

# Intravenous Immunoglobulin (IVIG)

Intravenous Immunoglobulin (IVIG) is a therapy treatment for patients with antibody deficiencies. It is prepared from a pool of immunoglobulins (antibodies) from the plasma of thousands of healthy donors. Immunoglobulins are made by the immune system of healthy people for the purpose of fighting infections. While IVIG is derived from plasma (a blood product), it is so purified that the chances of contracting a blood-borne infection are extremely low.

Unlike many of the medications prescribed by rheumatologists, IVIG does not increase the risk for infection. IVIG works in different ways to prevent the body from attacking itself and to decrease several types of inflammation in the body. It is considered safe for use during pregnancy and breastfeeding.

IVIG is used for certain rheumatologic diseases including [Kawasaki's disease](#) in children. It also may be employed in the treatment of inflammatory muscle diseases including dermatomyositis, polymyositis, and [juvenile dermatomyositis](#). It may be used for very low platelet counts (idiopathic thrombocytopenic purpura) in those with systemic lupus erythematosus. It can be useful in the treatment of several other conditions of immunodeficiency as well.

## How to Take It

IVIG is given as an intravenous infusion (through the vein in the arm), which takes several hours to complete. Frequency of infusions vary according to the patient's need. It may be given as a one-time infusion (such as for Kawasaki's disease). For other diseases, it may be given from anywhere between one to five days on a monthly basis. Frequency and duration of infusions depend on the underlying disease and the clinical course. IVIG can take several weeks to fully take effect. The dosing of IVIG also varies dependent on the condition being treated, but usually is based on body weight. In these diseases, IVIG therapy generally involves the use of 2 g/kg administered over either two or five consecutive days.

Currently there are formulations of immunoglobulin that can be administered under the skin (subcutaneous, or SCIG) if the intravenous option is not viable.

## Side Effects

The majority of people do well with IVIG, experiencing only minor side effects. IVIG may cause infusion reactions, which may present as fevers, chills, flushing, rash, muscle aches, and nausea. Headaches are also relatively common. These are generally not severe and improve with analgesics and antihistamines.

Rarely, IVIG may cause aseptic meningitis (inflammation of the lining of the brain without an infection). The use of medications like steroids, non-steroidal anti-inflammatories ([NSAIDs](#)), acetaminophen, and diphenhydramine, and staying well hydrated can help to prevent these complications. Among patients who have certain forms of IgA deficiency, a severe allergic reaction to IVIG can occur.

In formulations of IVIG with a high sugar content, the sugar level in the blood may be affected transiently following an infusion. This can often be avoided by slowing down the infusions and hydrating the body well.

Additionally, because the medication has a large volume, it may worsen heart failure and may cause the blood pressure to be elevated temporarily. IVIG also increases the risk for blood clots slightly when given in high doses.

## Tell Your Rheumatology Provider

If you develop a severe reaction (difficulty breathing, chest tightness, wheezing, rash, fevers) or if you have severe and persistent headaches with neck stiffness, nausea and vomiting, tell your rheumatology provider. While some reactions may occur while IVIG is being administered, others occur within a few hours to days after the infusion.

While vaccines are not contraindicated while on therapy with IVIG, your body may not be able to fully respond to the vaccines. Talk to your rheumatology provider about the best time to receive immunizations. In addition, certain blood tests (that rely on checking for an antibody in the blood) performed while on therapy with IVIG may be inaccurate.

*Updated February 2022 by Mohammad Ursani, MD, and reviewed by the American College of Rheumatology Communications and Marketing Committee.*

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