## **Preface**

For a great number of women, menopause is accompanied by aching and stiff joints that seem to only get worse as we get further and further into menopause. We quit dancing, drop aerobics, cancel outings, shun stairs, stop gardening, and although we just chaired a meeting, we can't get up out of our chair! Menopausal arthritis is aggravatingly present as we attend school, run errands, and go about every aspect of our lives. The joint aches (especially in the knees) can distract us, or worse they can completely disable us. In fact, some of us with aches and pains at menopause can at times hurt so much that we may even think we are succumbing to fibromyalgia.

All too often, though, the only thing that we hear about menopausal arthritis in books or on websites on women's health issues is that it is probably the "wear and tear" disease of osteoarthritis brought on by a decline in estrogen during menopause. However, research has revealed some much-needed information about menopausal arthritis and osteoarthritis. For anyone trying to break free of menopausal arthritis this is what you need to know:

Menopausal arthritis pain is more complex than just osteoarthritis brought on by menopause, and osteoarthritis goes beyond just a "wear and tear" disease of aging.

Before we go on to talk about some of the new research, let's go back nearly one hundred years to when menopausal arthritis was first recognized in the medical literature. Two very insightful medical doctors, Dr. Russell Cecil and Dr. Benjamin Archer first brought this form of arthritis to light in their 1925 journal article. Unfortunately, the article pretty much has remained in the dusty archives of the Journal of the American Medical Association. But, they were on to something. They knew that the most common attribute of women with menopausal arthritis, other than menopause itself, was obesity. The joint most affected by menopausal arthritis was the knee joint, and it was usually the first in which this arthritis developed. Their patients complained of pain going up and down the stairs, and getting up out of a chair. Since the knee was the main joint afflicted, Drs. Cecil and Archer had wondered whether excess body weight load upon the knee was the root cause of menopausal arthritis. They reasoned, though, that it had to be more than just the mechanical weight upon the knee joint, since other non-weight-bearing joints were affected too. They speculated that it was most likely endocrine in nature. They discounted that it could be metabolic in nature; this was 1925, though, and insulin resistance wouldn't really become a topic in the medical literature until the 1930's.

We *now* know that women in menopause who become obese are more likely to have metabolic syndrome and insulin resistance, along with leptin resistance. Most of us are aware that visceral fat is a virtual endocrine organ that releases inflammation-causing proteins. Powerful hormones, such as leptin, are produced by visceral fat. Hormones such as leptin are associated with inflammation and the release of inflammatory cytokines (I'll talk more about cytokines in Chapter Two). Most of us are probably aware that leptin and other hormones

produced by white adipose tissue have been linked to the risk for cardiovascular disease and type II diabetes.

What wasn't known until recently is that higher levels of leptin are linked to osteoarthritis! The proinflammatory cytokines that leptin promotes within the body are involved in breaking down cartilage! Osteoarthritis exists within a metabolic milieu! Moreover, brand new research out of Stanford University Medical School shows that the low-grade inflammation that has now been associated with osteoarthritis may actually play a dynamic role in how and why osteoarthritis develops. We'll be discussing the pioneering 1925 research of Drs. Cecil and Archer in Chapter One, and the cutting-edge 2011 research out of Stanford University Medical School in Chapter Twelve.

It is now clear that to beat osteoarthritis and menopausal arthritis you must fight low-grade inflammation! My healing plan includes a vast array of very effective inflammation-fighting foods, herbs, and supplements. I have described each of them along with the scientific evidence-based findings that support their use. These anti-inflammatory allies are a cornerstone of the natural healing program within this book, and they are your *first line of defense against menopausal arthritis*.

There are overlaps between menopausal arthritis and osteoarthritis, and that is why there will be an emphasis upon natural ways to fight the inflammation we now know exists within the disease process of osteoarthritis. However, what is also critical to know is that there are *other things* that are involved in the experience of menopausal arthritis pain. Many of these things have actually *nothing directly to do with the disease process of osteoarthritis*. For example, there are many physical ailments such as soft tissue disorders that are *more common in women* and can easily be mistaken for osteoarthritis knee pain. In fact, they can produce severe knee pain that feels just like arthritis pain! These ailments that "mimic" arthritis include several key forms of bursitis (such as pes anserine bursitis), and we'll take a look at them in Chapter Six.

To find the original research study on pes anserine bursitis, we return once again to the invaluable archives of the Journal of the American Medical Association. The pes anserine syndrome was first described in 1937 by Dr. Eli Moschcowitz who called this syndrome "bursitis of sartorius bursa." "For an unknown reason" he wrote, "the malady occurs almost exclusively in women." The primary disease characteristic? Pain in both knees only when going up and down the stairs. Importantly, Dr. Moschcowitz noted that the knee joint *did not show any arthritis* upon x-ray examination.

