

The Morrison-Bruce Center for

the Promotion of Physical Activity for Girls & Women



Newsletter
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the History

The Morrison-Bruce Center for the Promotion of Physical Activity for Girls & Women, that's a mouthful. But believe it or not The Morrison-Bruce Center, as it is more commonly known, is an active member of the JMU community. Since it's beginning in 2004, the Center has had it's hand in many different research studies, physical fitness events, and many community events. The foundation for the center was laid over fifty years ago by two active professors. Dr. Lee Morrison and Dr. Patricia Bruce, where the center's name comes from were both very active in enhancing the lives of women by expanding physical activity. The center is primarily a research center and has been since 2004. It is under JMU's department of kinesiology with a goal to create activities to promote physical activity and raise awareness for specific health issues, primarily in women. The center is now run by Dr. Judith Flohr and Molly Whittaker. It works on various research projects related to women's



physical and mental well-being as well as promoting physical activity. It is also involved in many other events with the community and JMU alumnae, which will all be discussed throughout this newsletter. The Morrison Bruce center is very excited to be on JMU's campus and is looking to be more recognized. For more information you can visit the website at <http://www.jmu.edu/kinesiology/cppagw/index.html> or you can stop by the Center's office located in Godwin.

Kid's... Come Improve your swing...

with Pro-Golfer Janet Massey-Phillips and
former JMU teammate Wendy Shifflet @

Movin' and Groovin'

April 12th in JMU's Godwin Gym



The Morrison-Bruce Center for the Promotion of Physical Activity in Girls and Women is active in completing research that is concerned with physical activity and fitness in girls and women. Below are some current studies that the center is involved with.

Vigorous Physical Activity and Risk of Chronic Disease - The purpose of this study is to assess the impact that vigorous physical activity engaged in early adulthood (18 – 22 years) has on a women's lifestyle and risk for chronic disease later in life. Data collection began in October 2004, however new participants will be tested on an annual basis. Participants of this study include JMU alumnae and non-alumnae who may or may not have participated in vigorous physical activity during their college-age years. The study will begin follow-up testing of all subjects in April 2008.



Caffeine and Bone Mineral Density - This study seeks to determine whether a particular gene influences whether caffeine has a negative impact on bone health. Participants have had their bone density measured by the DEXA machine in the Human Performance Laboratory. These participants will then be genotyped to determine whether they are slow or fast caffeine metabolizers. The two groups will then be compared as to the relationship between caffeine intake and bone density. This study was funded by a grant from the College of Integrated Science and Technology.

Gender Differences in Plantar Pressure Distribution - The purpose of this research project is to study the changes in dynamic plantar pressure distribution at a walking speed among fatigued female athletes throughout their menstruation cycles. Previous research suggests women are more susceptible to over-use injuries and foot deformities than men and clinical studies have demonstrated hormone effects on ligament laxity and injury rate. Other research has shown the combination of mechanical loading and estrogen to decrease collagen and biglycan levels, possibly resulting in increased ligament injury in female athletes.

Iron Deficiency in Female Athletes - This study's purpose is to determine if one week of iron supplementation, during menstruation will affect serum ferritin and serum transferring levels, and heart rate in female intercollegiate athletes during a 3-minute YMCA step test. Previous studies have determined that women have lower iron stores than men because of iron loss during the reproductive years (Whitfield, Treloar, Zhu, Powell, & Martin, 2003) and have an increased risk for iron deficiency regardless of training status due to monthly blood loss (Akabas & Dolins, 2005).



Check out the back page for the featured research study:
The WAIAT Study

Upcoming Events

Movin' and Groovin': April 12th



What is movin' and groovin'? That is the question. Movin' and Groovin' is one of the many events that the Morrison Bruce Center puts on for the community. This fun-filled exciting event is designed for kids in the third, fourth, and fifth grades to stress the importance of physical activity. While learning about cardiovascular endurance, muscular strength, flexibility, body composition, and nutrition, the participants will also be taught how to incorporate physical activity into their daily lives. We are particularly excited about this year's Movin' and Groovin'. It takes place on April 14th and is open to all third, fourth, and fifth grade students all across

the valley. This year we have a special guest by the name of Janet-Matsy Phillips. She is a pro-golfer, a JMU alumnus and she played for the JMU golf team. Janet is coming back for this special event, to do a golf segment. She was the LPGA 2006 professional of the year, which means she has her hand in every piece of golf. From running a sports complex in northern Virginia, giving private lessons to people of all ages, facilitating after school golf programs, starting different golf teams at various schools; she is truly an ambassador for the sport of golf. When asked what was the most exciting thing about Movin' and Groovin' she said, "first it would be coming back to JMU and second would be furthering golf in the community." She is an advocate for golf and would love to see it take off in the valley. Her fellow JMU teammate, Wendy Shifflet, a native of the valley, will also be at the event. She will be a great follow up to the golf segment and a great support for kids who want to get involved in the sport because she is local. This is only one of the many things offered at Movin' and Groovin' this year. If you want details on how to sign up there is an ad on the back. We are so excited and can't wait to get the ball rolling.

Alumnae Health and Fitness Program: April 24-April 26

The Alumnae Health and Fitness Program will be held on Thursday, April 24th and Friday, April 25th, 2008. Participants in this event will be graduates from the class of 1958 and before. They will attend lectures and workshops on women's health and physical activity, undergo assessments of cardiovascular health, bone health, and physical fitness, as well as work with JMU students to design an exercise prescription to improve the individuals' health and fitness. The data from this program will further the research in the Impact of Physical Activity on Non-Traditional Risk Factors in Women study conducted by the Morrison-Bruce Center for the Promotion of Physical Activity in Girls and Women.



If you are interested in participating in this program please contact Megan Brock by e-mail at morrison-brucecenter@jmu.edu or by phone at (540) 568-4348.

W.A.I.A.T.

(Women Atherosclerosis Inflammation and Thrombosis)

Recent research has identified non-traditional risk factors for cardiovascular disease (CVD), including markers of inflammation and blood coagulation. These factors are associated with CVD because inflammation causes CVD and blood clots cause the majority of heart attacks and strokes. Increased physical activity is associated with a decrease in inflammation and blood coagulation potential in males. Although CVD is the primary cause of death in females and hormone replacement therapy has adverse effects on inflammation and coagulation, few studies have examined the impact of physical activity on non-traditional risk factors in post-menopausal women. The proposed project seeks to: 1) determine the relationship between physical activity and non-traditional risk factors in pre and post-menopausal women; 2) determine the relationship between physical fitness (VO₂ max), physical activity and markers of inflammation (CRP) and blood clotting factors and 3) determine the interactive effect

between exercise and hormone replacement therapy on non-traditional risk factors in post-menopausal females. This ongoing study all participants are given an extensive health and fitness screening. The information collected will solidify the relationship between healthy behaviors and cardiovascular disease risk factors in women. Anyone wishing to be a participant in the study should email Megan Brock at morrison-brucecenter@jmu.edu or call 540-568-4348.

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