

ARTHRITIS RESEARCH NEEDS YOU



'Arthritis Research Needs You' is written and illustrated by Edward Ross (www.edwardross.co.uk). Professor Carl Goodyear and Dr Aurelie Najm at the University of Glasgow provided scientific advice.

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*It all started a
few years ago.*

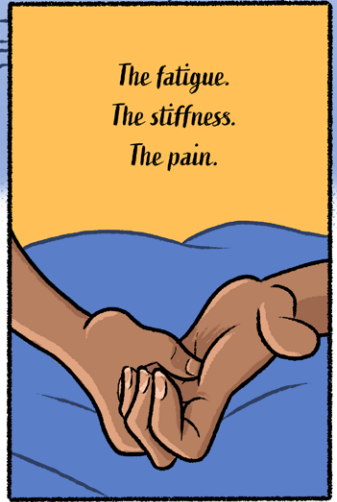
*I almost didn't
notice it at first.*



*The aching joints
when I woke up.*



*The fatigue.
The stiffness.
The pain.*

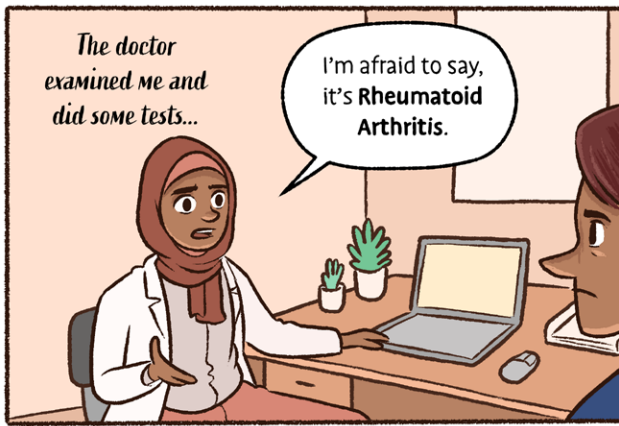


*I shrugged it
off at first.*

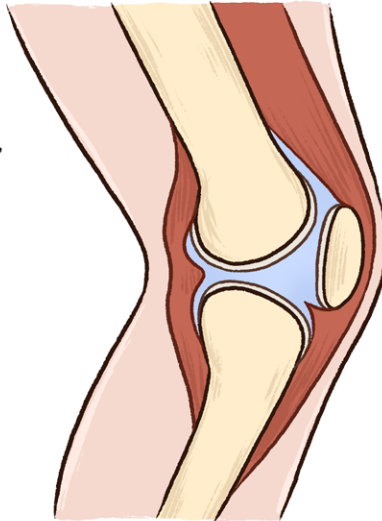


*But it got worse. It started impacting
my life, work and hobbies.*

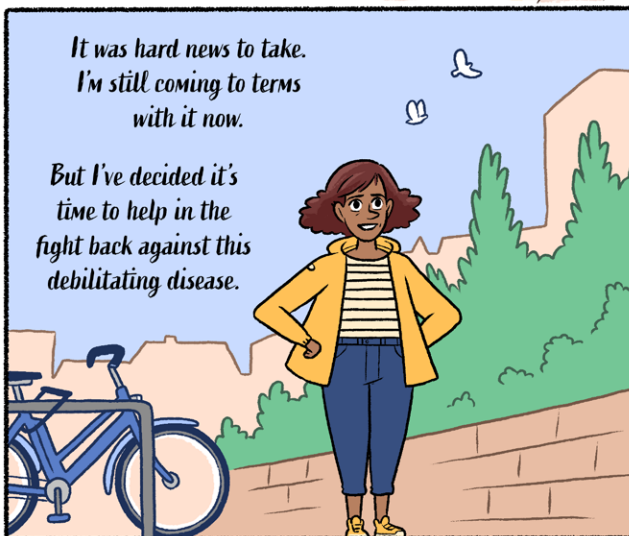


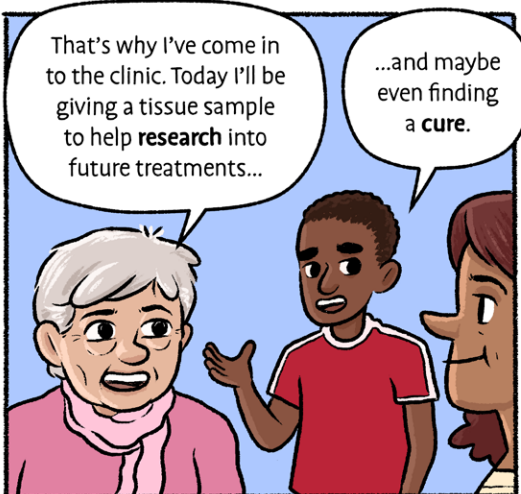
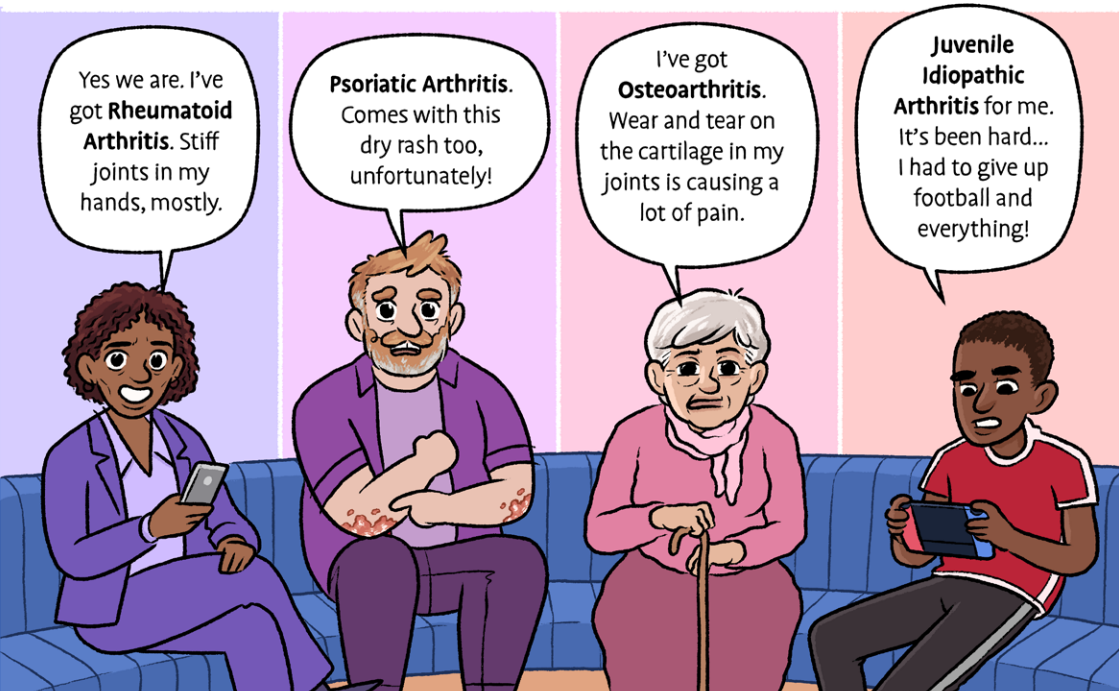
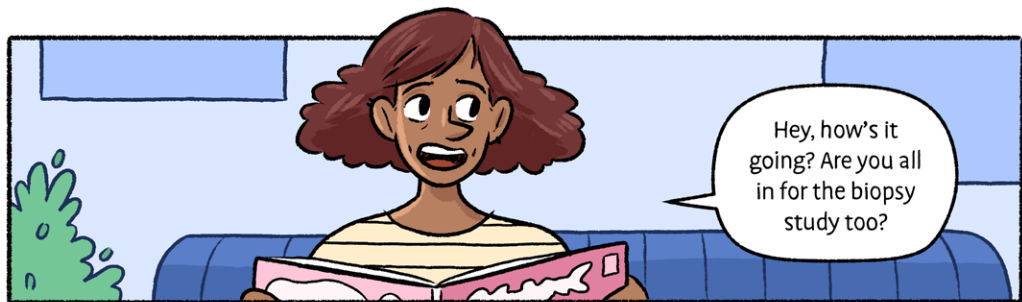