This brings up an interesting point about x-rays. Did you know that there is often a total *lack of connection* between symptoms of osteoarthritis pain and x-ray evidence of arthritis? X-ray findings that diagnose osteoarthritis *do not necessarily correspond to self-reported pain with osteoarthritis*. This means that you could have deterioration of cartilage on an x-ray, but not have any pain. Conversely, you could have no deterioration of cartilage on an x-ray and have considerable joint pain.

Current writings on osteoarthritis have not unraveled all of the reasons for the different experiences of men and women. In addition to soft tissue problems such as bursitis, there are also other problems of importance such as muscle imbalances and shortened muscles that may be more specific to women than to men. These muscle problems can cause women to adopt gait patterns that put tremendous strain on the knees. Oftentimes, this resulting knee pain may be identified as being arthritis pain, *when it is not!* 

Women experience a rapid loss of muscle mass within the first few years right after menopause, whereas men lose muscle more gradually over time. There are significant differences between men and women in muscles, cartilage and ligaments. These key differences are of much importance in developing an exercise program for women with menopausal arthritis. We'll look at physiological and biomechanical differences between men and women in Chapters Four, Five, and Seven.

The healing plan within this book includes a set of unique and effective exercises that will allow you to enhance and maximize the ability of your muscles and tendons to support your joints. The exercises have been developed using principles of modern sport training, kinetic muscle chain development, and principles of the integrative muscle-tendon unit found in the Asian martial arts. We describe the research and theoretical bases for our exercise program in Chapter Seven -- Part I, and in Chapter Seven Part II we present the exercises with illustrations and full descriptions of how to perform them, as well as exercise tips and check points.

Rather than isolated eccentric or concentric exercises that you may find in many exercise programs for arthritis, our exercises use whole chains of muscles. At once you will be exercising many muscles involving many joints (*no* solitary knee extensions with a burdensome weight at your ankle!). As you strengthen your muscles in ways that engage and use whole chains of muscles, you will increase muscle force. As these chains of muscles begin to work together in a coordinated and smooth fashion, you will build speed and generate increased power. These exercises have been expressly designed for women who are experiencing menopausal arthritis.

All of the exercises are done standing, so there is no need to disrupt the flow of your everyday activities by having to get down on the floor. It can hurt to have to lower your body into a floor position and then get back up off of the floor when you have painful joints. Nor is there any need to set up exercise props such as bands or weights. For menopausal women with arthritis, props such as bands can be uncomfortable or painful. So, in doing these exercises you benefit doubly -- through the exercises, *and* in not increasing problems in already painful or vulnerable joints.

Menopausal arthritis is far more complex than originally thought. But, what about estrogen loss? How *does* it fit into the picture? From my research, it is clear that estrogen loss matters, and it seems to be a trigger for the unfolding menopausal arthritis pain. I will discuss how estrogen relates to menopausal arthritis in the first half of this book. However, one of the appealing things about my natural healing plan for menopausal arthritis is that it is not dependent upon hormone supplementation. Moreover, my plan does not need to include pharmaceutical drugs nor NSAIDs (non-steroidal, anti-inflammatory drugs such as ibuprofen).

I am writing this book because women need to know about what may really be causing their menopausal arthritis. There is an impressive body of research with much needed information on the topic. Unfortunately by far, most of the findings from this body of research have not made their way out of the medical and other professional journals into the general public media.

I began my research with the classic studies that I have touched upon above. However, following this research and a handful of other early studies, there would be a dearth of empirical research on arthritis and the menopause for many decades. Perhaps it is no great coincidence that as the massive baby-boomer generation began to meet menopause head on, research on menopausal arthritis took a quick, upwards swing. By the end of the decade from 1985-1995

there were 130 articles related to menopause and arthritis accessible through PubMed. Then, from 1995 to January 2011 the research had burgeoned, with the number of scientific studies reaching 416!

In this book I have included findings from many diverse professional fields including rheumatology, orthopedics, sports medicine, biophysics, nutritional science, and many more. I have explored research that looks at why osteoarthritis and menopausal arthritis develop, and research that shows what you can do about it. With empirical research as my base and launching point, I have developed a plan with specific and effective ways to help heal from menopausal arthritis. I provide in my plan the basic and fundamental information that you need to fortify your body so that you can resist inflammation and develop strong and smoothly functioning joints. I am going to provide you with the exciting and fascinating research behind my healing plan throughout this book.

If you are a perimenopausal, menopausal or postmenopausal woman experiencing arthritis symptoms common to menopause, then this book is written for you. It is about getting back your pleasure in movement! It is about regaining your strength and ability to move with a body free of arthritis pain! After many years of pain going up and down the stairs that ultimately led to pain just in walking, I am now without menopausal arthritis pain. I am enthusiastic that my healing plan can help you, too!

Phyllis Rickel-Wong San Francisco, California January, 2012

Copyright © 2012 by Phyllis Rickel-Wong