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## Rheumatoid Arthritis: Advances in Treatment

*"Hands need to close, feet need to be walked on  
and knees need to help climb stairs."* Dr. Jane Box

By Jane Box, M.D.  
Rheumatologist  
Box Arthritis and  
Rheumatology of the  
Carolinas

Rheumatoid arthritis is an inflammatory disease which causes pain and swelling in almost all of the joints of the body. Untreated it can cause destruction of the joints with severe deformity and loss of function as well as damage to internal organs. The goal of treatment is three fold. First we want to relieve the pain. Second we want to maintain the function of the joints. Hands need to close, feet need to be walked on and knees need to help climb stairs. Third we want to control the permanent damage this disease can do to the joints. The ability to achieve all of these goals has been challenging for many years.

The development of corticosteroids and the use of gold injections in the early part of the 20<sup>th</sup> century made the first step in relieving some of the pain but this wasn't really successful in achieving all of these goals. In the late 20<sup>th</sup> century better understanding of how inflammation and the immune system interacted and their role in the progression of RA helped not only to understand why steroids and gold were somewhat effective but led to the use of what became known as DMARDs (disease modifying antirheumatic drugs). These drugs affect the immune system in a general way and are often used at present to start the treatment of RA or combined with the newer treatments. However once again in many patients these drugs alone are not sufficient to achieve all three of our goals. The treatment of Rheumatoid arthritis underwent a significant advancement with the development in the 1990s of the group of drugs known as biologics. Now with the advent of this rapidly expanding group of medications known as biologics we can come very close to achieving low disease activity with control of pain, maintenance of function, and cessation of joint damage.

These drugs are named biologics because they are proteins which alter the biologic response to inflammation. Inflammation, the symptoms of which are heat, swelling, redness and pain, is the main feature of rheumatoid arthritis. Inflammation is caused by specific components of the immune system which are overly active. This process of inflammation is normal and is the body's way of protecting itself from outside attack. An example that helps explain inflammation is to think about what happens if you get a small cut. The area becomes slightly swollen and red. The reason is the body has activated your immune system and sent cells and proteins to the cut to promote healing and prevent infection. In RA this system has become, for unknown reasons, active all over the body.



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## Did you know?

**Arthritis Services  
can provide your  
group with an  
Arthritis Awareness  
Program  
or  
Osteoporosis  
Screening**

**Call 704/331-4878**

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Please call  
704/331-4878  
for more information.

Many of the components of the inflammatory cycle are increased and out of control. In the last 30 years a detailed understanding of the way this system works has been possible. Genetic mapping has brought about knowledge of the structure and role of the many proteins which participate in the production of inflammation in the body. Drugs have been made which can decrease the activity of some of these overactive proteins.

Other drugs change the way in which the inflammation is regulated. This has led to major advances in the treatment of RA. These medications are bringing us very close to achieving all of our treatment goals.

There are several classes of biologic drugs, as different drugs target different parts of the immune system. Each of these targets are named and the drugs are grouped together by the name of the protein or cell in the immune system which the medication is designed to affect. Since these drugs are targeting different components of the immune system different patients may respond differently to each drug.

The biologics can be divided according to their target:

TNF (tissue necrosis factor) inhibitors: Cimzia, Enbrel, Humira, Remicade, and Simponi

Interleukin 1: Kineret

Interleukin 6: Actemra

JAK(Janus Kinase, inhibitor): Xeljanz

T cell: Orencia

B cell: Rituximab

In addition, there are other biologics which are being developed whose targets will be other parts of the immune system. At some point in the future it might be possible to do testing which would help predict which drug would be most effective in an individual patient. In making choices on how to treat your disease, always ask questions! You want to know what symptoms the medication will help. You want to know what to

expect if you don't follow the prescribed treatment. You want to know what side effects to look out for and what lab testing might be required to monitor your medications. All medications have potential side effects and you should always read the provided information about the side effects and discuss any signs and symptoms you might have with your physician.

