Obesity is a risk factor for the development of many diseases, and as more and more Kentucky men and women become obese, the implications for the population’s health are alarming. Obesity is a major factor associated with the development of the metabolic syndrome, a cluster of symptoms that occur together and center on abdominal obesity. The word “metabolic” refers to the breakdown of food or calories to a form that your body can use for energy, and “syndrome” means a collection of medical signs and symptoms that occur together. Other symptoms include high blood pressure, high cholesterol or lipids, and insulin resistance or Type II diabetes. Each of these problems raises your risk for heart disease, stroke or diabetes, especially if you have more than one of them. The metabolic syndrome affects men and women equally, and the American Heart Association estimates that more than 50 million Americans are affected.
“Obese” simply means too much body fat. There are two types of obesity: central and peripheral. Central or abdominal obesity is fat in the abdominal region or an apple-like body shape; peripheral is a more dispersed type, concentrated in the thighs and buttock area or a pear-like body shape. Obesity causes people to have many other problems. For example, obesity raises levels of LDL cholesterol in the blood, can raise blood pressure, and leads to diabetes in many people. Obesity is defined by BMI, or body mass index, which is calculated based on height and weight. People with a BMI greater than 25 are considered overweight; those whose BMI is greater than 30 are considered obese.

How do I calculate my BMI?

You can calculate your BMI on the Department of Health and Human Services Web site: http://www.nhlbisupport.com/bmi/

A major feature of metabolic syndrome is insulin resistance, which is characteristic of type 2 or adult onset diabetes. Many people do not have the symptoms of diabetes and therefore do not realize that they are becoming resistant to their body’s insulin. Insulin resistance can be found in individuals who are not diabetic, meaning that obesity, especially central obesity, changes the ability of insulin to do its job. Insulin is secreted by the pancreas in response to food. Its job is to tell muscles, fat and the liver to take up the sugar or glucose circulating in the blood. Insulin resistance occurs when a body’s cells do not respond to insulin as well as they need to and they have trouble taking up the circulating glucose. This leads to high glucose levels in the blood but low glucose levels inside cells, which makes the body think that it is starving. The liver then produces glucose in response, further increasing blood glucose levels. High levels of glucose in the blood have many dangerous effects on the body, especially the kidneys and eyes. The body continually needs more and more insulin to overcome the high glucose levels and eventually the pancreatic cells that produce insulin may become exhausted. At that point, the person will require insulin in the form of shots.

High blood pressure, or hypertension, affects many Americans. There are many risk factors for high blood pressure, some of which cannot be changed, such as family history, race and age. If you have a family history of high blood pressure, you are at greater risk of developing it yourself. Hypertension is a particular risk for those of African descent, and as all people age they are more likely to develop the condition. Many factors can be controlled, though. Obesity, little exercise, heavy drinking, high salt intake and stress all contribute to high blood pressure and are all factors that we can change. People with diabetes also have hypertension more often than the general population.

Metabolic Syndrome, continued from page 1
I am delighted to inform you that April is now Women’s Health month in Kentucky! Throughout April, women were encouraged to take steps toward improving their health. It is our hope that the information we provide in this issue of the Kentucky Women’s Health Registry newsletter will help you keep the spirit of Women’s Health month all year long! Michelle Segar, a colleague from the Institute for Research on Women and Gender, has provided wonderful advice about not only how to start but most importantly how to maintain an exercise routine. We are also very pleased to have Yasmin Parrish, a medical student at UK, who is doing brilliant work with the Registry trying to understand how stress affects metabolic syndrome in women. Read her article to understand what metabolic syndrome is and how you can prevent it.

I would like to recognize some of our loyal Registry supporters. State Representative Susan Westrom is an advocate for women’s health and a long-time supporter of the Registry. We are very grateful for her work in bringing a resolution for Women’s Health Month to the Kentucky House of Representatives. Rep. Westrom graduated from the University of Kentucky with a BA in social work in 1993, and a master’s in social work in 1995. After working for two years as an advocate for children and families in Washington, D.C., and Frankfort, she ran for public office in 1998, winning the House of Representatives seat in the 79th District in Lexington. Rep. Westrom has served for 10 years on the Health and Welfare Committee and currently is the National Chair of the Health Committee for the National Conference of State Legislatures.

