

# Optimus

## Optimus Mission & Vision

To provide research-based, life-style interventions designed to reduce the risks for chronic diseases.

We strive to provide a positive, safe, and comfortable environment to help you achieve your personal health and wellness goals.

Optimus staff members are experienced health and wellness professionals. Optimus has state of the art fitness equipment for total body conditioning and various services to better your health and fitness.

### HOURS

Monday-Friday:  
6am-1pm and 4-7pm  
Saturday: 7am-noon

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Bi-Monthly Newsletter for Optimus: The Center For Health

Volume 4, Issue 3

## Exercise and Knee Osteoarthritis

by Tom LaFontaine, PhD

Osteoarthritis (OA) of the knee is a leading cause of disability among older adults. OA is a degenerative disease in which the smooth, slippery, fibrous tissue called articular cartilage or meniscus that acts as a protective cushion between the femur (thigh bone) and the tibia (lower leg bone) begins to deteriorate. As a result the space between the bones narrows and thickens forming bone spurs. This causes inflammation, swelling, pain, stiffness, deformity, and loss of strength and mobility. Figure 1 illustrates OA. Several factors increase the risk of developing OA of the knee (listed in Box 1).

OA is treated with medications, physical therapy, weight loss, intra-joint injections including cortisone or hyaluronic acid (i.e.

Synvisc which provides “joint lubrication”), over the counter medicines called NSAIDs (non-steroidal anti-inflammatory drugs) such as ibuprofen, naprosyn, aspirin or prescription NSAIDs such as Meloxicam or Celebrex, supplements such as glucosamine, and surgery.

Perhaps the most underappreciated treatments for OA are weight loss and exercise (aerobic and weight training exercise). Studies show that in overweight men and women each pound of weight loss results in a 4 lb reduction in the load exerted on the knee per step during daily activities. Accumulated over thousands of steps per day, a reduction of this magnitude is clinically meaningful. It also is well documented that strength of the muscles of the thigh, particularly the quadriceps (see Figure 2) is associated with less risk of knee OA and improved function among persons

with knee OA.

For information on designing and implementing an effective and safe program to treat knee OA, visit with one of the Optimus Personal Health Fitness Coaches (visit our [www.optimushealth.com](http://www.optimushealth.com) to view the qualifications of our staff).

The web links and articles listed below and on page 3 provide scientific information on the role of bodyweight and quadriceps strengthening in the prevention and management of OA.

- [www.arthritis.org](http://www.arthritis.org)
- <http://www.medicalnewstoday.com/articles/56514.php>
- <http://www.sciencedaily.com/releases/2009/01/090113174539.htm>

Figure 1

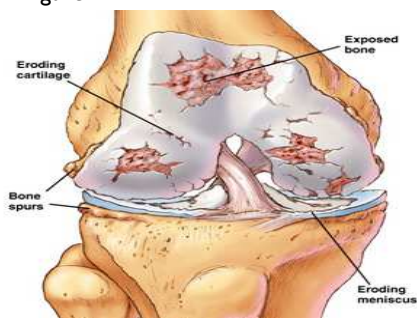
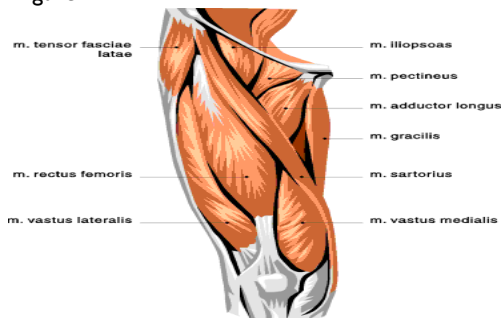


