

Swimming Economy in Long Distance Swimmers and Triathletes, Master's Thesis

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This study is being performed to further understand swimming in swimmers and triathletes who compete in events that require long distance swims. The ability to swim well requires proper development of swimming technique. Developing this technique requires an athlete to devote quality training time specifically to swimming. The multi-sport nature of triathlons requires a the athlete to cross-train in swimming, cycling and running. Consequently, this limits a triathlete's ability to optimize performance in a single discipline. Evidence suggests triathletes are less skilled in a single sport when compared to athletes who specialize in an individual sports. Because swimming is very technique dependent, training in other endurance sports only minimally enhances swimming performance.

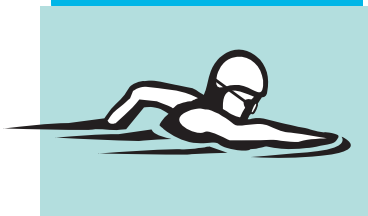
Despite less proficiency in a given sport, triathletes may have adopted a training style which allows them to perform well in all three events in series. This study will investigate swimming economy, the amount of work required to maintain a given velocity of motion, in long distance swimmers and triathletes. The objective is to determine if triathletes and swimmers differ in their swimming throughout a long swim and how swimming parameters (ie. stroke frequency and stroke length) correspond to changes in swimming economy between these two groups of athletes.

Subjects in this ongoing study partake in two days of testing. The first session consists of body composition analysis and a 400-yards swim to establish pacing and familiarization with the testing equipment and protocol. Subjects then return within a 7 day period to the McCorkel Aquatics Pavilion where the



experiment takes place. The subject will swim 3x 400-yds, 1x 2000-yds, and again, 3x 400-yds. For those who live a more terrestrial life, these subjects are swimming a distance that is equivalent to an 11 mile run! As if the swimming isn't cumbersome enough, following each swim trial, the subjects must immediately breath into a one-way valve while trusty undergraduates pinch their nose sealed and blood is drawn from their fingers. Thanks to the Men's Swim Team, their highly sophisticated underwater camera system allows us to analyze the changes in stroke frequency and stroke length.

Data collection has been underway since January and will come to an end in May. While Michelle has yet to solve the performance determining variables of endurance swimming, the process of a Master's Thesis has been a rewarding one. As she's been told by one of her Ironman subjects, the experience is, "just like an Ironman, steady as she goes with a dramatic ending".

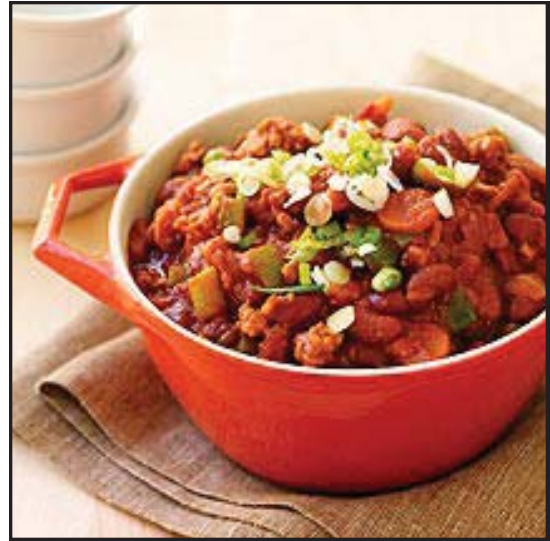


Hearty Turkey Chili

Dietitian's tip: This chili uses roasted vegetables and turkey meat instead of ground beef for a full, hearty flavor. By Mayo Clinic staff

Ingredients

- 2 cups chopped zucchini
- 1 teaspoon olive oil
- 1 cup chopped onion
- 2 cups chopped celery
- 1 cup chopped bell peppers
- 2 teaspoons chopped fresh garlic
- 1 pound chopped cooked turkey
- 1 1/2 tablespoons chili powder
- 1 teaspoon cumin seed
- 2 cups diced canned tomatoes, no-salt-added variety
- 4 cups canned kidney beans, rinsed and drained
- 2 cups low-sodium vegetable broth
- 1 teaspoon brown sugar



Directions

Preheat the oven to 475 F. Spray a glass baking dish with cooking spray. Arrange the zucchini in a single layer in the baking dish. Roast for 8 to 10 minutes until slightly tender and lightly browned. While the zucchini is roasting, add the oil and chopped onions to a dutch oven or soup pot. Saute over low heat until the onions are browned. Add the celery and peppers and continue to saute. Add garlic, turkey, chili powder and cumin seed. Cover and simmer for about 5 minutes. Stir in the tomatoes, kidney beans, vegetable broth, brown sugar and the roasted zucchini. Cover and simmer for 15 minutes. Ladle into warmed individual bowls and serve immediately. Serves 8.

