Resource

Immunisation for people with rheumatoid arthritis

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Immunisations are a way in which we can help train our immune systems to recognise infections more quickly and effectively. Perhaps the most dramatic example of the success of vaccines has

been during the COVID-19 pandemic, with an estimated 230,000 hospital admissions, and 100,000 deaths prevented within the first year of their use. Indeed, COVID-19 vaccination has been key to the global emergence from the pandemic.

COVID-19 is not the first disease to be overcome through vaccination. Historic diseases such as smallpox and polio are other examples of illnesses that we no longer see due to the success of vaccination.

How do vaccines work?

Vaccines expose your body to a sample of an infection, allowing the immune system to be better prepared when it encounters the infection for real. It is important to highlight those vaccines do not prevent you getting exposed to an infection, but rather help your body respond to an infection and prevent you becoming severely ill.

Do drugs used to treat rheumatoid arthritis increase the risk of infection?

There are now a great many treatments for RA available, and the extent to which these increase the risk of infections can vary. In general, simple pain relief (e.g. paracetamol) and non-steroidal anti-inflammatory medication (e.g. ibuprofen) do not alter the risk of infection. Standard oral medicines such as methotrexate or sulfasalazine are mild treatments and have very minimal impact on infection risks. Stronger medicines such as biologics (e.g. TNF blockers like adalimumab) or targeted oral medicines (e.g. JAK inhibitors) do increase the risk of infections. For some of the biologic or targeted medicines used for RA, the medicines are linked not only to an overall increased risk of infection, but also risks for particular types of infection. For example, JAK inhibitors increase the risk of developing shingles (a type of viral infection that causes a painful skin rash). Finally, steroids (e.g. prednisolone or intramuscular methylprednisolone) also increase infection risks to similar or greater levels as seen with biologics or targeted oral medicines.

It is important to highlight that the risks of infections from treatment must be balanced with benefits of treating RA. Uncontrolled RA is generally more harmful in the long run. Vaccines offer a mechanism by which you can further improve the risk / benefit ratio for RA treatments. Vaccines are available to prevent some of the most common infections, including pneumonia, influenza, shingles and, of course, COVID-19.

Which vaccines should I be getting?

Irrespective of age, anyone with RA is recommended to have an annual influenza vaccine, as well as a one-off pneumonia vaccine. If you are eligible, then it is also recommended to have a shingles vaccine. Anyone who is severely immunosuppressed and over 50 will be able to get two doses of the Shingrix vaccine for shingles – currently the vaccine is only available to those over 70. From 1st September 2023, those turning 65 and 70 will also be able to get the vaccine after their birthday, in addition to those already aged 70-80. Patients will be contacted by their GP practice when they become eligible.

At present, COVID-19 vaccine schedules and recommendations are rapidly evolving, and information on COVID-19 vaccinations are available here. It is recommended to pause methotrexate for 2 weeks after each dose of the COVID-19 vaccine to ensure a good response.

Allergies and vaccines

Some people can be allergic to vaccines. Severe allergic reactions are thankfully very rare, but if you have experienced allergies, you should always tell your doctor or pharmacist before receiving a vaccine. Often the allergy is against something mixed with the vaccine (such as egg products) rather than the vaccine itself, and sometimes alternative brands are available which exclude these components.

Different types of vaccine

Vaccines are broadly divided into three types: live vaccines, mRNA vaccines, and inactivated vaccines:

Live vaccines use a real version of the infection. An example of this is the yellow fever vaccine, which uses a live version of the yellow fever virus which has been modified to be a very weak version of the original virus. Live vaccines generally create a very good immune response but tend to cause slightly more side effects (like fever and muscle aching) and we generally avoid live vaccines in people with weak immune systems (including people with RA on medications), as even a very mild version of the infection could be harmful. The most used live vaccines are:

· Measles, mumps and rubella (MMR)

· Rotavirus

· Smallpox

· Chickenpox

· Yellow fever

· BCG (TB vaccine)

*There are currently two shingles vaccines available in the UK, one live (Zostavax) and one not (Shingrix). For people with RA, it is usually best to use the non-live version.

mRNA vaccines use a small piece of genetic material that will be seen by your body’s own cells and used to make a protein found in an infection. This is a common type of COVID-19 vaccine. The mRNA approach only exposes your immune system to one part of the infection, and so can never cause the actual infection, which means they are safe even for people with a weakened immune system. However, mRNA vaccines are especially good at activating the immune system, and it is quite common to have a sore arm afterwards or develop a transient fever.

Inactivated vaccines use a small part of an infectious organism to stimulate an immune response. Like mRNA vaccines, they can never cause the actual infection, and so are safe to use whilst on RA medicines. Inactivated vaccines are the most common type of vaccine and include the commonly used pneumococcal and seasonal influenza vaccines for adults (in children there is a live influenza vaccine, available as a nasal spray).

Will RA medication stop vaccines working?

Being on medication for RA can reduce how well a vaccine works. However, in most people, vaccines will still provide a very valuable protection against infection even if it does not work quite as well as for someone without RA.

Should I interrupt my RA medication when having a vaccine?

For some vaccines, it is possible to improve the chances of responding by temporarily interrupting your RA medicine. Stopping methotrexate for one dose before and one after your vaccination(s) is likely to improve the chance of your body responding well to the vaccine. However, interrupting your RA medicine can increase your risk of flare. If your disease has been well controlled, then a short pause in your RA medication is reasonable, but if your RA is active, you should discuss the risks and benefits of interrupting treatment with your rheumatology team.

What about yellow fever vaccines being required for travel?

There are certain countries around the world that require evidence of yellow fever vaccination for travel. Generally, for people on immune suppression for RA, live vaccines such as yellow fever are not recommended. You can still travel but would need to carry a medical letter of exemption, which your rheumatologist should be able to supply.

Further information

The national UK guidance on vaccines is published and regularly updated in the ‘Green Book’. Chapter 7 of the Green Book provides detailed recommendations for people with underlying medical conditions, including RA.

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Medicines in rheumatoid arthritis

We believe it is essential that people living with RA understand why certain medicines are used, when they are used and how they work to manage the condition.

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