,644	
BEST BUY	Pegylated interferon alfa-2b 240 mcg	PegIntron	1.5 mcg/kg once weekly	\$748	\$2,992	
<b>S</b> BEST BUY	Pegylated interferon alfa-2b 50 mcg	PegIntron Redipen	1.5 mcg/kg once weekly	\$798	\$3,192	
<b>S</b> BEST BUY	Pegylated interferon alfa-2b 80 mcg	PegIntron Redipen	1.5 mcg/kg once weekly	\$809	\$3,236	
<b>S</b> BEST BUY	Pegylated interferon alfa-2b 120 mcg	PegIntron Redipen	1.5 mcg/kg once weekly	\$804	\$3,216	
<b>5</b> BEST BUY	Pegylated interferon alfa-2b 150 mcg	PegIntron Redipen	1.5 mcg/kg once weekly	\$891	\$3,564	
	Ribavirin					
	Ribavirin 200 mg tablet	Copegus	800 mg - 1,400 mg daily	\$20	\$2,400 - \$4,200	
<b>BEST</b>	Ribavirin 200 mg tablet	Ribasphere (Branded generic)	800 mg - 1,400 mg daily	\$9	\$1,080 - \$1,890	
<b>S</b> BEST BUY	Ribavirin 200 mg tablet	Generic	800 mg - 1,400 mg daily	\$9	\$1,080 - \$1,890	
	Ribavirin 200 mg capsule	Rebetol	800 mg - 1,400 mg daily	\$14	\$1,680 - \$2,940	
	Ribavirin 200 mg capsule	Ribasphere (Branded generic)	800 mg - 1,400 mg daily	\$12	\$1,440 - \$2,520	
	Ribavirin 200 mg capsule	Generic	800 mg - 1,400 mg daily	\$10	\$1,200 - \$2,100	

<sup>1.</sup> Prices per dose and monthly costs are derived from national average retail costs for March 2009 through February 2010, rounded to the nearest dollar. Information is derived by Consumer Reports Health Best Buy Drugs from data provided by Wolters Kluwer Pharma Solutions. Wolters Kluwer is not involved in our analysis or recommendations.

2. As recommended on labeling.

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## Combination Therapy with Pegylated Interferon and Ribavirin for Chronic Hepatitis C Virus Infection

Generic Name and Dose	Brand Name	Comments/Special Notes
Pegylated interferon alfa-2a - 180 mcg once weekly for up to 48 weeks	Pegasys	<ul> <li>No generic form available</li> <li>Supplied in vials or in prefilled syringe</li> <li>Fixed dosing</li> <li>Approved for use in combination with Copegus (ribavirin)</li> </ul>
Pegylated interferon alfa-2b - 1.0 or 1.5 mcg/kg once weekly for up to 48 weeks	PegIntron	<ul> <li>No generic form available</li> <li>Supplied in vials or in Redipen delivery system</li> <li>Weight-based dosing</li> <li>Approved for use in combination with Rebetol (ribavirin)</li> </ul>

<sup>3.</sup> Average monthly cost of pegylated interferons is based on one injection per week for a total of 4 injections per 30 days.