Serving Size: ~ 1 cup			
Calories	277	Cholesterol	43mg
Protein	26g	Sodium	315mg
Carbohydrate	32g	Fiber	9g
Total Fat	5g	Potassium	764mg
Saturated Fat	1.5g	Calcium	84mg
Monounsaturated Fat	2g		



Getting To Know Your Graduate Associates: Alisa Blazek (and Farewell~)

Ya-Ting Hsu, MA, PT



Do you still remember the cute girl with curly hair and big smile teaching Pilates last year? She is Alisa Blazek, who just obtained her M.A. during winter quarter. Perhaps not many people know that Alisa has worked as a Research Scientist at Battelle, a government contract research company, for more than 10 years. Her work deals with DNA extraction and bacteria/virus sample analysis. Before Battelle, she worked at a peptide company and met her husband, David, another chemist there. Because of her passion for exercise and sport, she decided to extend her molecular world from bacteria/virus to human beings. Ultimately, she wants to focus on the relationship between exercise and human genetics and immunology. Thanks to her decision, we have had the wonderful opportunity to know her here.

Alisa personally enjoys various types of exercise and sports. Most of you might know she loves playing hockey and has enjoyed watching the Blue Jackets and cheering for our hockey Buckeyes for the last 10 years. She even started the hockey team at Battelle! She also enjoys running, weight-lifting, Pilates, and interval training. In addition, she enjoys sharing her tips to prevent workout routine boredom: trying different things every day. For example, she runs on Monday, lifts weights on Tuesday, does Pilates Wednesday, and so on. Performing a variety of exercises and sports keeps the workout more fun! Another tip for people who are interested in Pilates: practice with a DVD/video. Alisa attended a couple of Pilates classes and found she did not learn anything new from the class since she had practiced with the DVD for a while. You can practice Pilates at home without going to a class, and that gives you more workout flexibility.

Alisa's A-list

restaurants:

Starliner Diner, Hilliard.
Try their chicken specials. Yummy!

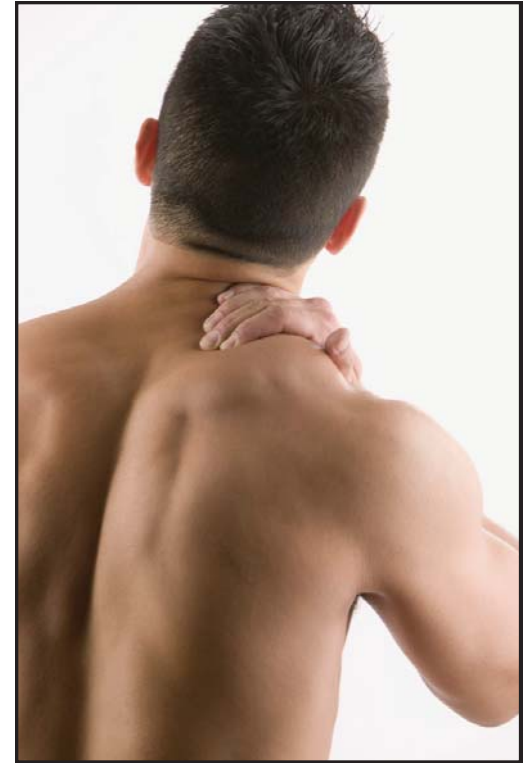
Banana Leaf, on Bethel, facing Micro Center. Indian vegetarian restaurant. Buffet offered.

Dragonfly, on King. Vegetarian restaurant near OSU campus. Empandas are a must.

In the future, Alisa would like to keep pursuing exercise research on immunology and genetics. We all wish her good luck on her journey.

Exercise and Fibromyalgia

Justin Dials



As exercise physiologists, we assist in the rehabilitation and care of various patients with a variety of morbidities including cardiovascular disease, pulmonary disease, metabolic diseases and various musculoskeletal complications. A less common condition that we are exposed to which requires considerable attention is fibromyalgia. Fibromyalgia is a common rheumatological condition characterized by chronic fatigue, reduced sleep, depression, anxiety, headache and bowel dysfunction. Fibromyalgia can be significantly frustrating for patients especially considering the limitations placed on their normal activities of daily living as a result of the associated pain. When treating patients with fibromyalgia, exercise physiologists and other clinicians are faced with the difficult task of determining the cause of fibromyalgia related symptoms. Many of these symptoms, including fatigue and pain, often resemble symptoms of cardiovascular disease and diabetes. We often have to rule out the onset or progression of cardiovascular disease and routinely assess vital signs and blood glucose levels. Upon finally determining that a patient possesses fibromyalgia, despite the exhaustive series of frequent testing, scanning and physician visits that in turn can worsen underlying depression and anxiety, exercise is a proven modality to help patients cope with the debilitating symptoms.