The biologic drugs have some side effects which they all share and some which are specific to each medication. In general since these medications are proteins the possibility of allergic reaction is present. These reactions can at times be severe and exist for all of the medications. Since the immune system is altered there is increased risk of infection with not only the biologic drugs but all drugs used to treat RA. Discuss your specific risks with your doctor. Other diseases or problems you might have could make you more at risk of infection than another patient might be. Some of the infections might be different than what you usually expect so all patients need to be screened for any exposure to Tuberculosis even if that exposure may have taken place in the past. This can be done with either a skin or a blood test. Previous exposure to some types of infections may increase your risk of that infection becoming active after taking these medications. Discuss with your doctor what parts of the country or the world you might have lived in or your relatives might have lived in to see if these infections need to be a concern for you. Some other diseases such as lung or heart disease also might increase your problems with these medications. Read the information about the particular drug you and your rheumatologist have chosen for



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your treatment and discuss any questions you might have. If you have symptoms of infection the most important thing you can do is make sure you let your doctor know.

With the development of the biologics the treatment of RA has taken a giant step forward. The possibility of achieving all three of our goals is a reality. With these medications pain can be controlled, function can be maintained and destruction of the joint is minimized.

Rheumatoid Arthritis, when diagnosed and treated early in the course, has become an inconvenience rather than a disaster for most patients. Let's hope that with further research, the next step will be a cure.



Please don't forget about our ongoing "arthritis friendly" fitness sites that are not involved with the Senior Citizen's Nutrition Program:

Wilmore Community Center  
501 West Blvd.  
Charlotte, NC

Tuesdays and Thursdays  
9:00 am until 10:00 am

Both days are led by Suzanne Rosen, LPT

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Amity Presbyterian Church  
2831 N. Sharon Amity Rd.  
Charlotte, NC

Mondays, led by Yolanda Osborn,  
BS, AEA

Thursdays, led by Jennifer  
Watson, MPT

Both days are 11:00 am until  
12:00 noon

Please contact Arthritis Services at 704-331-4878 with any questions you may have or to register for the classes. As always, these classes are offered free of charge.



# Myofascial Release

By Christine Roper, PT, PYT



Chronic pain can be so debilitating - but, does it have to be? For over 20 years as a Physical Therapist, I have been treating patients with chronic pain who have suffered far too long as a result of a medical system where the fascial system has been mostly ignored. I have experienced this personally through my own chronic pain and recovery and I have learned if you treat the fascial system, you can return to a normal, functional, pain free life.

What is fascia? Fascia is a specialized system of the body that has an appearance similar to a spider's web or a knitted sweater. It is one continuous sheath that is very densely woven, covering every muscle, bone, nerve, artery and vein, as well as all of our internal organs - the heart, lungs, brain, spinal cord, and so on. It's purpose is to support, protect, and essentially hold all these systems together. This continuous structure exists from head to toe without interruption - each part of the body is connected to every other part by the fascia.

Trauma, inflammatory responses, and/or surgical procedures create myofascial restrictions that can produce tensile pressures of approximately 2,000 pounds per square inch on pain sensitive structures that do not show up in many of the standard tests (x-rays, myelograms, CAT scans, electromyography, etc.). Many people suffering with pain and/or lack of motion may be having fascial problems, but are not diagnosed.

Fascia plays an important role in the support and function of our bodies, since it surrounds and attaches to all structures. In the normal healthy state, the fascia is relaxed and wavy in configuration.

Without restrictions or adhesions the fascia moves freely and in a functional non-painful manner. If we analyze the muscles, each muscle spindle is encased in fasciae and consists of two types of tissues, elastin and collagen. The elastin portion is stretchy like the top of your gym shorts. The collagenous portion is thicker, denser, similar to the tissue in your ear lobe or nose. When one experiences physical trauma, emotional trauma, scarring or inflammation, the fascia loses its pliability. It becomes tight, restricted, and a source of tension to the rest of the body. Meaning your normal "stretch" routine, the elastin component, is not working anymore for you. I hear all the time, "I have always had tight hamstrings", "It was after the fall that it seems like I just can't get the spasm stretched out" or as the years progressed with a medical diagnosis, "I feel stuck like I can't move". These are all examples of fascial restrictions. Fascial restrictions affect our flexibility and stability and are a determining factor in our ability to withstand stress and perform daily activities.

The key to unlock?

The approach founded and taught by John Barnes, PT, L.M.T., N.C.T.M.B., Myofascial Release (MFR). He is internationally respected in this field and has trained over 75,000 physical therapists in Myofascial Release.