Figure 2



- Heredity – some evidence suggests that genetics may make a person more susceptible to OA
- Bodyweight – in several studies, this is the number one risk factor
- Age – as with most things the risk of OA increases with age
- Gender – it appears that women as they age are at a slightly greater risk of OA
- Trauma – previous injury, often sports injury, can precipitate OA
- Repetitive stress injuries – often associated with occupations that involve a lot of kneeling or squatting (baseball catcher, carpet layer, other)
- Poor aerobic and musculoskeletal fitness may increase the risk of OA
- Poor alignment of the knee such as genu varus (bow-legged)

## Member Spotlight: Louise Miller

This month's member spotlight is a follow-up report on Louise Miller, a client of Optimus and Tom LaFontaine. She joined Optimus in July of 2008. She is a PhD in nursing and teaches and does research at the University of Missouri Sinclair School of Nursing. I have personally known Louise since the early 1980's (but I won't divulge her age NOR mine!).

Initially, Louise did a Metabolic

Exercise test administered by Tom. This test provides excellent information on health, fitness, and exercise capacity. It involves walking or jogging on a motor driven treadmill, while your exhaled air is collected and analyzed for carbon dioxide production and oxygen uptake (essentially we are measuring your metabolism thus the name

Metabolic Exercise Test). As part of this test body composition is also assessed (% fat, fat weight and lean body weight). Louise's first test was administered on July 23, 2008. She did a follow-up on 12/26/2008 and showed excellent progress after 6 months of training. On 4/20/2010, Louise did a 2nd

follow-up. She lost 16.6 lbs. More importantly she lost 18 lbs of fat and gained 1.4 lbs of lean bodyweight. Her capacity to use oxygen, perhaps the most important marker of health and fitness increased from 31 to 45 or by 45%! On April 24, she ran a personal best 1/2 marathon in 2:25:08!!

CONGRATS LOUISE!!!

## Optimus Members Finish Marathons

### Lance Bollinger

The Boston Marathon took place on April 19th. This is the oldest annual marathon in American history with this year being it's 114th. Lance Bollinger, Optimus Personal Health and Fitness Mentor, completed the marathon in 3:03:59. This was good enough for 1,749th place (out of 23,071 starters and 22,588 finishers).

***"It was a great experience competing against so many other high quality runners and interacting with over 500,000 fans along the 26.2 mile course."***

### Shelley Frazier

I ran the New Orleans Rock and Roll series marathon on February 28th. This being my first marathon attempt,

I "expected" all sorts of "unexpected" problems, but the only unanticipated obstacles I faced were in training for the race (due to injuries I had about a 6 week taper). Race day itself was fantastic. I could not have dreamed up better weather. Of course, given the winter and it's pounds upon pounds of snow we trained through here in Missouri, New Orleans had a pretty easy act to follow. The course was fantastically flat, and I am told we ran by all sorts of interesting things, although I didn't ever notice much more than 1 foot worth of pavement in front of me. I do remember bands playing at several points along the way which was pretty neat. The Boston Marathon qualification time for my age was 3:50. My final time was 3:44:47. Needless to say, I was very pleased. I owe a huge "thanks" to

Tom for constructing my training plan and putting up with all my questions along the way!

### Laurie Digges

With my 50<sup>th</sup> birthday precariously close, I needed a challenge. How about running a marathon! I have done several half marathons and have even trained for a full, but I have never crossed the finish line. New Orleans, Feb. 28, 2010 was the selected race. I was in for 12 weeks of training through what would be the wettest and coldest winter I can remember.

Race day could not have been more perfect, sunny skies, little wind and temperatures in the low 50's. All 18,000 of us enjoyed the great weather! Starting out was amazing...All the runners, the bands, the excitement in the air, finally here after

all those hard, cold workouts... I was going to enjoy every mile! We started out and kept our designated pace through mile 20, and at that point I turned to my partner and asked "so what exactly happens to your body between now and the finish line?" Our longest training runs were 20 miles, no more! Her response was something I can't print but it sounded really painful! Mile 20-24 were doable so I was a little surprised to reach mile 25 and hit a wall! My GPS watch must have stopped because I knew I was running faster than that! Yeah, Finish line in site, my support team (husband) was waving and yelling, and with tears in my eyes I crossed the finish line. My time 3:55 good enough to get me to Boston in 2011, and good enough for me.

