

## TIP OF THE WEEK:

Get a workout buddy!

You are far more likely to remain accountable to your workout goals if you have a workout buddy to help you stay motivated!

## Broccoli & Feta Omelet & Toast

### Ingredients:

- 1 cup chopped broccoli
- 2 lg eggs, beaten
- 2 Tbsp feta cheese, crumbled
- 1/4 tsp dried dill
- 2 slices rye bread, toasted



### Directions:

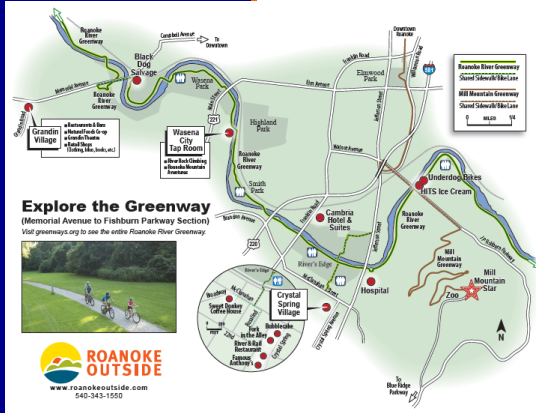
1. Heat nonstick skillet over medium heat. Coat pan with cooking spray. Add broccoli, and cook 3 minutes.
2. Combine egg, feta, and dill in a small bowl. Add egg mixture to pan. Cook 3-4 minutes, flip omelet and cook 2 minutes or until cooked through.

Serve with toast.

# Roanoke Greenways

There are plenty of trails in Roanoke if you're interested in going on a run. The Roanoke Outside website has a variety of different outdoor ideas, but runners should definitely check out the link below. The site has tools to help runners find trails nearby and an interactive map.

<http://www.roanokeoutside.com/land/greenways/>



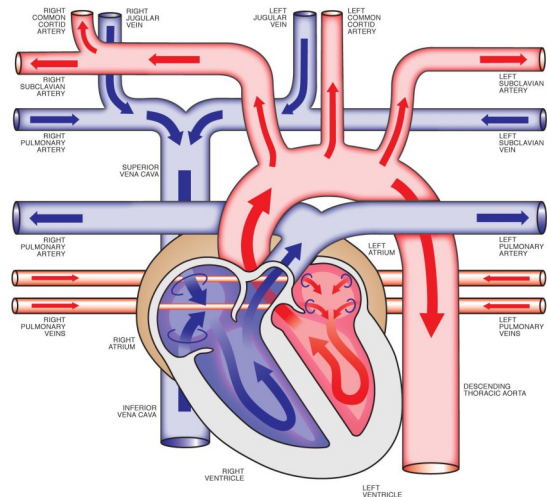
<http://www.roanokeoutside.com/land/greenways/>

## Exercise What You're Learning

I Just did a weeks worth of cardio after walking into a spider's web.

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# Get the Facts - Supplemental Protein

**Myth:** If I take supplemental protein without working out, it will make me fat.

**Fact:** I want to start by saying if you begin eating more of anything without replacing something else with it or adding more exercise to your routine, you will gain weight (or you will stop losing as much weight).

Assuming we keep the number of calories the same, protein consumption in replace of fat or carbohydrate consumption will maintain muscle mass. For example, if someone eats 1000 kcals less than needed with 45% carbs, 45% fats, and 10% protein, they will experience significantly more muscle mass loss than those who consume a protein supplement to increase the percent of protein in their daily kcal allowance.

In a study by Frestedt et al., 59 overweight individuals did exactly this. One arm consisted of consumption of 500 kcals under the Basal Metabolic Rate (BMR) eating a normalized diet. The second arm also consumed 500kcal under BMR but supplementing a 30g protein shake in the morning and at night (this required manipulation of the normal diet to ensure the same kcal amount as the other arm). After analysis via DEXA scan, researchers observed on average a greater fat mass loss in the protein arm as compared to control (3.5kg vs 1.5) and less lean muscle mass loss in the protein group as well (1kg vs 2.5kg). This study was only over 12 weeks and these are untrained individuals experiencing no excess muscle stimulation. Combine these results with a nice resistance training regimen and you could imagine the benefits.

How can we as med students apply this information further? Well in another article by Alex Ritson MSc, protein breakdown and supplementation was discussed in the context of the bed-bound and immobilized. As we know, one of the largest hospital populations is the elderly. Each person over 60 years old spends an average of 6 days in the hospital per visit and, depending on which unit they stay in, can be pretty expensive. After one day of being bed ridden, muscle atrophy occurs at approximately a rate of 0.5% per day with the greatest rates in the first 2 weeks. With that being said, those who also need to remain inactive for recovery take an additional hit. As muscle atrophies, it doesn't just disappear. It results in hypocalcemia, myosteatosis (fat accumulation in between muscle fascicles), and functional strength capacity diminishes (Ritson, 2016). Thinking again beyond exercise, this can have profound impacts on other areas of health. For example, DVT formation from lack of lower limb strength, or wasting/deterioration of diaphragmatic or accessory breathing muscles (an especially important factor in those with COPD).