An expert MFR physical therapist will evaluate you, assess your range of motion, function and restrictions and treat with Myofascial Release. The technique takes the therapist time and should not be rushed.

The contents of this publication are for informational purposes only. It is strongly recommended that readers consult with their physician or other health professionals regarding individual needs.



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Myofascial Release is a gentle approach used by a therapist who has steady hands and a quiet mind to unlock the fascial restrictions. The pressure is gentle but firm and should be held for 2-5 minutes to truly unlock the fascial system.

The key to a healthier life is remembering that where you have pain is not necessarily the source of the restriction. It is important to be evaluated and treated. It is your therapist's keen sense of touch and your ability to let go that will unravel the tight fascia and lead you to a healthier, fuller life.



Christine Roper, PT, PYT  
Roper Physical Therapy  
301 E. Tremont Ave., Ste. B  
Charlotte, NC 28203

[www.ropertpt.com](http://www.ropertpt.com)

## Chair Exercises

We all enjoy watching our favorite shows on television. Just remember, when the commercials come on, you don't have to sit there like a couch potato.

### **YOU CAN EXERCISE!**

#### **Neck Rotation**

Slowly turn your head to the side, looking over your shoulder. Hold a gentle stretch for 5-10 seconds. Return your head to the center. Repeat movement in the opposite direction. Do 3-5 repetitions on each side.

#### **Straight Leg Raise**

Put one leg straight out in front of you, resting on your heel. Tighten the muscle in the front of your thigh by pushing the back of your knee straight. Slowly lift that leg/heel 4-6 inches off the floor. Lower leg back to floor keeping the muscle in the front of your thigh as tight as possible. Then relax as heel touches back to floor. Repeat 3-5 times with each leg, working up to 10 repetitions.

#### **Ankle Circles**

Pick up one foot until just off the floor. Slowly move your foot/ankle in a circle clockwise. Repeat this movement 5-10 times, then slowly move the same foot in a circular motion counterclockwise 5-10 times. Repeat with your other foot.

Just a little exercise a day  
will help a lot!

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Please help make  
that change  
happen, give to

## LIVE UNITED



United Way  
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CAP  
Community  
Arthritis  
Project



## Did You Know?

Arthritis Services receives funding from the Older Americans Act (OAA), Title III-D Disease Prevention and Health Promotion Services. This funding is disseminated through the Centralina Area Agency on Aging and allows us to offer these classes:



Living Healthy:  
Stanford University  
Chronic Disease  
Self-Management  
Program (CDSMP)



Living Healthy  
with Diabetes:  
Stanford University  
Diabetes Self-Management  
Program (DSMP)



Matter of Balance  
Falls: Managing  
Concerns About Falls  
(MOB)



Fit and Strong



If you would like to participate in any of these classes, please contact Arthritis Services at 704-331-4878.

## HATS

### Handy Arthritis Tips

By Jennifer Watson, MPT

#### Assistive Devices

Assistive devices are specially designed products that can make living with arthritis easier. Pain, fatigue, weakness, and limited range of motion may cause everyday activities to become challenging. The use of these devices allows you to protect your joints and perform daily tasks with more ease and less pain. Here are some examples of popular assistive or adaptive devices.

- A cane or crutch on the opposite side of a painful/weak hip or knee makes walking easier
- Braces or splints provide support to joints and decrease strain
- Reachers can be helpful for picking up things from the floor without having to bend over uncomfortably
- Grab bars and raised toilet seats can make it easier and safer to get up and down in the bathroom
- A tub bench or shower chair, hand held shower head, long handled bath sponge, bath mitt, and non-skid strips can make bathing less of a challenge
- Button hooks, zipper pulls, Velcro closures, sock aid, long handled shoe horn, and elastic shoelaces can allow for easier dressing
- Built-up utensils, rocker knives, electric can openers, jar openers, and non-skid mats are useful devices in the kitchen

If you discover any changes in your everyday ability to function, consider investing in an assistive device. It could be just the help you're looking for to minimize the effects of arthritis!



