

About Immunoglobulin (Ig)

What is immunoglobulin?

Cells in the immune system make antibodies (or immunoglobulins) to protect the body from infections caused by bacteria and viruses. There are different immunoglobulins, that target different things.

Immunoglobulin (Ig) products are made from blood donor plasma which is then purified to produce a range of immunoglobulins to treat immune deficiencies and autoimmune conditions. Ig is complex to produce and is a finite resource, as it relies on regular donations from blood and plasma donors.

Immunoglobulin G (IgG) is the most common immunoglobulin found in blood and other body fluids. Intravenous immunoglobulin (IVIg) and subcutaneous immunoglobulin (SCIg) are used to treat a range of immune deficiencies and autoimmune conditions. Ig therapy is administered regularly to maintain blood IgG levels.

How is Ig made and is it safe?

In summary:

1. Ig products are made out of immunoglobulins from plasma which has been donated by healthy donors; Ig products cannot be made synthetically. To produce each batch of Ig products, thousands of human blood plasma donations are needed.
2. Collection and manufacture of Ig are strictly controlled and regulated to ensure the product is safe, and includes testing for blood-borne viruses, and manufacturing steps to reduce the potential risk of pathogen transmission.
3. Ig products have been used for many decades and have an excellent safety record.



Who needs it?

Immunoglobulin therapy can be given when your body does not make enough. This occurs in primary (caused by a rare inherited defect) and secondary immunodeficiencies (acquired due to factors including chemotherapy or other immune-suppressive treatments). This is called immunoglobulin replacement, as it tries to replace your missing immunoglobulins to help reduce infections.

Immunoglobulin therapy may also be given for autoimmune conditions. This is when your immune system attacks your own body, damaging its cells, for example some neurological conditions and generalised inflammatory conditions such as vasculitis or some blood abnormalities. It is thought that immunoglobulin helps prevent the immune system from attacking your own cells. This is often called immunomodulation, where it is trying to modify your immune system.

Immunoglobulin therapy can only be given for approved medical conditions. In Australia and New Zealand, there are specific criteria that outline the medical conditions for Ig use. In Australia, criteria for the use of Ig is decided by the National Blood Authority and these criteria are reviewed regularly by specialist doctors. Sometimes there are alternative treatments that may be used or may be better for your particular condition. When you are receiving Ig therapy you will be regularly reviewed to make sure it is working. Sometimes your doctor may adjust your dose or stop it to assess how well you have responded to the Ig therapy. If immunoglobulin fails to help improve your condition it may be stopped.

Immunoglobulin therapy can be intravenous (IV) or subcutaneous (SC)

The Ig dose is calculated on your weight, your immunoglobulin blood levels, how well your treatment is tolerated, and the degree to which it improves the symptoms of your underlying disease.



About Intravenous Ig (IVIg)

Intravenous Ig (IVIg)



The immunoglobulin is administered intravenously through a 'drip' into a vein.



It is given by a health care professional (Nurse or Doctor) in a hospital or day treatment centre.



The majority of people need IVIg every 3 to 4 weeks.



It can take 2-8 hours per infusion.



Travel and holidays need to be planned around your treatment schedule.

What are the side effects of IVIg?



You may find it difficult or painful to have a cannula inserted into a vein.



If you feel unwell or have any concerns at any stage of the infusion, make sure you let your nurse know.



IVIg gives you a rapid rise in your immunoglobulin levels and you may feel tired or unwell for a few days afterwards while you recover from the infusion.



As the Ig levels gradually fall over the next weeks, your body may have reduced ability to fight infection.

Patient tips for IVIg



Hydrate well. Drink water starting the day before an infusion, as many people report this is helpful.



If you get a headache after your infusion, paracetamol can be helpful. If you get a bad headache that paracetamol won't help, please contact the hospital where you have your infusion as soon as possible or attend the hospital emergency department and tell them you've had IVIg and have a bad headache. If you have any other symptoms that concern you after your infusion, please contact your specialist or relevant medical team etc. for advice.



Eating a healthy diet is encouraged.



Know your limits and take care of yourself both physically and mentally.



About Subcutaneous Ig (SCIg)

Subcutaneous Ig (SCIg)



The immunoglobulin is administered into the fatty tissues under the skin through a small plastic tube and fine needle.



After being trained in the process by a nurse or doctor, you or a carer will be able to administer your own treatment at home at a time that suits you and your routine.



SCIg is usually given weekly depending on your dose, immunoglobulin levels, and how well you feel.



You will not be required to attend hospital as often, but you are required to comply with your therapy plan.



SCIg is not associated with 'wear off/ tapering effects' that is associated with IVIg.



You can take your SCIg with you for travel and holidays.

Side effects of SCIg



Occasionally you may notice a red lump or itching at the site of the infusion that may last for a day or two.



There may be swelling at the needle site.

Patient tips for SCIg



Hydrate well. Drink water starting the day before an infusion, as many people report this is helpful.



If you get a headache after your infusion, paracetamol can be helpful. If you get a bad headache that paracetamol won't help, please contact the hospital where you have your infusion as soon as possible or attend the hospital emergency department and tell them you've had SCIg and have a bad headache. If you have any other symptoms that concern you after your infusion, please contact your SCIg nurse, specialist or relevant medical team etc. for advice.



Eating a healthy diet is encouraged.





Know your limits and take care of yourself both physically and mentally.



Administer the infusion in the same place/site (stomach or thigh) each week as long as the site has recovered ok (i.e. no swelling or tenderness remains). Using the same place/site helps your body become used to the infusions and it helps your body absorb it quicker. Some people alternate places/sites which gives more options of where they can infuse.



An ice pack placed on the site for 30 seconds before inserting the needle can help to numb your skin and reduce your discomfort associated with inserting the needle.



It is advised not to apply an ice pack for 4 hours following injection to allow for adequate absorption.

How to transport and store SCIg



The storage temperatures of products can vary. Be sure to ask your nurse how to transport and store your specific product. Information is also available in the product information. Some products need to be refrigerated, while other products can be stored below 25 degrees, at room temperature.



If the product you have needs to be refrigerated and you have an extended power cut or your refrigerator fails (more than 6 hours), please contact your SCIg nurse or specialist as soon as possible.

How to travel internationally with SCIg



As SCIg is a blood product, taking it overseas requires specific permissions and procedures to ensure it is transported and stored correctly.



As soon as you can or at least 5 weeks before you travel, you need to contact your SCIg nurse or specialist to provide information so an export permit and a patient letter can be arranged. Arrangements will be made for you to collect your product close to your departure.



Further information is available on the Victorian Blood Matters webpage <https://www2.health.vic.gov.au/about/publications/factsheets/scig-patient-overseas-holiday>





This document has been reviewed by medical professionals and patient organisations to ensure that the information included is correct and relevant.

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