

Difference Between Pegasys and Pegintron

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Key Difference - Pegasys vs Pegintron

As a result of the development of biotechnology in the field of pharmaceuticals, various types of drugs are developed with the intention of effectively treating different fatal disease conditions with fewer side effects. Pegasys which comes as the brand name of Peginterferon Alfa 2A, is a drug that is produced for the treatment of hepatitis. Pegintron is the brand name of Peginterferon Alfa 2B that is produced for treating skin cancers (melanoma) and hepatitis. **Pegasys is used for the treatment of Hepatitis B and C whereas, Pegintron is used for the treatment of melanoma and hepatitis C except for Hepatitis B.** This is the **key difference** between Pegasys and Pegintron.

What is Pegasys?

In the context of pharmaceuticals, Pegasys is a drug that is used for the treatment of Hepatitis B and Hepatitis C. It is also known as Peginterferon alpha-2a. Pegasys is the brand name of Peginterferon alpha-2a. It is a drug that belongs to the interferon family. Interferons are proteins which are released by the immune system during an infection caused by viruses. It also involves in the regulation of the immune system during infections. Pegasys is known as Pegylated interferon alpha 2a as well. The drug is pegylated that prevents the breakdown of the drug. A compound of it could be pegylated by the covalent or noncovalent bonding of polyethylene glycol.

During the treatment procedures of Hepatitis C, Pegasys is provided as a combination therapy with Ribavirin in order to boost its effects. But Ribavirin is not used during the treatment of pregnant women. The treatment procedure for Hepatitis B is different to that of Hepatitis C. In Hepatitis B, Pegasys is provided alone, not as a combined drug. The drug is injected under the skin during both treatment procedures.

In the United States, the medical use of Pegasys was approved in the year 2001 by the World Health Organization as a safe drug. It is used worldwide for the treatment of chronic hepatitis C which is diagnosed in individuals with HIV or cirrhosis. Pegasys also has several side effects. The side effects could arise under mild conditions such as headaches, nausea, fatigue or it may develop into fatal side effects such as psychosis, autoimmune disorders, the frequent occurrence of infections and blood clots.

What is Pegintron?

Pegintron is a drug which is used in the treatment of Hepatitis C and Melanoma. Melanoma is commonly referred to as skin cancer where the tumor cell is originated at the melanocytes which involve in the production of melanin. Pegintron is the brand name of Peginterferon alpha-2b. The drug belongs to the interferon family.

Since it is an interferon, it acts effectively during a viral infection that develops under intracellular conditions that compromises the immune system. Pegintron involves in the regulation of the immunity system. This drug is also known as Pegylated alpha 2b since the drug is pegylated; bonded to polyethylene glycol by covalent and noncovalent bonds. This prevents the breakdown of the drug.

During Hepatitis C treatment, pegintron is provided to the patients as a combined therapy with Ribavirin. This combination therapy has proved to be effective in Hepatitis C rather than providing pegintron alone. But this differs from the treatment of melanoma. During melanoma treatment, pegintron is provided as a single drug.



Figure 02: Melanoma

Pegintron causes fewer mild side effects such as nausea, pain at the site of injection, fever and hair loss. The symptoms might develop into fatal conditions such as psychosis, thrombosis (formation of blood clots) and liver problems. It may also lead to irregular heartbeats. Pegintron drug utilizes the JAK-STAT signaling pathway as its mechanism of action. This causes programmed cell death and apoptosis at the final stage. Pegintron has the ability to transcribe several genes and to produce a multifunctional immunoregulatory cytokine. This cytokine leads to the development of type II T helper cells which enhances the production of antibodies by B cells.

What are the Similarities Between Pegasys and Pegintron?

- Both are drugs that are commonly used in the treatment for Hepatitis with ribavirin.
- Both can cause mild side effects such as fatigue, nausea and headache and also fatal side effects such as psychosis and thrombosis.

What is the Difference Between Pegasys and PegINTRON?

Pegasys vs PegINTRON	
Pegasys is a drug that is used in the treatment of Hepatitis B and Hepatitis C.	PegINTRON is a drug that is used in the treatment of Hepatitis C and Melanoma.
Fatal Side effects	
Autoimmune disorders	Irregular heartbeats
Common Names	
Peginterferon Alfa 2A, Pegylated Alfa 2A	Peginterferon Alfa 2B, Pegylated Alfa 2B

Summary - Pegasys vs PegINTRON

During the treatment of Hepatitis C and Hepatitis B, Pegasys is used. Pegasys is the brand name of Peginterferon Alfa 2A. Hepatitis C is treated as a combination therapy with Peginterferon Alfa 2A and Ribavirin. Pegasys is provided as a single drug during treatment of Hepatitis B. PegINTRON is the brand name of Peginterferon Alfa 2B. It is used in the treatment of Hepatitis B and Melanoma. Both drugs are pegylated in order to prevent breakdown. PegINTRON is also combined with ribavirin during Hepatitis C treatment and is provided as a single drug for melanoma. Both Pegasys and PegINTRON contain similar side effects such as fever, nausea, headache, thrombosis, and psychosis. This can be highlighted as the difference between Pegasys and PegINTRON.

Reference

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1. '[Melanoma](#)' By National Cancer Institute (Public Domain) via [Commons Wikimedia](#)

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