

Difference Between Peginterferon Alfa 2A and 2B

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Key Difference - Peginterferon Alfa 2A vs 2B

In the field of pharmaceuticals, different drugs are developed for different disease conditions. They are developed through research-based evidence which causes the drug to be very effective on the particular disease condition with fewer side effects. Peginterferons are widely available in the market as Peginterferon Alfa 2A and Peginterferon Alfa 2B. **Peginterferon Alfa 2A is used in the treatment procedures for Hepatitis B, and C and Peginterferon Alfa 2B is used for the treatment of Melanoma and also for Hepatitis C but not Hepatitis B.** This is the **key difference** between Peginterferon Alfa 2A and 2B.

What is Peginterferon Alfa 2A?

In the context of different medication used in the treatment of Hepatitis B and Hepatitis C, Peginterferon alfa-2a is widely used amongst them. Peginterferon alfa-2a is also referred as pegylated interferon alfa-2a. This belongs to alfa interferon family, and it is pegylated in order to prevent the breakdown of the medication. In the field of pharmaceuticals, this product is sold under the brand name Pegasys. Peginterferon alfa-2a is an interferon. In the context of immunology, interferons are considered as proteins that are released in response to a viral infection. Interferons act on viruses and thereby prevent the compromising of the immune system.

In the treatment of Hepatitis C, combination therapy of Peginterferon alfa-2a and ribavirin is practiced. It has been found out that the combination therapy treatment is much more effective rather than providing Peginterferon alfa-2a alone. The use of ribavirin combined therapy during pregnancy is strictly prohibited. But in the disease condition Hepatitis B, Peginterferon alfa-2a is provided alone and not as combination therapy. During the treatment of both Hepatitis B and Hepatitis C, the therapeutic is injected under the skin.

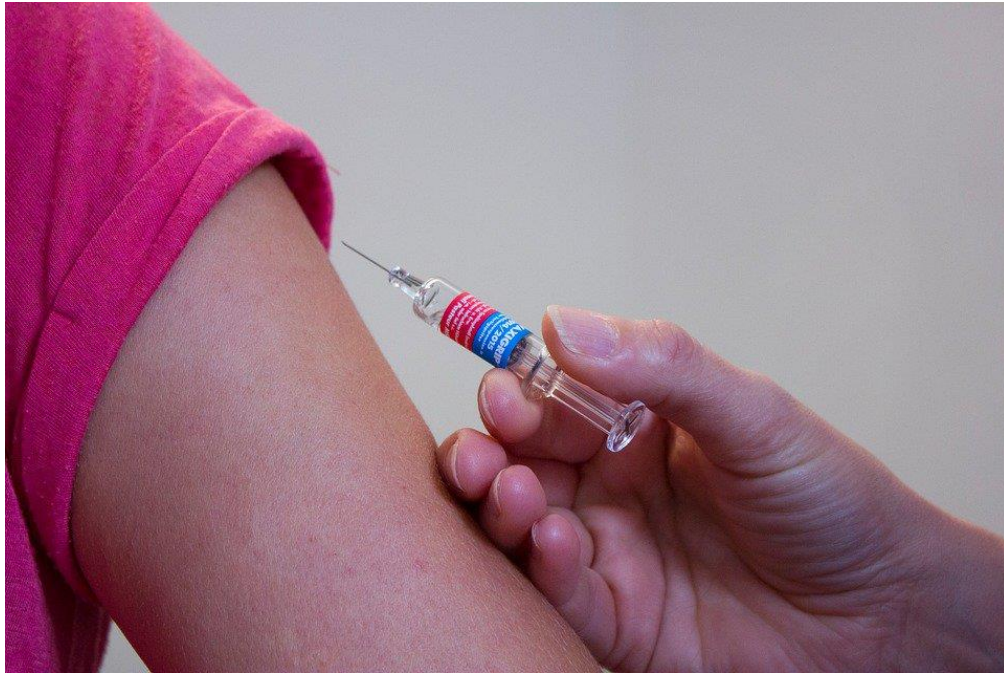


Figure 01: Peginterferon Alfa 2A vaccination

In the United States, Peginterferon alfa-2a was approved for medical use in the year of 2002 by the World Health Organization. Also, this drug is approved worldwide for the treatment of chronic hepatitis C which includes immuno-compromised individuals with HIV and cirrhosis as a co-infection. As of most of the drugs, Peginterferon alfa-2a has its set of common side effects. This includes nausea, fatigue, headache, hair loss. The side effects also could be at severe levels which include psychosis, infections, blood clots and autoimmune disorders.

What is Peginterferon Alfa 2B?

Peginterferon alfa-2b is utilized in the treatment of Hepatitis C and Melanoma. Similar to Peginterferon alfa-2a, Peginterferon alfa-2b is given as a combined drug with ribavirin during the treatment of Hepatitis C. During the condition of melanoma, it is given as a chemotherapeutic once the surgery is completed. During both treatment methods, the drug is injected under the skin. Peginterferon alfa-2b is an interferon which belongs to the alfa interferon family and involves in the elimination processes when the host cells are infected by viruses.

Peginterferon alfa-2b consists of common side effects such as nausea, pain at the site of injection, hair loss and sometimes fever. The side effects may be fatal which results in psychosis, problems in the liver, formation of blood clots and occurrence of irregular heartbeats.

Peginterferon alfa-2b utilizes JAK-STAT signaling pathway as the major mechanism of action. Through a series of reactions, cell differentiation will take place will finally lead to apoptosis; programmed cell death. Peginterferon alfa-2b has the ability to transcribe several genes in order to act as a multifunctional cytokine which is immunoregulatory. This multifunction cytokine involves in many immune mechanisms utilizing different cells which include the inducing of T helper cells to develop into type II T helper cells which maximize

the stimulation of B cells and increase the production of antibodies against the specific antigen which is non self.

What are the Similarities Between Peginterferon Alfa 2A and 2B?

- Both drugs are used to treat Hepatitis C
- Both drugs have common side effects such as nausea, fatigue, and headache
- Both drugs have common fatal side effects such as psychosis and thrombosis.

What is the Difference Between Peginterferon Alfa 2A and 2B?

Peginterferon Alfa 2A vs Peginterferon Alfa 2B	
Peginterferon Alfa 2A is an interferon which is utilized in the treatment of Hepatitis B and C.	Peginterferon Alfa 2B is a drug which is utilized in the treatment of Hepatitis C. and Melanoma
Alternative names	
Pegasys, Pegylated Alfa 2A	Pegintron, Pegylated Alfa 2B
Fatal Side effects	
Autoimmune disorders	Irregular heartbeats

Summary - Peginterferon Alfa 2A vs 2B

Peginterferon Alfa 2A is used for the treatment of Hepatitis C and Hepatitis B. It is present in under the brand name Pegasys. Peginterferon Alfa 2A is combined with Ribavirin during the treatment of Hepatitis C. But it is provided as a single drug for Hepatitis B. Peginterferon Alfa 2B is utilized during treatment for Hepatitis C and melanoma. Similar to Peginterferon Alfa 2A in hepatitis C treatment, Peginterferon Alfa 2B is used as a combined drug with ribavirin. Both drugs possess common side effects such as fatigue and headache, psychosis and thrombosis.

Reference:

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