## What you need to know about Immunoglobulins (with Professor John Ziegler AM)

Immunoglobulins are proteins in the blood that actually form the antibodies that protect us against infections. If you don't make any bodies you'll quickly experience many- many infections and develop complications like chest chronic chest disease as a result.

What immunoglobulin therapy does immunoglobulin replacement therapy is preventing infections Immunoglobulin is made from the liquid fraction blood the cells are removed and what you're left with is plasma and immunoglobulin is purified from the plasma. So it's attained from blood donors and it's usually the healthy donors have been tested for infections and considered suitable for the purpose. It's a very involved process. It makes it inexpensive. So it's not only the production of the product but the steps that are needed to make it safe. It's remarkably safe.

Immunoglobulin products have a had an excellent record over the years of safety. They now undergo not only the testing of the donor but testing of the product for viruses and then they undergo purification steps that remove viruses. Immunoglobulin were discovered as a way of replacing antibodies that people can't make and then it was discovered that they can also alter inflammatory or autoimmune diseases in a beneficial way so, in fact a lot of the use now is for people with chronic inflammatory disorders usually autoimmune diseases. Someone who can't make antibodies won't make antibodies perhaps for years if ever and so that's long-term treatment for changing an inflammatory condition it's sometimes just a one off.

Immunoglobulin treatment doesn't work all the time. It's often given it for a trial period to decide if someone you know is going to benefit from this long term. They prevent infections or dampen down an inflammation but they don't cure anything. Immunoglobulin is given either by a drip into a vein or as an injection under the skin. Most people who receive immunoglobulin via drip will have it monthly and most people who receive it under the skin will receive it weekly. Many people will get something like a headache, or they feel like get a bit of chest tightness. Most of those problems resolve very quickly and fortunately you know serious complications serious side effects are very uncommon. You can't you know, suddenly make you know, a million batches of it. You dependent on the blood donors. There's not no one's worked out how to make this stuff artificially.

So because immunoglobulin is so hard to obtain and so expensive its use is determined by the criteria for clinical use of immunoglobulins in Australia based on clinical research and published evidence about conditions where it's safe and effective to use it. We need to be sure that this person needs it to start with and that it's working for them and so it's important that people are check at least annually if not more often to make sure that they're getting the benefit that that the cost requires you know to happen. So immunoglobulin replacement therapy prolongs lives and makes people healthier.

If immunoglobulin is being used for immune modulation for a treatment of an autoimmune disease, the benefit can be remarkable with people who have been wheelchair bound being able to walk again.