Arthritis Outreach



# Research Opportunities For:

*(Listed in alphabetical order by site.)*

## **Arthritis & Osteoporosis Consultants of the Carolinas**

Allyson Eakin, 704-342-0252 ext.225

Call for information on clinical research trials for **Rheumatoid Arthritis** and/or **Osteoporosis** with **Cardiovascular Risk Factors, OSKIRA2** for **RA** patients who have taken DMARDs for at least 6 months and **stopped a biologic drug** due to lack of insurance or financial means to pay for biologic treatment, and **RA** patients on a stable dose of DMARDs for 8 weeks but **NO previous biologics**.

## **Box Arthritis & Rheumatology of the Carolinas**

Jennifer Ponder or Laura Crawford, 704-541-9092 ext. 211

Call for information on clinical research trials for **Rheumatoid Arthritis, Gout, Lupus** and **Psoriatic Arthritis**.

## **Carolina Bone & Joint**

Lisa Ward, 704-541-3055 ext.127 for Pineville office and ext.326 for Monroe office. Call for information on research opportunities for **Rheumatoid Arthritis, Osteoarthritis, Lupus, Gout, Anemia, Fibromyalgia, Psoriatic Arthritis, Osteoporosis** and **pain management**.

## **Carolina Center for Rheumatology & Arthritis Care**

Call 704-366-3001 for clinical research studies for **Fibromyalgia, Lupus, Gout, Gout with Cardiovascular Disease** and **Rheumatoid Arthritis**. Study sites convenient to Charlotte and upstate South Carolina.

## **Joint & Muscle Medical Care Clinic**

Vanica Pharoah, 704-377-1216

Call for research opportunities for **Rheumatoid Arthritis**.

## **Metrolina Medical Research**

Call 704-527-6672 for research opportunities for **Osteoarthritis** and/or **Rheumatoid Arthritis** with **Cardiovascular Risk Factors**. Check their website for a listing of all current studies: [www.pmg-research.com/metrolina](http://www.pmg-research.com/metrolina)

## **Thurston Arthritis Research Center, University of North Carolina**

Diane Bresch, 919-966-0545 or Brenda Meier, RN at 919-843-6619

Call for research opportunities for **Rheumatoid Arthritis, Osteoarthritis** and **Lupus**.



**Arthritis Services**  
500 East Morehead St., Suite 320  
Charlotte, NC 28202

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**Arthritis Services**

*Uplifting the community since 1977*

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email: [help@arthritisservices.org](mailto:help@arthritisservices.org)  
[www.arthritisservices.org](http://www.arthritisservices.org)



### Support Opportunities

#### **Fibromyalgia / Chronic Pain Support Group**

Offers support/education for people with FM. Meets the third Wednesday of the month at 1:00 pm at Arthritis Services office. Pre-registration required - call 704/331-4878.

#### **New Support Group - Spill Your Beans**

A support group for young women with disabilities ages 16 and up. Meetings are held once a month at Caribou Coffee on Park Rd. Covered topics include safety, relationships, health and beauty, and more. For more information, contact: Ariel Kliem, Therapeutic Recreation Specialist, at 704/432-4327 or email [Ariel.Kliem@MecklenburgCountyNC.gov](mailto:Ariel.Kliem@MecklenburgCountyNC.gov)

#### **Individual Counseling/Relaxation Training**

Call 704/331-4878 for more information or an appointment.

## Local Opportunities

### Educational Opportunities

#### **Information and Referral Services**

#### **Arthritis Nurse Consultation**

Health Professionals available to meet with you individually or upon request to speak for community groups about arthritis, Fibromyalgia and osteoporosis.

#### **Osteoporosis Screening & Education**

Available by appointment. Also provided to community groups upon request.

#### **Community Arthritis Project (CAP)**

Comprehensive Arthritis Management /Exercise Program offered at Mecklenburg County Senior Nutrition sites. Call to see if the CAP is coming to your area.

### Exercise Opportunities

#### **Functional Fitness Classes**

Taught by a physical therapist for those 55 and older, all fitness levels welcome.

**WEST** - Wilmore Community Center, 501 West Blvd., Tuesdays and Thursdays, 9:00 'til 10:00am

**EAST** - Amity Presbyterian Church, 2831 N. Sharon Amity Rd., Mondays and Thursdays, 11:00 'til 12:00pm

**Charlotte Mecklenburg Senior Centers** offer arthritis exercise classes. Please call them at 704/522-6222 for more information.