In June of this year, more than 14,000 people from over 110 countries gathered in Madrid, Spain to attend the largest rheumatology event in Europe, the annual meeting of the European League Against Rheumatism (EULAR 2013).

During the event, more than 320 talks and 1800 posters revealed the latest in rheumatology research. Focusing on rheumatoid arthritis (RA), Arthritis Consumer Experts (ACE) highlights a few of those important new research findings in this issue of JointHealth™ monthly.

**EULAR2013: Putting the spotlight on RA**

### Family ties

Rheumatoid arthritis creates a large burden on the close family relationships of people with the disease, according to the results of two British surveys presented at EULAR 2013.

The National Rheumatoid Arthritis Society (NRAS) in the United Kingdom analyzed the impact of the disease on close relationships after it found there was little data on the topic and because the need was identified during focus groups of people living with RA and their families.

The first survey, conducted in the spring of 2012, was of family members. Later that year, those with RA were also surveyed. The key findings from 392 responses to the family survey and 1,343 patient responses:

- **14%** of patients said the disease had made their family members feel uncomfortable.
- **12%** of patients said the disease had strained relationships with friends.
- **11%** of patients said the disease had made family members feel upset.

### The importance of taking your meds

There are many reasons why people with rheumatoid arthritis may stop taking their medications. An examination of a large United States database of patients with rheumatoid arthritis revealed why one-third of patients discontinue a biologic therapy within the first year and why half stop within the first two years.

The study, presented at EULAR 2013, looked at 6,209 adults with RA from the database of the US Consortium of Rheumatology Researchers of North America (CORRONA). According to the results, while 82% of patients were still on their medication at six months, half of those on anti-TNF biologic drugs had stopped by 26.5 months and half who were taking other biologic treatments stopped by 20.5 months.
First of its kind study compares two RA biologic medications

“Many of our trials are done compared to placebo. However, in the office or the clinic, patients don’t want to know how the placebo works, they want to know how the drug works.”

That was how Dr. Michael H. Schiff of the University of Colorado introduced the results of the first-ever two-year head-to-head comparison of two biologic treatments for rheumatoid arthritis at a press conference at EULAR 2013.

The multinational study, called AMPLE, looked at 646 people with RA who had never taken any other biologic medication for their disease. They were divided randomly to receive either the subcutaneous (under the skin) injection formulation of abatacept (Orencia®) or adalimumab (Humira®), along with methotrexate as the normal standard of care. Neither the doctors nor the patients knew what biologic medication the patients were taking during the two years they were followed.

The study showed the two medications were equally effective in clinical, functional, and radiographic (X-ray) outcomes. In one measure of improvement called the “ACR20”, more than 60% of both groups achieved 20% improvement in their pain, functional abilities, and swollen and tender joints at one year into their treatment. The “ACR20” measures improvement in tender or swollen joint counts and improvements in three of five areas: pain scale, functional questionnaire, patient assessment, physician assessment and test of severity of inflammation. Both medications required a similar time period to become effective. After two years, X-rays showed no worsening of the disease in 85% of those on abatacept and 84% of those on adalimumab.

Overall, the two medications are closely matched in effectiveness and are similarly safe.

While both medications have been available in Canada for some years, abatacept is now available by intravenous injection. Both abatacept and adalimumab are reimbursed by provincial drug formularies if a patient with RA meets special access criteria.

So what is the bottom line?

This study shows through direct comparison that a biologic medication that targets T-cells (abatacept) is as effective at treating RA as a biologic medication (adalimumab) targeting tumour necrosis factor (TNF) and offers both rheumatologists and patients a greater choice of treatments when starting a biologic therapy.

Family ties surveys were:

• People with RA were almost unanimous (94%) in feeling “frustrated” about their RA and 80% said they feel or have felt “anxious” about their disease.
• 41% of partners reported having difficulties with their relationships and 67% of partners reported a negative impact on their sex life as a result of their partner’s RA.
• 46% of those with RA reported not being happy with their sex life.
• Single people in the survey reported they believe that having RA puts people off having a relationship with them.

As a result of the survey findings, the NRAS is developing a new publication and online resource to help people with RA and their families address the issues that the disease brings to their relationships.

ACE also suggests the following reading material:

• The February 2013 issue of JointHealth™ monthly titled Heart’s Content, which has tips for people with RA to help reduce stress and overcome the barriers to enjoyable sex.
• Rheumatoid Arthritis: Plan to Win is a book written by Cheryl Koehn, Taysha Palmer, and Dr. John Esdaile. It is an overall guide to help minimize the effects of chronic disease and achieve optimal health. Two chapters, “Relationships and Sexuality” and “Work, Family, and Leisure”, may be helpful for navigating RA’s affect on personal relationships.

For more reading suggestions, please visit the resources section of jointhealth.org.

Taking your meds

The database allowed people to enter up to three reasons for discontinuation. Loss of effectiveness was the most common reason given (36%), followed by physician preference (28%), safety (20%), patient preference (18%) and access to treatment, including not being able to afford treatment (9%). Reasons for discontinuation were similar for anti-TNF drugs and other types.

On your doctor’s advice it may be necessary to quit taking a certain medication and switch to a new one. However, if the fear of side effects has you thinking about stopping your medication or not taking it as prescribed, ACE recommends speaking with your doctor, so together you can weigh the benefits against the risks. Untreated or under-treated disease risks include hospitalizations, worsening symptoms, increased medical visits, and the need for more or other medications, and sometimes life-threatening conditions. Your chances of getting better go down greatly when you do not stick to your medication.
Methotrexate: A critical part of the treatment arsenal

Taking methotrexate (MTX) in the early stages of rheumatoid arthritis increases the chances of bringing it into remission, which makes it an important part of the treatment strategy. For this reason, ACE is sharing two studies on the medication that were presented at EULAR 2013.