## Optimus Weightlifters

Kate Walker, 61 year old Optimus member, set raw (no assistive equipment) American records in her age and weight class for squats, deadlifts and bench press in the 2010 USAPL Missouri State and Ozark National Championships, March 13, in St. Louis Missouri. Kate did her personal best squat of 80 Kg (176 lbs). deadlift 110 Kgs (242 lbs). and bench press 40 Kgs (88 lbs). Beyond state records in the Missouri USAPL (USA Powerlifting), Kate established American records in her age and weight divisions. The USAPL only recently started keeping records, so shes set the bar high for

those who follow. Kate will compete in ADFPF National Championships June 26th at the MU Recreational Center. This meet can qualify her to go to Ireland in November for ADFPF World Championships.

Aaron Horschig, age 23 yrs, Optimus employee and an MU Physical Therapy student, competing in the 94 Kg weight class, lifted at the National Collegiate Olympic style-weightlifting meet (representing the University of Missouri) held in Marquette, MI on April 17th. Aaron finished in 4th place, his

best finish thus far in a national meet. He lifted 104 Kg Snatch (228.8 lbs), 134 Kg Clean and Jerk (294.8 lbs) and 238 Kg total (523.6 lbs).

Geoff Grambo, representing Optimus, recently competed in the Relief for Haiti Olympic weightlifting meet in St. Joseph Missouri, setting new personal bests in the snatch at 106 Kg (232.2 lbs) and the clean and jerk at 137 Kg (301.4 lbs).

Anthony Jones, 19 years old, representing Optimus, com-

peted in the Junior National Championships on Feb 27th in Rochester Minnesota. This was his first national meet. He lifted 95 Kgs (209 lbs) in the snatch and 127 Kgs (279.4 lbs) in the clean and jerk.

Whitnee Maycock, a former Optimus employee and Olympic style lifter got 3rd in the 75 Kg (165 lb class) at the National Collegiates on April 18, 2010. She lifted 78 Kgs (171.6 lbs) in the snatch and 96 Kgs (211.2 lbs) in the clean and jerk

## Anatomy Trains: Is Your Line Confused?

by Janene Sun

The Superficial Front Line (see Figure 1) rarely causes specific pain. But it is frequently the source of our problems.

Muscles tend to get short and tight. They don't like to be long, loose and weak. Think about what happens to the front side of your body when you study for long hours ... when you sit in front of the computer ... when you slouch and have bad posture. The muscles on the front side of

your body get short. The longer the duration and as the years go by, these muscles keep getting shorter and tighter. Meanwhile, the muscles on the back side get longer and looser.

Which muscles are really creating the problem? Let's start by talking about the muscles that we'll most likely complain about first ... the muscles of the back. The reason for the pain that I hear often is "that is just where I carry my stress". It

could be the neck, between the shoulder blades, or low back. As a massage therapist, what is the usual response? "Let me rub your back to get rid of the pain". Except that, if we have a short 'superficial front line (SFL), what does this do? It makes our back longer, looser and weaker than it was to begin with. This may feel good short-term, but it is not helpful in the long run! What we need to do is release the adhesions in (or lengthen) the muscles

(such as the abdominal muscles and muscles of the sides of the neck called the sternocleidomastoid) of the Superficial Front Line. These are all part of the SFL, and tend to pull us down in the front. This will do more to decrease the stress in your back than any amount of rubbing on the back muscles. Call, or e-mail Janene, if you'd like to set up an appointment!

## Congratulations Pam Walker!!

Pam was nominated by two faculty members of the University of Missouri Trulaske College of Business for a Special Citation of Merit. This award is given annually by the College to two non-alumni. The award is based on professional accomplishments, community involvement, and contributions to the college. Pam's contributions include assisting with alumni relations, interaction with donors, and hosting and supporting many Trulaske College of Business events. We're proud to have Pam as an Optimus member!!