I also want to recognize Tina Lentz, director of the Louisville Metro Office for Women (OFW). In this role, Tina focuses on policies that impact women both inside and outside government ranging from health and safety issues to employment policies. In addition, she works to develop community partnerships and improve networking opportunities for Louisville women. Tina is a graduate of the University of Louisville, where she earned a bachelor’s degree in psychology and a master’s degree in Justice Administration. Her background includes working in management within Louisville Metro Human Services prior to her appointment to OFW. Before joining government, she worked as a research consultant and project coordinator for E.C.H.O., the Exploited Children’s Help Organization. She also previously served as a domestic violence and child abuse advocate with the Commonwealth’s Attorney’s Office in Louisville. She currently sits on the board of Women 4 Women and is a member of the Metropolitan Louisville Women’s Political Caucus.
HEART DISEASE is the number one killer of women in this country — and the symptoms underlying the metabolic syndrome play a major role.
Essential steps are the things women must do to take care of themselves. And because physical activity is such an important factor in women’s health and well-being, movement is, quite literally, “essential steps.”

Why is activity so important? A huge body of research has demonstrated the many dramatic benefits physical activity has on mental and physical health and on overall quality of life. Regular physical activity reduces the risk of breast and colon cancer, heart disease, diabetes, osteoporosis and numerous other ailments. It helps reduce the recurrence of breast cancer. It staves off the development of Alzheimer’s disease. It improves cognition, memory and intelligence. It enhances well-being and mood, in some cases with as much effectiveness as anti-depressants. Physical activity acts as a “wonder drug” on our mind and body.

But these benefits are well-documented and well-publicized, so why aren’t more women motivated to make physical activity a regular part of their lives?

Women may be motivated to start exercising but they don’t stay motivated to do it. Clearly there is a need to understand the sustainability of physical activity. Women typically start exercising for reasons related to changing their body shape or weight rather than for the long-term effects of activity. There are important problems associated with women taking this approach to exercising.

1. They have unrealistic and unachievable goals for what exercise will actually do to their bodies. (This has been perpetuated by fitness companies marketing their products and services.) When they don’t see these drastic changes, they give up.

2. Women often begin exercising to prepare for an upcoming event – a vacation or special event. When that event is over, they have no reason to continue.

3. Women select physical activities aiming to “burn calories and lose weight” or “tone up” rather than choosing activities they enjoy. In addition women may exercise so intensely to achieve their drastic body-change goals that they become exhausted or even injured. For some women, exercise is a reminder that they don’t feel comfortable with their bodies.

These factors lead to a “vicious exercise cycle” of beginning exercise and then giving up over and over again.

The key to breaking that cycle is to begin pursuing exercise for more than its weight and appearance benefits. Indeed, women who decide to integrate physical activity into their lives in order to enhance their quality of life are more likely to stay active and reap the long-term benefits.

Once you decide to take this different approach, the next step is to decide in what

Match your goals with activities

**Want stress reduction?**
- walk in a beautiful or inspiring place
- yoga
- tai chi

**Want to spend time with others?**
- plan to try a new class together
- join a gym/Curves together
- take a walk instead of having a coffee date

**Want to use high energy?**
- spinning
- running
- aerobics class

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Interesting facts from the Registry

1. Routine checkups. Of the 4,889 women who answered this question, 74 percent had a routine checkup less than 1 year ago; 16 percent had a routine checkup 1-2 years ago; and only 8 percent have not had a checkup for at least three years. Great news! We hope that each year the percentage of women who get a checkup once a year grows!

2. This past year we asked some questions about barriers to care that women might have had. Of the 3,847 who answered this question, the most common problems cited were:
   • Too busy to go for healthcare – 29 percent
   • Difficulty getting an appointment – 23 percent
   • Couldn’t afford the co-pay – 10 percent
   • Couldn’t get time off work to get healthcare – 8 percent
   • Didn’t want anyone to know they had a problem – 7 percent

3. Spring is here! Last year 4,889 people answered the allergy question.
   • Environmental allergies – 33 percent.
   • Drug allergies – 33 percent
   • Animal allergies – 18 percent
   • Food allergies – 14 percent

4. Registry participants are responsible for a lot of child and adult care! 36 percent of the 3,847 women who answered the question had care-giving responsibilities for either children or adults.

5. And stress levels don’t seem to be going down. Of the 4,889 women who answered the question, 26 percent have less stress than last year, 40 have the same amount of stress as last year, 32 percent have more stress than one year ago and 1 percent report having no stress.

6. Finally, 20 percent of Registry women use aspirin therapy to prevent heart disease.

Take the Challenge!

Enroll 3 friends

The CHALLENGE: In order to achieve our goal of enrolling 2,500 women each year into the Registry, we would like to ask each of you to help us enroll three of your friends, family or co-workers. In order for the Registry to get an accurate account of the state of women’s health in Kentucky, we need women of all ages, all states of health, smokers and nonsmokers, sick and well, young and old from all across the Commonwealth to be a part of your Kentucky Women’s Health Registry. All you do is simply complete a 20-minute survey once a year.

Visit the Web site:
www.kywomensregistry.com
or call 1-800-929-2320
for more information.

