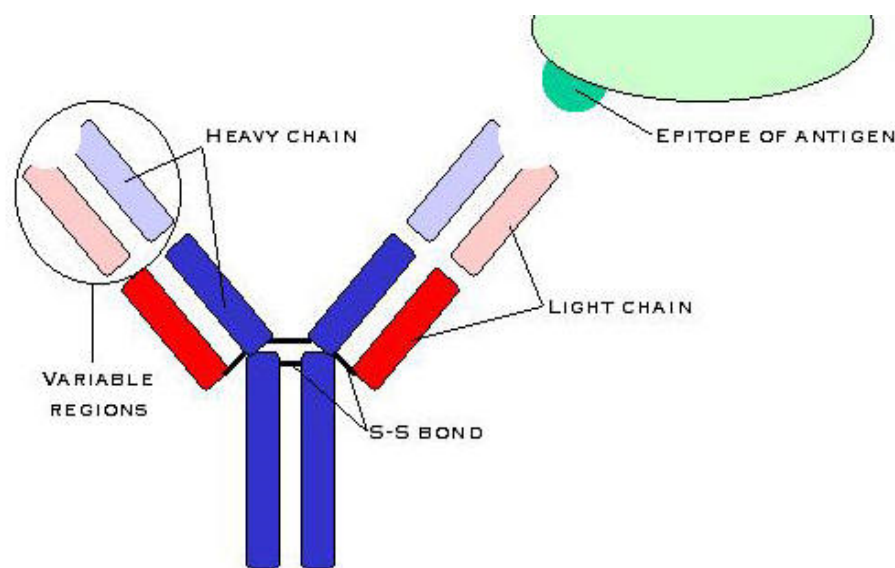


[Go to our Home page](#) [Go to the main IVIg page](#) (Updated information must read ON THE MAIN PAGE).

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IVIg page from CIDPUSA where key facts of IVIg are described, we provide you with the most comprehensive coverage about IVIg through our main page.



What is IVIG (Intra Venous Immune Globulin) 20 Facts

1. What is IVIG or Intravenous Immune Globulin?

IVIg is a collection of Y shaped antibodies called IgG as shown in the above cartoon.

IVIg is a plasma product formed by taking antibodies from about 20,000 donors and mixing them together. IVIg has proven effective in several immune system disorders, including nearly all autoimmune conditions even CIDP and GBS. The sooner you can treat the patient with IVIg the better the results. There is a window of opportunity usually within the first 18 months during which IVIg administration is ideal. The longer you wait to treat with IVIg the longer it will take for IVIg to work.

After being exposed to toxins and poisonous chemicals including carbon monoxide the body's immune system may mount an attack on the body. This autoimmune attack can be reduced by IVIG.

2. How does IVIG work?

For immune deficiency where the body does not make enough antibodies, IVIG supplies them. For autoimmune disorders like GBS & CIDP, there is an abnormal autoantibody being formed which is inactivated by IVIG.

Patients with autoimmune disorders like CIDP also are deficient in antiidotype antibodies. IVIG has antiidotype antibodies and thus helps improve the patient's condition. Antiidotype antibodies are normal antibodies which are produced in the absence of any antigen. They are capable of inactivating many different types of antigens. IVIg has a higher concentration of antiidotype antibodies.

3. How long does it take to a IVIG treatment to have an effect?

After IVIg infusion, patients may see a response in their disease within 24- 48 hours. Some patients will have to wait 3-4 weeks to see an effect after IVIg. In a few no effect may be seen following IVIg infusion. If 4-5 cycles of IVIg do not show any response then try a different approach like plasmapheresis, cytotoxic or immune suppressants. The NIH recommends that if no response is seen with IVIg infusions, then add steroids to the treatment plan.

Everyone is slightly different as it depends on how long has the disease process been going on. The sooner one treats the disease with IVIg the faster the response. No one can predict how a particular patient will respond to IVIg.