Methotrexate is the preferred initial disease-modifying medication to treat RA, and it can be administered in two ways: orally or by a subcutaneous (under the skin) injection. Does it make a difference? That was the question taken on by a Canadian study, headed by Dr. Glen Hazlewood at the University of Calgary.

The study looked at patients in the Canadian Early Arthritis Cohort (CATCH) who had been diagnosed with RA but had symptoms for less than a year and had not yet taken methotrexate.

A total of 653 patients were included, with 442 taking methotrexate orally and 211 by injection. Patients were evaluated with a DAS28 (disease activity score) at the start and again after one year.

When they took this higher dose into account, the conclusion was that there was no significant difference between the effect of taking it orally or by injection. The difference in the scores was due instead to the higher dose. They found that for every additional mg of methotrexate dose, the average DAS28 score decreased by 0.02 after one year.

Another finding of note from the study, which included centres across Canada, was that there was “significant variability” in the use of subcutaneous methotrexate among centres.

Another study reported on at EULAR also showed benefit from higher doses of methotrexate when combined with adalimumab (Humira®). In the study, 395 people with RA who had not yet taken any biologic therapy were randomly assigned to oral MTX at a dose of either 2.5, 5, 10 or 20 mg along with for all, 40 mg of adalimumab every other week. After 26 weeks, there was a statistically significant trend in the proportion of patients achieving low disease activity with higher doses of methotrexate. However, it was also found that this effect continued only up to the 10 mg dose. Between 10 mg and 20 mg of MTX, there was little difference in benefit.

The latest thinking on the prevention and early detection of RA

The very early detection of rheumatoid arthritis and its prevention were highlighted at EULAR 2013 with an exciting presentation of a study of four new biomarkers.

“Prevention is better than a cure: A new dawn for the management of RA?” was the title of a presentation given by invited speaker Dr. Danielle M. Gerlag, an expert in clinical immunology and rheumatology at the University of Amsterdam, The Netherlands.

Dr. Gerlag noted that research in RA prevention is focused on the earliest changes in the body as the disease starts. These include:

- circulating auto-antibodies (which serve to identify disease);
- increased acute phase reactants (proteins found in the blood that indicate the level of inflammation), and;
- early synovitis (inflammation of the synovial fluid which lubricates joints).

Research is showing elevated levels of auto-antibodies can be found in blood samples a median five years before clinical symptoms appear.

“It is known that early in the course of disease, a window of opportunity exists during which the introduction of aggressive anti-rheumatic therapy can result in a change in the natural course of the disease,” Dr. Gerlag said, noting that this “can be brought to another level now that we are able to identify those who are at risk of developing RA, aiming at the prevention of the onset of clinical signs and symptoms of arthritis.

While there are no interventions that would prevent the onset of RA, Dr. Gerlag said, “The immunological knowledge has advanced to a stage where such an intervention is likely to be successful.”

Belgian researchers presented a study on four new biomarkers to help with early detection of RA – important research given that one-third of people with RA test negative to existing diagnostic antibodies RF (rheumatoid factor) and ACCP (antibodies directed against cyclic citrullinated peptides). This is unfortunate because it can cause delays in patients receiving treatment early enough to increase the chances of achieving remission.

The new biomarkers tested in the study were found to be 85% specific to RA and produced positive results in 36% of study patients with early RA and 24% of those who had tested negative to both RF and ACCP.

The new biomarkers and their potential to revolutionize early RA prevention were highlighted at EULAR 2013.

Preventing RA in families

Wouldn’t it be wonderful if rheumatoid arthritis could be predicted and a treatment plan put into effect before the disease gets a chance to take hold? That may soon become possible. An exciting upcoming study will be looking into preventing RA for people genetically predisposed to the disease. Dr. Ed Keystone, the lead researcher, says, “We really need to treat RA early and aggressively. If we can predict RA, even before people get it, and if the likelihood is high enough, then our goal is to treat them before they get the disease.”

ACE will share further information once the pilot study is under way, which will be in the coming months.
About Arthritis Consumer Experts

Who we are
Arthritis Consumer Experts (ACE) provides research-based education, advocacy training, advocacy leadership and information to Canadians with arthritis. We help empower people living with all forms of arthritis to take control of their disease and to take action in healthcare and research decision making. ACE activities are guided by its members and led by people with arthritis, leading medical professionals and the ACE Advisory Board. To learn more about ACE, visit www.jointhealth.org

Guiding Principles
Healthcare is a human right. Those in healthcare, especially those who stand to gain from the ill health of others, have a moral responsibility to examine what they do, its long-term consequences and to ensure that all may benefit. The support of this should be shared by government, citizens, and non-profit and for-profit organizations. This is not only equitable, but is the best means to balance the influence of any specific constituency and a practical necessity. Any profit from our activities is re-invested in our core programs for Canadians with arthritis.

To completely insulate the agenda, the activities, and the judgments of our organization from those of organizations supporting our work, we put forth our abiding principles:
• ACE only requests unrestricted grants from private and public organizations to support its core program.
• ACE employees do not receive equity interest or personal “in-kind” support of any kind from any health-related organization.
• ACE discloses all funding sources in all its activities.
• ACE identifies the source of all materials or documents used.
• ACE develops positions on health policy, products or services in collaboration with arthritis consumers, the academic community and healthcare providers and government free from concern or constraint of other organizations.
• ACE employees do not engage in any personal social activities with supporters.
• ACE does not promote any “brand”, product or program on any of its materials or its website, or during any of its educational programs or activities.

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