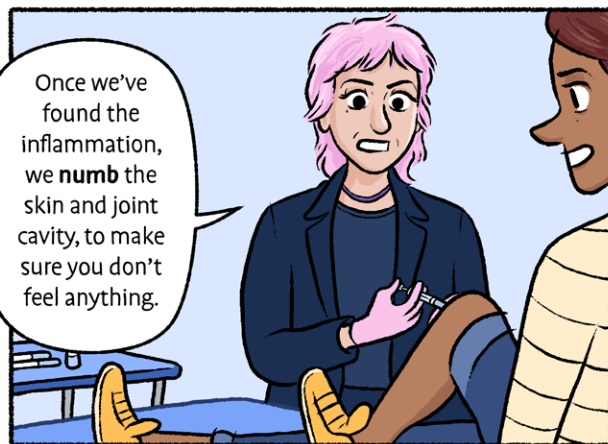
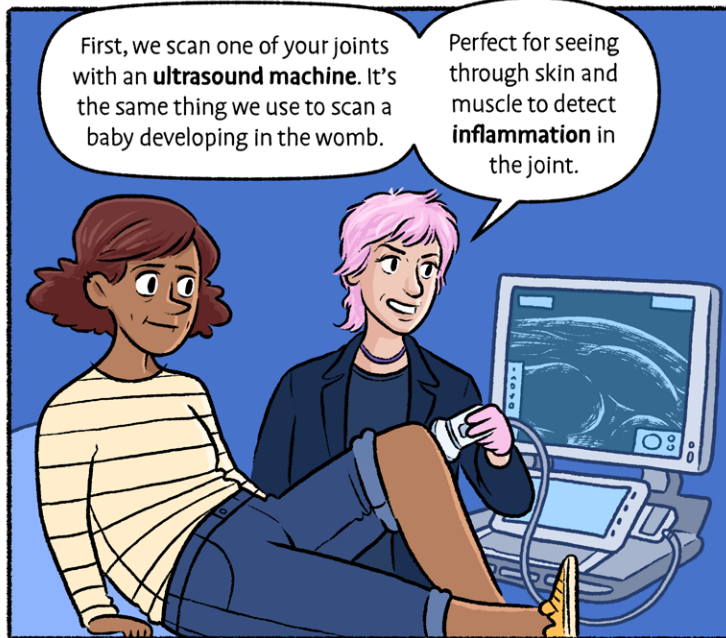
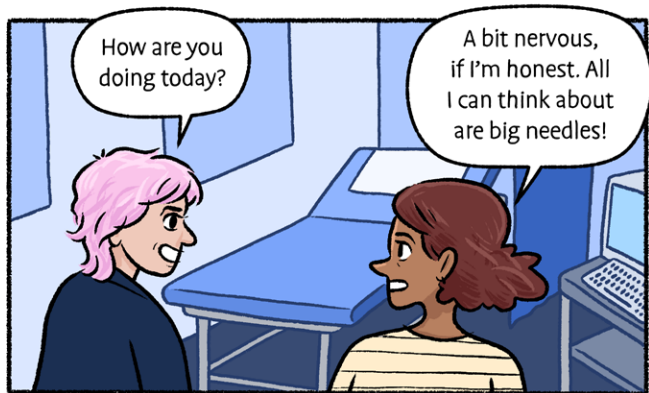
It's a condition caused by your body's immune system turning against your body - seeing the cells in your joints as the enemy, and attacking them.

