Josie’s experience is not uncommon.

Arthritis can be a devastating experience causing intense pain and extreme fatigue, with no cure. Contrary to popular belief, it doesn’t just affect older people. Children and babies as young as six months can develop some types of arthritis.

In fact arthritis is an umbrella word to describe a number of conditions affecting the musculo-skeletal system.¹ Although these conditions have different causes and disease processes, the result is ten million people in the UK living with incurable chronic joint pain, extreme fatigue and loss of mobility.

While major advances have been made in treating rheumatoid arthritis more effectively, many people still don’t respond to the new drugs that are now available. And in osteo-arthritis, by far the most common condition affecting the joints, treatment remains far more limited. So there is so much more that urgently needs be done for people with arthritis.
The facts are shocking:

- One in six of us struggle with the pain and disability of arthritis every day
- Musculoskeletal conditions are the second most common cause of days off work in men and women
- The estimated NHS annual direct cost of osteoarthritis is £5.2 billion

*One in seven people with rheumatoid arthritis give up work within a year of diagnosis

It might not routinely kill like other diseases (though some forms of arthritis can and will do) but it can rob you of everything that makes life worth living.

WHO IS ARTHRITIS RESEARCH UK AND WHAT DO WE DO?

We’re the only charity in the UK solely dedicated to funding research into all forms of arthritis, and we are Europe’s biggest charitable funder of arthritis research.

“I am proud to be an ambassador for Arthritis Research UK. Without their backing, major breakthroughs in the treatment of arthritis, musculoskeletal conditions and significant advances in knowledge simply wouldn’t happen.”

Pamela Relph MBE, Arthritis Research UK ambassador and part of the gold medal winning rowing team at the London 2012 Paralympic Games.

- We fund high quality scientific and medical research that will have a direct impact on people with arthritis.
- We also provide information on all the different types of arthritis to patients and healthcare professionals alike, to help patients make informed choices and health lifestyle changes; and to educate doctors and allied health care professionals so they can treat their patients more effectively.
- We work hard to secure a better deal for people with arthritis. We believe they deserve better.
- We want to drive their care and treatment further up the government’s agenda.
- And we do all this without a penny of government funding, relying entirely on the generosity of the public.
WHAT HAVE WE ACHIEVED?

Arthritis Research UK has a proven track record of success.

Thirty years ago people with severe rheumatoid arthritis like Josie Dykes might have ended up in a wheelchair. But, now the treatment of rheumatoid arthritis has been transformed by a class of drugs, pioneered and developed by our scientists, called anti-TNF therapy. These biologic drugs are now used worldwide.

It’s rare for a charity to play such a big part in the development of such a radically life-transforming class of therapies and we’re hugely proud of this big step-change in tackling the condition.

“Anti-TNF therapy has given me my life back,” says Josie. Within three months she was well enough to go back to work. Millions of people like Josie have benefited.

In addition:

- We’ve proven the importance of exercise and weight loss in managing arthritis. Now we are also trialling non-mainstream treatments and therapies such as yoga and acupuncture.

- In recent years joint replacement surgery has made an enormous difference to the lives of people with severe osteoarthritis, and we’ve played an important part in developing longer-lasting implants and improving surgical techniques.

- We’ve identified some of the risk factors for the condition and tracked down a number of genes responsible for causing a number of types of arthritis: these are both milestones in the development of new treatments. But, we must do more if we are to break the genetic inheritance in some families that condemn successive generations falling prey to arthritis.

WORLD-CLASS RESEARCH

Everything we do has the patient at its heart.

Thanks to the generosity of our supporters, our investment is substantial. In 2011/12 we spent £28m on research, and at any given time we fund between 200 and 300 different research projects in medical schools, universities and hospitals around the UK.

Our research is a mix of laboratory-based and clinical work involving patients. Our scientists aim to find out how and why arthritis starts and develops, so that effective treatments can be found now and in the future.

We also have an ambitious programme of clinical studies and trials which we hope will establish the best ways of treating patients who need help today. Key to our success is our multi-disciplined team who bring their collective knowledge and expertise together to create the environment needed for faster breakthrough moments.
We have established major centres of excellence in collaboration with universities each with a specific focus. Each centre receives up to £2.5m over 5 years from Arthritis Research UK – with additional support from the host institutions.

We want to speed up the development and delivery of much-needed new drugs capable of cutting through pain, by early testing of new treatments in seven experimental centres. But we cannot shortcut this process and must invest more time on trials before patients can benefit safely from our work.

We’re the authoritative voice in the field of information provision. There’s a lot of information out there for people with arthritis via the internet and in the health page of newspapers and magazines. But what makes our 90 publications so unique is that they are based on the evidence from our own research and are the most trusted, high-quality resource available for patients.

Our educational work aimed at GPs and other primary care practitioners is challenging the old mind set “It’s just arthritis. It’s your age, now go away and live with it.” We are changing the terminology from ‘wear and tear’ to ‘wear and repair.’ We are helping GPs to do more for their patients.