4. Why is IVIG so expensive?

IVIg is obtained from plasma, donors are paid then the plasma is sent to a processing centers for mixing, antibody removal, chemical treatment and filtration to remove viruses. This is followed by the products to be freeze dried. All this ends up for IVIG to be priced at \$ 48 to \$ 68 a gram. A single IVIg infusion costs about \$3000 for a child and 10,000 for an adult. For a child the cost of IVIg is low because only a few grams are used. The price of IVIg in India is \$25 a gram. In Pakistan IVIg costs 20 a gram. IVIg can be bought from China at 45-10 A Gram.

5. How is IVIG administered?

IVIG is mixed in a bag and a tube runs from it to a vein usually in the arm. The recommended way to infuse IVIg includes a pump. Usually IVIg is given at a rate of 100 cc/ hour to 200 cc/ hour.

The rate is of IVIg is reduced for any problems such as headaches, rash, fatigue, hypertension or hypotension. For an adult's infusion of IVIg is usually given over 5 to 6 hours. Dr Dalakas mentioned in his study that precise control of IVIG infusion is required. Dr Engle at USC recommends a rate of 100cc/hr of a 7.5% solution.

6. What are the common side effects OF IVIG?

Some times patients get a headache after IVIg which is more common in females with a history of Migraines or SLE. Patients may experience fatigue similar to getting a Flu, which is due to antibodies interaction. Some patients get a rash after IVIg and it is recommended they take Benadryl or even steroids to avoid this. Remember there are a lot of antibodies in IVIg and some may result in odd reactions. After IVIg if odd symptoms are seen then use of steroids usually helps. Some people experience changes in blood pressure and others may have a severe headache called aseptic meningitis.

7. How can one reduce the side effects of IVIG?

Remember to drink eight glasses of water a day for hydration before starting the IVIG treatment and continuing this a month after the last IVIg infusion. Also remember to take a baby aspirin to prevent thrombophlebitis after IVIg. Patients need to check with their doctors if they can use aspirin and should not take this if they are on coumadine or have bleeding disorders. Doctors do not recommend that you use this if you have a history of stomach ulcers. Doctors use Premedication to help reduce side effects. Some recommend that one should take Tylenol or other NSAID for prevention of headaches and pains after IVIg. Physicians may use a benadryl capsule for a rash and even to relax during the treatment. Physicians may use low dose prednisone will reduce side effects like headaches.

8. Where is the IVIG treatment given?

IVIg can be given at home, in a doctors clinic or a hospital outpatient unit. Some patients have

even taken this at work.

9. What is the frequency of the IVIG treatment given?

Usually a dose of IVIg is 2 grams per kilogram is divided into five doses and 400mg/kg is infused daily for 5 days. (For the first time only) Some patient can tolerate consecutive days of IVIg. It is recommended that young women take this on alternate days.

This is followed by a monthly infusion of IVIG at 400mg/kg.

Dr Dalakas at NIH recommends IVIG at 2g/kg /Month . For use in all autoimmune neurological disorders.

10. What are the differences in brands of IVIG?

Generally the difference is in IVIg is the amount of IgA content and also if the IVIg contains sucrose, glucose or some other sugar. Some IVIg products have Glycine while another one has no preservatives.

Different IVIg products match different patients. In general all the products work about the same.

11. What is a recall OF IVIG?

A recall of IVIg happens when someone reports defects in IVIg, side effects of a particular batch. Then the FDA may issue a warning or a recall of IVIg. This may also depend on contamination of IVIg .

12. Where can I find out about recalls of IVIG?

The FDA in the US maintains a current list of blood-product recalls on its site. This is because its members use so many different types of blood products, and generally store them in quantity. Look under Biologics and then recalls near the middle of page. <http://www.fda.gov/cber/recalls.htm>

13. Who is a good provider for IVIG?

There are many nationwide providers of IVIG. . Some provide customized service for the patient. They select the correct IVIG for the patient. They manage side effects . Their nurses are well trained. They will also work with you on CO-PAYS and disease management.

Email us for a nationwide IVIG provider.