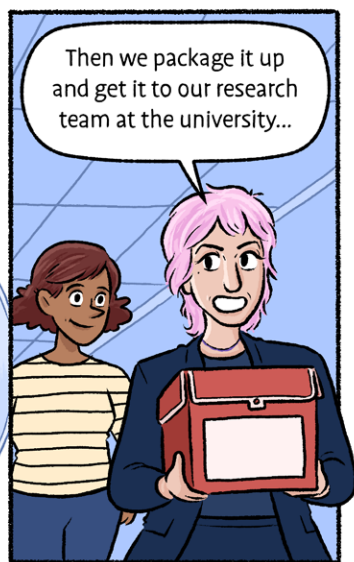
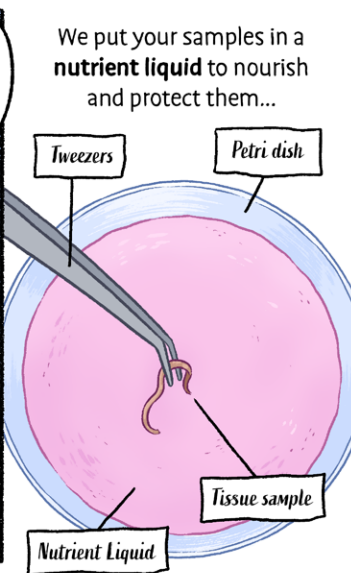
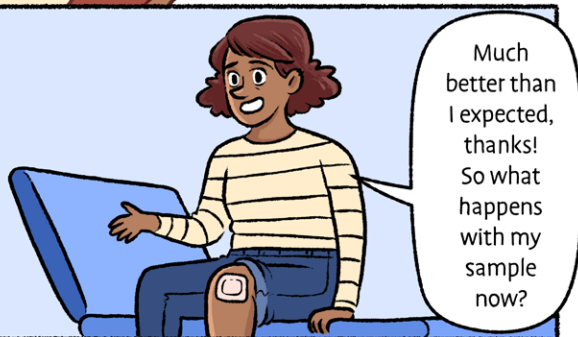
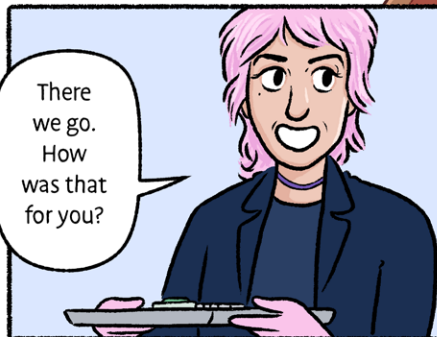
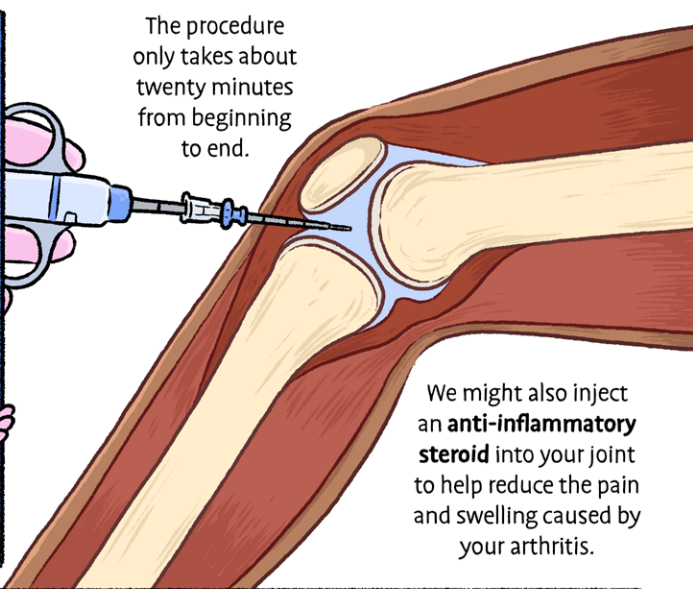
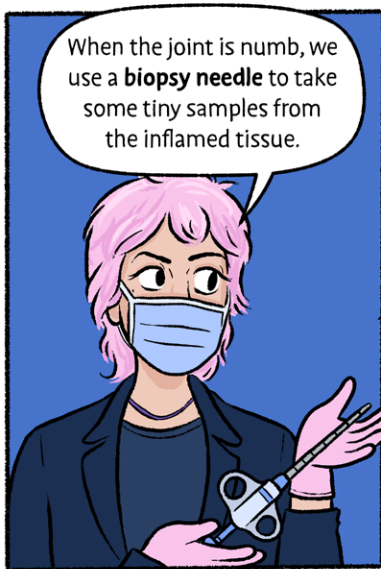


This bitter war going on in your joints is what causes the pain, inflammation and stiffness that characterise Rheumatoid Arthritis.









At the university...

Thank you!

A piece of tissue from one of your joints, no bigger than a grain of rice. It might not seem like much, but to us, each sample is **precious**.

If we have any hope of better understanding these diseases, and how to fight them, the answers are locked inside tissue samples like yours.

We use a process called **Spatial Transcriptomics**.

We cut thin slices from across the sample, and find out which **genes** are switched on or off in different areas.

Wow! Almost like you're drawing a **map** of the joint...

showing you where the disease is causing problems, and where it is less severe.

Put together, everyone's samples generate a huge amount of **data**. The job now is to **make sense** of that information...