## Come Join Us for Optimus Seminars!

**"How To Deal with People You Don't Like" Dr. Mike Mayer**

Tuesday, May 11th @ 5:45-6:30pm

Tuesday, May 25th @ 12:15-12:45pm

**"Preventing Hypertension and Heart Disease. Dr. Tom LaFontaine**

Thursday, May 20th @ 12:15-1:00pm and

5:45-6:30pm



**"What is the Psychology of Business?" Dr. Mike Mayer**

Tuesday, June 8th @ 5:45-6:30pm

Tuesday, June 22nd @ 12:15-12:45pm

**Continued from lead article, page 1:**

Liu CJ and Latham NK. Progressive resistance strength training (PRST) for improving physical function in older adults. Cochrane Database Syst Rev. 2009. July 8;(3):CD002759. Reported improved function in daily life among older adults participating in PRST. Amin S. et al. Quadriceps strength and risk of cartilage loss and symptom progression in knee OA. Arthritis Rheum. 2009;60:189-198. Found that persons with OA with stronger quadriceps had less loss of cartilage on the outside of the knee joint, less pain, and better physical function.

Ronai, P, P Sorace, and TP LaFontaine. Resistance training in persons with OA and Rheumatoid Arthritis. Strength and Conditioning Journal. 2008;30:32-34.

## Nutrition Corner: Fiber Facts

By Hannah Holzum

The average American only consumes about 14 grams of fiber daily. This is less than half of the daily recommendation. Fiber is such an important nutrient and its importance is often overlooked.

Dietary fiber is important for many reasons. It lowers cholesterol levels, helps with weight loss and bowel regularity, satiety, blood glucose control, and protects against certain cancers. So if it does all of these great things, why do most people only consume half of the recommendation?

The majority of food consumed today is processed. When this takes place, much of the fiber is left out of the final product. As you have likely heard, the best food you can consume is the food that is whole. The fewer steps in

the food making process, the more nutrients you are going to get. That is why whole-grain breads, fruits, vegetables and beans are terrific sources of not only fiber, but also many of the important vitamins and minerals that your body needs.

When you do consume an adequate amount of fiber, you must drink water throughout the day. If water is not consumed, the fiber can become “backed up” in your digestive tract. So make sure you are drinking plenty of water throughout the day. This will help not only digestion, but also your hydration status.

The recommendation for fiber is 25-35 grams per day. Let’s look at the fiber content of a few different foods.

Raspberries	1 cup	8.0 gm
Pear	1 med.	5.5 gm
Apple	1 med.	4.4 gm
Strawberries	1 cup	3.8 gm
Banana	1 med.	3.1 gm
Whole-wheat pasta	1 cup	6.2 gm
Bran flakes	3/4 cup	5.3 gm
Brown rice	1 cup	3.5 gm
Split peas	1 cup	16.3 gm
Lentils	1 cup	15.6 gm
Black beans	1 cup	15 gm
Artichoke	1 med	10.3 gm
Broccoli	1 cup	5.1 gm



## Recipe: Black Bean Veggie Burger

Source: [www.allrecipes.com](http://www.allrecipes.com)

### Ingredients:

- 1 (16oz) can black beans, drained and rinsed
- 1/2 green bell pepper (cut in 2 inch pieces)
- 1/2 onion (cut into wedges)
- 3 cloves of garlic, peeled
- 1 egg
- 1 Tbsp chili powder
- 1 Tbsp cumin
- 1 tsp chili sauce or hot sauce
- 1/2 cup bread crumbs

1. In a medium bowl, mash black beans with a fork until thick and pasty.
2. In food processor, chop green peppers, onion and garlic. Then stir into mashed beans.
3. In small bowl, stir together egg, chili powder, cumin and chili sauce.
4. Stir egg mixture into mashed beans. Mix in bread crumbs until mixture is sticky and holds together. Divide into 4 patties.
5. Place patties on oiled aluminum foil sheet and place sheet on grill. Grill on each side for 8 minutes each.