14. What is the recommended dose of IVIg as compared to age?

Children can tolerate a higher dose of IVIg and the whole 3g/kg dose of IVIg has been given without side effects as a single infusion. Young adults up to 25 years of age can tolerate 1g/kg as a single infusion. Up to age 50 only 400mg /kg is recommended in one day .

When dealing with above 70 year old patients we recommend not to infuse more then 400mg/kg in one week.

15. What is the right IVIG product for me?

Patients need to understand the differences among the IVIg products, and many factors need to be taken into consideration when deciding which IVIG product should be prescribed. Some examples of the factors include:

- Patients with congestive heart failure or compromised renal function may fare better if they receive a IVIg product with a low osmolality and low volume;
- Patients who are diabetic should receive a IVIg product containing no sugars;
- Patients receiving IVIg with sucrose may be at a higher risk for renal failure; (Need adjustment of concentration). Also patients who have Myositis and high myoglobin levels are at higher risk of developing renal failure while on IVIg infusion.
- Patients with immunoglobulin A (IgA) deficiencies should only receive products with the lowest amount of IgA or they could have anaphylactic reactions;
- Patients with small peripheral vascular access or a tendency toward phlebitis may want to avoid IVIg preparations with a low pH.

16. Who is a good provider for IVIG?

There are many nationwide providers of IVIG. Please contact us for a good one near you.

17. What diseases is IVIG being used for?

Some of the common autoimmune diseases include Alzheimer's, Narcolepsy, Multiple Sclerosis, Heart Disease, Lupus, forms of encephalitis, CIDP, autism, Transverse Myelitis, Brachial neuritis, Fibromyalgia & Chronic Fatigue Syndrome. (studies are available which show IVIg is effective in these conditions). If you need more info then go to the main page of IVIg on the CIDPUSA web site There you will find links to other pages providing all the details of IVIg.

18. What is an alternative to IVIg?

If you cannot get IVIg there are alternatives available, colostrum is a natural product which also contains IgG and antibodies, the best colostrum would be freshly obtained liquid. Weaker forms will be the powder forms.

19. Can infections be transferred from IVIG?

IVIG has been involved in the spread of some cases, then FDA took steps to and IVIg producers followed instructions and No further cases of Infection have been reported since the year 2000.

20. Can a cold vial of IVIg be infused in a patient ?

Yes this is often done but cold IVIg infusion can cause problems, like blocked IVIg filters, more IVIg reactions, it is best to give IVIg at body temperature.

21. What diseases is IVIG approved for use by FDA, (MEANS YOUR INSURANCE CANNOT DENY THIS IVIG TREATMENT)

the US Food and Drug Administration has approved the use of IVIG for the following 6 conditions:

- Primary immunodeficiencies IVIg is approved by FDA
- Immune-mediated thrombocytopenia IVIg is approved by FDA
- Kawasaki disease IVIg is approved by FDA
- Hematopoietic stem cell transplantation in patients older than 20 years (Gamimune-N only) IVIg is approved by FDA
- Chronic B-cell lymphocytic leukemia IVIg is approved by FDA
- Pediatric HIV type 1 infection IVIg is approved by FDA