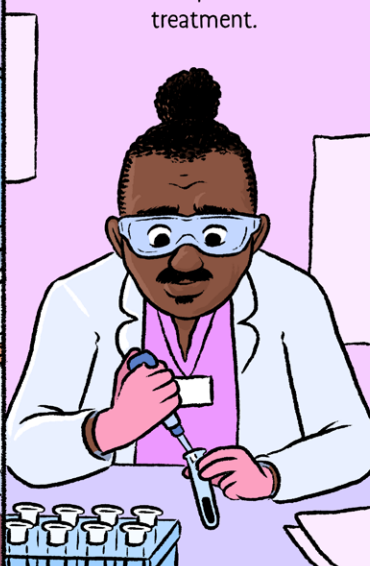


This is where true scientific **teamwork** comes in! We work with people with all sorts of different knowledge and specialisms.

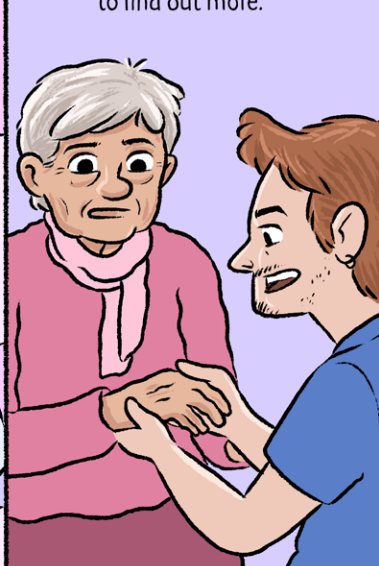
Data Scientists who take this data and use complex **algorithms** to find patterns in the noise.



Biologists who examine how genetic and **environmental** factors contribute to how the disease appears, progresses, and responds to treatment.



And **Clinical Researchers** who track the effectiveness of treatments and work with **patients** to find out more.



And through all this work, what are you discovering?



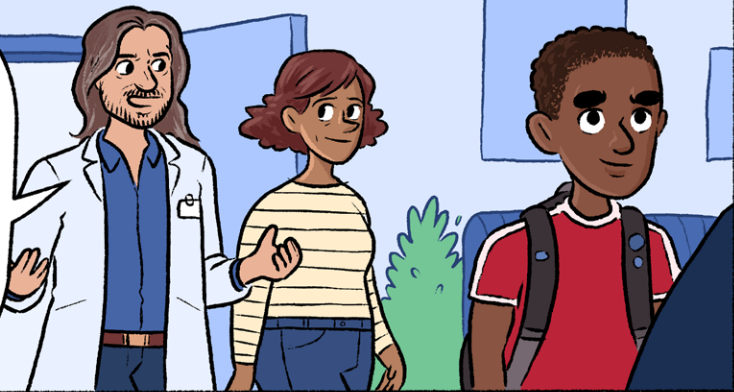
Arthritis is a complex disease, and no single treatment will work for everyone.



But there is hope...



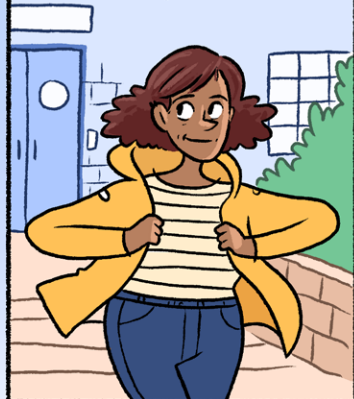
By gathering more **samples**, and using cutting-edge scientific techniques to **examine** **them**, we're slowly building up our map of arthritic diseases and discovering pathways towards **future treatments** that could be tailored to different patients.



It's **thanks** to people like you, who take the time to give us a tissue sample, that our research can **continue**.



Some days are hard, but treatment is making things better.



And with my tissue samples joining thousands of others...

I can feel hope for the future, knowing that together, patients, clinicians and researchers are working hard...



to ease the burden of living with arthritis.

Research into arthritis is only possible because of patients like Alice who have volunteered to take part in clinical research. If you're interested in taking part yourself, ask your rheumatology consultant or nurse who can tell you about any projects that you can join.

Alternatively visit our website to find out more about what we do, and read the comic online:



bit.ly/GAINcomic

If you have any feedback or would like to discuss anything related to this publication, please contact the Glasgow Arthritis Involvement Network (GAIN) Manager at gain@glasgow.ac.uk



University
of Glasgow



Meet Alice, a woman living with arthritis, who is joining the fight back against this debilitating disease.

This illustrated story will guide you through the process of volunteering a tissue sample and contributing to the future of arthritis medicine.

To find out how you can take part yourself, visit:



bit.ly/GAINcomic



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