### Nutrients Facts (per serving):

4 servings per recipe

Calories	198
Total Fat	3 gm
Carbohydrate	33.1 gm
Protein	11.2 gm
Dietary Fiber	9.8 gm
Sodium	607 mg



## DID YOU KNOW?

Pomegranate fruits contain polyphenols, tannins, and anthocyanins—all beneficial antioxidants. Pomegranate juice contains high levels of antioxidants, higher than most other fruit juices, red wine, or green tea!

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### Mark your calendars...

#### MAY

- \* Mental Health Month
- \* National Physical Fitness Month
- \* High Blood Pressure Awareness Month
- \* National Employee Health and Fitness Day, Wednesday, May 19, 2010
- \* Senior Fitness Day, Sat, 5-22-2010

#### JUNE

- \* 6th—National Cancer Survivor Day
- \* 14-22nd—National Men's Health Week

### May

Eric Cooper 5/1  
Larry Glabe 5/2  
James Elliott 5/3  
Kim Nielson 5/4  
Janet Bezlar 5/8  
Laura Seivert 5/8  
Pieter VanWaarde 5/10  
Mark Blount 5/11  
Suzy Moore 5/13  
Sandy Ollar 5/14  
Carroll Wilkerson 5/16  
Kathy Healy 5/16  
Hannah Holzum 5/20  
Richard Mellitt 5/21  
Lynda Hodges 5/27  
Scott Boyd 5/27  
Larry Slates 5/28  
Kay Rosenhauer 5/28  
Cheryl Stansbury 5/28  
Patty Schnitzer 5/28  
Van Allen 5/29  
Andy Dawson 5/30  
Mike Mayer 5/30  
Gayla Miller 5/31  
Kathy Ward 5/31

## Member Birthdays

### June

Justin Miller 6/2  
Paige Harrison 6/2  
Ravi Puri 6/4  
Anne Clark 6/6  
Steve Fair 6/9  
Lisa Franke 6/10  
Debbie Daniels 6/14  
Kellin Loch 6/16  
Roger Walker 6/17  
Blake Franke 6/17  
Richard Edging 6/18  
Lance Bollinger 6/19  
Audrey Harned 6/20  
Jared Reynolds 6/25  
Herman Traudes 6/27  
Cliff Custin 6/30



**Happy Birthday to all those celebrating a birthday in May and June!!**

## Upcoming Local Walk/Run Events - Register Today!!

### Movin' Marvin 5K

May 1st, 9:00am at Green Meadows Road

### Open Doors 5K for Granny's House

May 22nd, 9:00am at Stephen's Lake Park

### WellAware 5K

May 29th, 8:00am, at Stephen's Lake Park

### Show-Me State Senior Games 5K

June 12th, 7:30am at Bethel Street

### Jay Dix Challenge to Cure

May 8th, 9:00am, at 4th and Cherry

### Jeff Shikles Memorial 8K

June 6th, 8:00am at Bethel Street

### Show-Me State 10K

June 13th, 7:30am at Bethel Park

**For more information about upcoming events in the area, see [www.columbiatrackclub.com](http://www.columbiatrackclub.com)**

## WEEKLY CLASS SCHEDULE:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	6am Boot Camp	9am Boot Camp	6am Boot Camp		
	5:00pm Hatha Yoga		5:30pm Hatha Yoga		

Articles in *Optimus Connection* are contributed by the health and wellness professionals of Optimus. Information and recommendations presented in this newsletter are research-based and are given in the best interest of Optimus members and the Columbia community. Please contact Optimus to speak with any of our experienced staff if you have any questions or concerns regarding the content of this newsletter. Newsletter edited by Hannah Holzum and Optimus staff members.