We have invested £85k in a new training programme, jointly developed by the Royal College of General Practitioners (RCPG), to improve GPs’ and medical students’ core skills in diagnosing and managing musculoskeletal conditions.

WHAT MORE NEEDS TO BE DONE

Despite our achievements there is still so much to do. One thing is clear; without research there is no hope, no solution, and there will be no ultimate cure. The research we fund today will transform the lives of millions of people tomorrow.

“What we really want to do is find a cure. Our scientists are dedicated and will stop at nothing. With the help of our supporters, we really believe anything is possible.”

Dr Liam O’Toole, Chief Executive Officer, Arthritis Research UK.

In the field of rheumatoid arthritis, while the discovery of anti-TNF therapy has spawned a whole new generation of new drugs and opened up exciting new research avenues, we know they don’t work for everyone. More needs to be done for the 30 per cent of people in whom they fail to work.
“I don’t want to be complacent since there is a great unmet need and room for new treatments and prevention of disability,”
Sir Ravinder Maini, co-pioneer of the ground-breaking anti-TNF therapy.

Developing ‘personalised’ or ‘stratified medicine’ is the next big challenge for our researchers. We’re investing heavily in this area, working in partnership with the Medical Research Council.

Despite our efforts, treatment of osteoarthritis remains rudimentary, relying largely on painkillers, which can cause serious side-effects; self-management through exercise and weight-loss; and ultimately, joint replacement for severe, end-stage disease.

The human cost of osteoarthritis is enormous both to the individual and their family.

“I was reduced to head-butting the door because the pain in my hands was so intolerable every time I tried to turn the key in the door.”
Lee (44) from Leeds, arthritis patient.

We are moving away from a “one-size fits all” approach to treating OA. We’re testing the effectiveness of things like splints, knee braces and special insoles, knowing that different solutions will work for different people.

THE NEXT FEW YEARS

This is a great time to back our research. We are planning on opening and awarding new centres of excellence (please note the official names of the Centres are still to be announced):

Pathogenesis of Osteoarthritis Centre
Researchers will study the underlying causes of osteoarthritis and develop tools that can translate laboratory research into new clinical techniques.

Pathogenesis of Rheumatoid Arthritis Centre
Researchers will investigate the underlying causes of rheumatoid arthritis. The ultimate aim of the centre will be to develop new therapies that will provide patients with specific treatment that will work best for them early in the course of the disease, preventing irreversible joint damage and pain.

Epidemiology of Rheumatoid Arthritis Centre
We will look at producing clinically useful tools such as mathematical models to predict the onset, outcome and treatment response of patients with osteoarthritis. This information aids doctors in ensuring that patients are given the best treatment for them as soon as possible.

Genetics of Rheumatic Disease Centre
The aims of the centre will be to dissect how an individual’s genetics can contribute to them developing rheumatic diseases, how the diseases progress and how patients will respond to certain drugs. This information will help doctors to provide tailored treatments.
HELP US HELP PEOPLE LIKE JOSIE

We want to help Josie Dykes and millions like her. None of our vital research would be possible without the generous support of the public as we receive no government funding.

Arthritis Research UK is committed to curing arthritis. With your support, we are confident we will get there.

References:

1. Such as rheumatoid arthritis, osteoarthritis, lupus, osteoporosis, fibromyalgia, juvenile idiopathic arthritis and back pain. Osteoarthritis is by far the most common, affecting over eight million people in the UK. It is caused when cartilage at the ends of bones wears away leading to pain and stiffness. Rheumatoid arthritis is a serious auto-immune condition, causing joint pain and inflammation.
   i. Royal College of General practitioners Birmingham Research Unit Annual Prevalence report 2006
   iv. Oxford Economics March 2010: The economic costs of arthritis for the UK economy
2. Our current centres are in primary care; biomechanics and bio-engineering, musculoskeletal ageing (2); pain; tissue engineering, sports injuries and osteoarthritis.
3. In our Active Listening survey (2010) we asked people of different ages what were the biggest problems they faced. They told us overwhelmingly that long-term pain was the worst thing. 40% of people stressed the impact of joint pain and stiffness on their mobility and the degree to which they were no longer able to manage their everyday activities such as bathing, getting dressed, getting in and out of bed, and housework. Others were embarrassed by being increasingly dependent on others, and the fact that medication offered only limited respite from their pain. A number reported feelings of fear, depression and anxiety, combined with a sense of isolation.
4. Pathogenesis of a disease is the mechanism that causes the disease.
5. This Centre of Excellence will be at the University of Oxford under the directorship of Prof Tonia Vincent. The Centre will open in 2013.
6. This centre is a collaboration between the Universities of Glasgow, Newcastle and Birmingham and will be under the directorship of Prof Iain MacInnes. The centre will open in 2013.
7. This Centre will be awarded in July 2013, with the aim of the centre to open in late 2013 or early 2014.
8. Rheumatic diseases will include rheumatoid arthritis, juvenile idiopathic arthritis (JIA) and psoriatic arthritis. The Centre will be awarded in July 2013, with the aim of the centre to open in late 2013 or early 2014.

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