The most abundant question that we (as exercise physiologists) are asked by fibromyalgia patients is, ‘Is exercise safe for me?’. When talking with patients, a majority of reservations regarding exercise training involve fear of bone and/or muscle injury and worsening pain. Most exercise related studies show a positive effect of exercise in fibromyalgia patients and that both resistance and aerobic type exercises should be included in an exercise regimen. It has been determined that when following American College of Sports Medicine exercise guidelines, exercise has positive effects on physical function, psychosocial well-being and pain. William J. Polinski, DO, Ph.D., agrees with the majority of the research. ‘When carefully diagnosed, and after considering all co-morbidities that patients may possess, including coronary disease and diabetes, exercise is a safe and therapeutic strategy for patients with fibromyalgia’. Dr. Polinski often reminds his own exercise physiologists that the symptoms of fibromyalgia can often mirror symptoms of angina and hypoglycemia and to always be comfortably familiar with a patient’s complete risk profile. He goes on to state, “the impact of exercise on well-being and self-confidence is well-documented and more than likely plays a significant role in the improvement of fibromyalgia patients. Like many others, exercise makes this population of patients simply feel better.”

If you are suffering from symptoms of fibromyalgia and have additional questions or concerns, please feel free to contact one of our FSFP staff members. You can also visit www.myalgia.com for additional information.

FSFP member highlight Cory Scheadler, MA

Denise Peterson

Department of Pathology, Human Tissue Resource Network



Denise is a long standing member of FSFP, having been a member since the much less booming days of Cunz Hall, some four years ago. Denise started FSFP when her job went from active warehouse worker to 10-hour desk job. The sudden reduction in physical activity took its toll, “Despite walking at lunch...I was unhappy with the weight gain” says Denise. Denise is extremely consistent, coming to noon hours Monday through Friday. Denise sites help from a previous GA, Dennis Kerrigan, and her self-proclaimed ‘anal retentiveness’ for her consistency. Denise has a well-rounded routine of aerobics and resistance training that she uses to meet her goals. She even partakes in more intense cardio intervals Monday, Wednesday and Friday to increase the benefits and productivity of her workouts. When asked about her motivation, Denise says “After a workout, I feel better mentally... calmer at work.” In the long term, Denise hopes that FSFP will help build strength and bone mass. “I want to enter my golden years strong and vibrant.” She says the FSFP offers the best return for your money, with access to the gym, trainers, and other classes (such as Yoga and Water Aerobics) for a minimum fee. Denise enters each FSFP session with a friendly smile and a good attitude. We wish her many years of good health and look forward to seeing her in FSFP.

Ask the Expert

Rebecca Nguyen, MS

Question: I'm a 20 year old man. I'm 6 ft tall and weigh 220 lbs. I have unusually large hips for a man, which appear womanly. People make a lot of fun of me because of this. Please suggest something to get rid of the fat around my hips.

Answer: If we eat more calories than we expend, the excess energy will be stored as fat. The abdomen is the worst place on the body to accumulate fat, as this is associated with increased risk for cardiovascular disease and diabetes. Although most men tend to gain excess fat around the midsection, it is not always the case. Everybody stores fat a little differently.

Based on your reported height and weight, your body mass index (BMI) is 29.9. Since the ideal BMI is between 18 and 25, reducing your fat stores would improve your health. Unfortunately, there is no such thing as spot reduction. But decreasing your total body fat will decrease the fat around your hips. And this, in fact, is the only way to achieve your goal.

So how does one decrease body fat? Well, if you put more calories out than in, the body will tap into its fat stores. The best way is to do this slowly but consistently. Increase your daily physical activity and exercise. Decrease your consumption of unhealthy, caloric foods and snacks. Increase your consumption of fruits and veggies. If you are diligent, this always works!

But remember, you must incorporate at least a little bit of strength training. Otherwise a third of the weight you lose could be muscle! The American College of Sports Medicine (ACSM) recommends strength training all major muscle groups with 2 sets of 8-12 repetitions twice a week. This will keep you a lean, mean health machine.

Be sure to get medical clearance from your doctor before starting ANY new diet or exercise routine. You can do it!

Summer Schedule



Morning General Conditioning	MWF	6:30-8:30am
Noon General Conditioning	MTWRF	11:30-1:30pm
Evening General Conditioning	MTWR	4:30-6:30pm
Morning Swim*	MWF	7:30-8:30am
Yoga	T	12:30-1:30pm
Zumba	R	5:30-6:30pm

*Morning swim will not last the entire quarter due to pool construction. Details to follow via email.