

[Ribavirin](#)

Essential medicine status

Section:

[6. Anti-infective medicines](#) [6.4. Antiviral medicines](#) [6.4.4. Antihepatitis medicines](#) [6.4.4.2. Medicines for hepatitis C](#)
[6.4.4.2.3. Medicines for hepatitis C > Other antivirals for hepatitis C](#)

ATC codes: [J05AP01](#)

Indication

Chronic hepatitis C ICD11 code: [1E91.1](#)

INN

Ribavirin

Medicine type

Chemical agent

List type

Core

Additional notes

For the treatment of hepatitis C, in combination with direct acting anti-viral medicines

Formulations

Parenteral > General injections > IV: 1000 mg per 10 mL phosphate buffer solution ; 800 mg per 10 mL phosphate buffer solution

Oral > Solid: 200 mg ; 400 mg ; 600 mg

EML status history

First added in 2013 ([TRS 985](#))

Sex

All

Age

Adolescents and adults

Therapeutic alternatives

The recommendation is for this specific medicine

Patent information

Patents have expired in most jurisdictions

Read more [about patents](#).

Wikipedia

[Ribavirin](#)

DrugBank

[Ribavirin](#)

Summary of evidence and Expert Committee recommendations



Globally, approximately 150 million people are infected with hepatitis C and it is estimated that 350 000 people die each year from hepatitis C-related liver disease (1). The goal of therapy is to produce a sustainable virological response (SVR) which can potentially result in the reversal of liver injury and can prevent serious consequences such as cirrhosis, end-stage liver disease, hepatocellular carcinoma and death. When compared with standard interferon-alfa alone, interferon-alfa in combination with ribavirin increased the SVR from 10–20% to 40–60% (2, 3). The long-acting pegylated formulation in combination with ribavirin has further increased SVR rates to 50–60% for genotype 1 and to 80% for genotypes 2 and 3 (4, 5). A recent meta-analysis showed that treatment success rates in low- and middle-income countries were similar to those obtained in high-income countries (6). Head-to-head randomized controlled trials – including the large randomized IDEAL trial (n = 3070) – demonstrated similar SVR rates for peginterferon alfa-2a and alfa-2b (41% versus 39% in IDEAL) in combination with ribavirin (7). While peginterferon alfa-2a or alfa-2b in combination with ribavirin has been the standard of care for chronic hepatitis C, the new direct-acting oral antiviral agents (sofosbuvir and ledipasvir) are more effective but more expensive (8, 9). The Expert Committee noted that there are several more direct-acting antivirals in development. Pegylated interferons + ribavirin are associated with a range of adverse events that often require dose reduction and discontinuation. Adverse events that resulted in treatment termination were reported in 39 studies and were present in 4% (95% CI: 3–5) (6). Peginterferon alfa-2a and alfa-2b appear to be similarly tolerated (3). Before treatment patients must be screened, RNA measurements and genotyping (which require high-level laboratory support) must take place, and facilities are required for liver biopsy and for detecting and managing complications. WHO is developing guidelines for the screening, care and treatment of hepatitis C. Other expert bodies such as NICE (10), the European Association for the Study of the Liver (11) and the American Association for the Study of Liver Diseases (12) recommend peginterferon alfa-2a or alfa-2b with ribavirin for treatment of hepatitis C. Ribavirin was already listed in the EML and EMLc for viral haemorrhagic fevers. The Expert Committee agreed on the public health need for these medicines and, because of the high level of expertise and facilities needed and the high cost, decided to list pegylated interferon alfa-2a and alfa-2b in the complementary list, to be used with ribavirin for treatment of hepatitis C when these products are available. The Expert Committee stressed the need to follow the development of direct oral hepatitis C protease inhibitors and to consider applications for triple therapy or all-oral options for the treatment of hepatitis C. References: 1. Hepatitis C (WHO Fact Sheet, No. 164). Geneva: World Health Organization; 2010 (<http://www.who.int/mediacentre/factsheets/fs164/en/>, accessed 28 December 2013). 2. Foster G, Mathurin P. Hepatitis C virus therapy to date. *Antivir Ther*. 2008;13 Suppl 1:3-8. PMID:18432157 3. Foster GR. Pegylated interferons for the treatment of chronic hepatitis C: pharmacological and clinical differences between peginterferon-alfa-2a and peginterferon-alfa-2b. *Drugs*. 2010;70(2):147-65. <http://dx.doi.org/10.2165/11531990-000000000-00000> PMID:20108989 4. Zeuzem S, Hultcrantz R, Bourliere M, Goeser T, Marcellin P, Sanchez-Tapias J, et al. Peginterferon alfa-2b plus ribavirin for treatment of chronic hepatitis C in previously untreated patients infected with HCV genotypes 2 or 3. *J Hepatol*. 2004;40(6):993-9. <http://dx.doi.org/10.1016/j.jhep.2004.02.007> PMID:15158341 5. Hadziyannis SJ, Sette H Jr, Morgan TR, Balan V, Diago M, Marcellin P, et al.; PEGASYS International Study Group. Peginterferon-alfa2a and ribavirin combination therapy in chronic hepatitis C: a randomized study of treatment duration and ribavirin dose. *Ann Intern Med*. 2004;140(5):346-55. <http://dx.doi.org/10.7326/0003-4819-140-5-200403020-00010> PMID:14996676 6. Ford N, Kirby C, Singh K, Mills EJ, Cooke G, Kamarulzaman A, et al. Chronic

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