23 What other conditions can IVIg be used for?

- Aplastic anemia is treated with IVIg
 - Pure red cell aplasia is treated with IVIg
 - Diamond-Blackfan anemia is treated with IVIg
 - Autoimmune hemolytic anemia is treated with IVIg
 - Hemolytic disease of the newborn is treated with IVIg
 - Acquired factor VIII inhibitors is treated with IVIg
 - Acquired von Willebrand disease is treated with IVIg
 - Immune-mediated neutropenia is treated with IVIg
 - Refractoriness to platelet transfusion is treated with IVIg
 - Neonatal alloimmune/autoimmune thrombocytopenia is treated with IVIg
 - Posttransfusion purpura is treated with IVIg
 - Thrombotic thrombocytopenia purpura/hemolytic uremic syndrome is treated with IVIg
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- IVIg is used insolid organ transplantation, surgery, trauma, burns, and HIV infection.
 - Epilepsy is treated with IVIg
 - IVIg is used in Chronic inflammatory demyelinating polyneuropathy and Guillain-Barré syndrome
 - Myasthenia gravis is treated with IVIg
 - Lambert-Eaton myasthenic syndrome is treated with IVIg
 - Multifocal motor neuropathy is treated with IVIg
 - Multiple sclerosis is treated with IVIg
 - Wegener granulomatosis: is treated with IVIg
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- IVIG is used for recurrent pregnancy loss.
 - Asthma is treated with IVIg
 - Rheumatoid arthritis is treated with IVIg
 - Systemic lupus erythematosus is treated with IVIg
 - Systemic vasculitis treated with IVIg
 - Dermatomyositis, polymyositis are treated with IVIg
 - Inclusion-body myositis is treated with IVIg
 - Amyotrophic lateral sclerosis is treated with IVIg
 - Behçet syndrome is treated with IVIg
 - Acute cardiomyopathy is treated with IVIg
 - Chronic fatigue syndrome is treated with IVIg
 - Congenital heart block is treated with IVIg
 - Cystic fibrosis is treated with IVIg
 - Autoimmune blistering dermatosis is treated with IVIg
 - Diabetes mellitus is treated with IVIg
 - Acute idiopathic dysautonomia is treated with IVIg
 - Acute disseminated encephalomyelitis is treated with IVIg
 - Endotoxemia of Pregnancy is treated with IVIg
 - Hemolytic transfusion reaction is treated with IVIg
 - Hemophagocytic syndrome is treated with IVIg
 - Acute lymphoblastic leukemia is treated with IVIg
 - Lower motor neuron syndrome is treated with IVIg
 - Multiple myeloma is treated with IVIg
 - Human T-cell lymphotropic virus-1–associated myelopathy are treated with IVIg
 - Nephritic syndrome is treated with IVIg
 - Membranous nephropathy is treated with IVIg
 - Nephrotic syndrome is treated with IVIg
 - Euthyroid ophthalmopathy is treated with IVIg

- Opsoclonus-myoclonus is treated with IVIg
- Recurrent otitis media is treated with IVIg
- Paraneoplastic cerebellar degeneration is treated with IVIg
- Paraproteinemic neuropathy is treated with IVIg
- Parvovirus infection is treated with IVIg
- Polyneuropathy, organomegaly, endocrinopathy, M-protein, and skin changes (POEMS) syndrome
- Progressive lumbosacral plexopathy is treated with IVIg
- Lyme radiculoneuritis is treated with IVIg
- Rasmussen syndrome is treated with IVIg
- Reiter syndrome is treated with IVIg
- Acute renal failure is treated with IVIg
- Thrombocytopenia is treated with IVIg
- Streptococcal toxic shock syndrome is treated with IVIg
- Uveitis is treated with IVIg
- Vogt-Koyanagi-Harada syndrome is treated with IVIg

Please discuss the above information about IVIg with your doctor and providers. The above IVIg recommendations are based on information available in research literature & my own experience.

For CIDPUSA by Dr Imran Khan Nanotech Neurology 56 E-2 Wapda Town Lahore

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This is the top page on the internet with the most useful information about IVIG. More useful IVIg information is available in our website on the [main IVIg](#) page and you will see many links to other IVIg pages from there about IVIG on our website. So if you want in-depth IVig info please see the above IVIg link.

IVIG is used in neurology .IVIG is used for alzheimers. IVIg is used for asthma. IVIg is used for pemphigus. IVIg is used to treat vasculitis. IVIg is used in arthritis. IVIg is used for polyneuropathy. IVIg is used to treat renal disease. IVIg is used for gastrointestinal problems. IVIg can be used for almost 101 diseases. In immune deficiency IVIG is used to make the immune system stronger. So IVIg is used in cancer, IVIg can treat thrombocytopenia. IVIg is used in Kawasaki disease.

www.cidpusa.org www.cidpusa.org/P/ivig.htm <http://www.cidpusa.org/disease.html>