Don’t forget to renew your own survey each year!
Clinical research studies are scientific investigations in which people participate as volunteers to test drugs, devices or medical procedures. Controlled, scientific studies are necessary to help answer specific health questions and to develop safe and effective therapies.

Please review our clinical trials and consider taking part in any clinical trial that relates to you. You could help yourself and thousands of others!

**RIM Study**

The RIM study (Rituximab in Myositis) is a study for those with adult and juvenile dermatomyositis (DM) and adult polymyositis (PM). The purpose of this research study is to evaluate the effectiveness of the study drug, Rituximab, in people diagnosed with dermatomyositis, a disease that causes muscle weakness and is associated with a rash, or polymyositis, a disease that causes muscle weakness without a rash. This study will be done at approximately 37 centers across North America and Europe, including the University of Kentucky. For further information about the RIM trial go to: [www.edc.gsp.pitt.edu/rimstudy](http://www.edc.gsp.pitt.edu/rimstudy). You may also contact study coordinator Jenny Fuller at 859-323-3805 or by e-mail at Jlfull2@uky.edu. In addition, you may call UK Health Connection toll free at 1-800-333-8874.

**SCOT Study**

SCOT is a clinical research study designed for people with severe forms of scleroderma. SCOT stands for Scleroderma: Cyclophosphamide Or Transplantation. The SCOT study will compare the potential benefits of stem cell transplant and high-dose monthly cyclophosphamide (Cytoxan) in the treatment of scleroderma. More information about the SCOT trial can be found at [www.sclerodermatrial.org](http://www.sclerodermatrial.org) or call Mary Johnson at 859-323-1377.

**Sleep Quality and Sleep Disturbance in Women with Fibromyalgia Syndrome**

Suzette Sewell of UK's College of Nursing is conducting a study of women with Fibromyalgia. Qualified subjects will complete self-administered questionnaires and a sleep diary and wear a device worn like a watch that measures arm movements for a period of 7-10 days to help assess sleep quality and sleep disturbances. For more information call 502-636-3495.

**Fibromyalgia Syndrome & Tempromandibular Disorder Study**

Dr. Lise Solberg Nes at the University of Kentucky is conducting a clinical research study to examine the impact of mental effort and personality on experience of chronic pain. The study is enrolling women between the ages 18-55 who have been diagnosed with Fibromyalgia or Tempromandibular Disorder but do not currently use prescription medication other than contraception or antidepressants. For more information call: 859-321-3445.

**Periodontal Disease Study**

Dr. Dolph Dawson of the College of Dentistry is leading a study to evaluate whether a daily supplement of fish oil (n-3 polyunsaturated fatty acid or PUFA) has any effect on the inflammation found in gum disease. Fish oil has been shown to reduce inflammation in other studies. At this time, Dr. Dawson is enrolling women from the Registry who have 20 or more teeth and have or suspect they have gum disease (periodontal disease). Contact Gammi or Vanessa at 859-323-5349.

**Daily Life Study**

Dr. Suzanne Segerstrom of the University of Kentucky Department of Psychology/Behavioral Sciences. This study will be looking at how women's daily lives may impact their mental and physical health. At this time, Dr. Segerstrom is enrolling women from the Registry who are employed full time and are between the ages of 18 and 65. You can reach the study coordinator, Dan Evans, at 859-257-2207.

**Women's Stress and Aging Study**

Dr. Tamara Newton of the University of Louisville is conducting a study of women who are postmenopausal and have been divorced or separated for at least one year. This study will compare the effect of divorce and separation in women's physical and mental health. For more information call 502-767-2517.

**Smoking Cessation Study**

Dr. Catherine Martin of the University of Kentucky is enrolling female cigarette smokers from the Registry who are between 18 and 55 year of age. This study looks at the whether an FDA-approved medication called modafinil could aid in smoking cessation. Of particular interest is whether modafinil decreases appetite and weight gain when women are trying to stop smoking. Contact Dr. Martin at 859-257-9341.

For any of the above studies, you can also call UK Health Connection toll free at 1-800-333-8874 or call Mary Johnson at 859-323-1377 and toll-free at 1-800-929-2320.
ways you want your life to be enhanced. Do you want to reduce your stress? Spend time with friends? Just have fun? Once you decide what experiences you want to have, you can choose physical activities that will give you those experiences. Keep in mind that this is a sort of experiment in which you are seeking the right type of exercise for you, and remember that it may take some time to figure out. But if you are interested in sustaining physical activity for the long-haul, then taking the time needed to figure out how it can work in your life is worth the effort!

By: Michelle Segar, PhD, MPH, Researcher at the Institute for Research on Women and Gender (University of Michigan), Founder of EssentialSteps, www.essentialsteps.net.