Supplementation and diet alteration with protein products have also shown a decreased rate of this breakdown in the bed-bound population.

**Conclusion:** Whether it's in the gym or on the wards, we should remember the importance of personalizing diets to conform to the needs of the person. Exercising to gain muscle requires proper fuel for stimulation and growth, and muscle disuse requires a well-tailored nutrition plan to prevent as much loss as possible. Preventing one fall and subsequent hip fracture or increasing the chances of helping one person come off the ventilator sooner because they haven't lost as much diaphragmatic function can save cost, time, and personal suffering. So remember protein shakes aren't just for gym rats.

**I strongly recommend reading the Riston review article if you are interested in this topic. Email me if you need access.**

**Adam Heilmann - Adheilmann@cailionclinic.org**

References:

- Frestedt, J. L., Zenk, J. L., Kuskowski, M. A., Ward, L. S., & Bastian, E. D. (2008). A whey-protein supplement increases fat loss and spares lean muscle in obese subjects: A randomized human clinical study. *Nutrition & Metabolism Nutr Metab (Lond)*, 5(1), 8. doi:10.1186/1743-7075-5-8
- Ritson, A. (2016, March 01). Protein intake and its effects on lean mass preservation in bed-bound and immobilized subjects. *Alan Aragon Research Review*, 2-11.
- Sarcopenia and Dynapenia are Associated with Worse Quality of Life in Elderly HD Patients. (2013). *Journal of Renal Nutrition*, 23(2), 152. doi:10.1053/j.jrn.2013.01.013

# Pizza & Puppies - October 25th!!!

The Wellness Advocacy Committee would like to invite you to attend the group's kick-off event.

**October 25, 2016**

**From 6:00-8:00 PM in the VTCSOM Atrium & Café**



The School of Medicine Wellness Advocacy Committee is a sub-group of a larger VTC wellness committee. We are working to implement ideas and events that support medical students as they journey through their curriculum. As you've discovered, medical school can test a person's resilience. Many students benefit from reliable support from friends, family & their school. And... since many of you said you'd like to see puppies brought to the school for a play date, we have invited Therapets of Roanoke.

Of course.... There's also pizza!

## Committee Members:

Jeff Henry - M1	Becky Gates - M2, Ex-Officio
Lindsay Maguire - M2	Allison Bowersock, PhD
Allysa Nagy - M3	Jennifer Slusher, PhD
Mike Gallagher - M4	Emily Holt—Chair

**Please send  
your  
suggestions  
to the  
Wellness  
Advocacy  
Committee!**

## Date Night Dinner - Middle Eastern Rice Salad

### Ingredients:

- 2 Tbsp olive oil
- 1/2 Vidalia onion thinly sliced
- 1 16 oz can chickpeas, rinsed
- 1/2 tsp ground cumin
- 1/4 tsp salt
- Ground pepper
- 3 cups cooked brown rice
- 1/2 cup chopped pitted dates
- 1/4 cup chopped fresh mint
- 1/4 cup chopped fresh parsley

### Directions:

1. Heat oil in a large nonstick skillet over medium-high heat. Add onion, and cook, stirring often, about 5 minutes or until onion begins to brown. Remove from heat, and stir in chickpeas, cumin, and salt. Season to taste with freshly ground black pepper.
2. Combine rice, onion-chickpeas mixture, dates, mint, and parsley in a large bowl. Toss well until thoroughly combined.
3. Serve warm or at room temperature.



<http://www.health.com/health/recipe/0,,10000001993234,00.html>

# Better Sleep Series - Part III, Sleep Hygiene

Sleeping is as essential to health as breathing. During sleep we carry out a number of vital activities including regulation of blood pressure and blood sugar, memory consolidation, and the release of growth hormone. Chronic sleep deprivation has been linked to increased risk for heart disease, diabetes, cancer, obesity, depression, motor vehicle accidents, and medical mistakes. Yet, many of us struggle to obtain sufficient quality sleep. The first thing you should know is that you cannot train your body to need less sleep. The average adult needs between seven to nine hours of sleep per twenty-four hour period (this may vary slightly between individuals). Our sleep is influenced by numerous factors including light exposure, stress levels, circadian rhythms, how many cups of coffee we drink, and simply how much time we devote to sleeping. So what can be done to improve and maximize sleep potential? I hope you're enjoying this four-part series. Here is this week's topic:

## **PART III:**

### Sloppy Sleep Habits (AKA Sleep Hygiene)

- ◆ Catching up/Napping: If you struggle with difficulty sleeping during your normal sleep period avoid napping and "catching up" on sleep during off days. Make an effort to maintain a consistent sleep schedule and wake time seven days per week
- ◆ Caffeine acts as a stimulant in the body lasting approximately six to seven hours after ingestion inhibiting sleepiness and acting as a diuretic. Caffeine negatively impacts the quality and depth of your sleep.
- ◆ Bed for all things. Many people use their bed for various activities including TV, reading, and lying awake frustrated. This trains the brain to associate the bed with wakefulness. Use your bed only for sleep. If you cannot sleep get up and engage in a relaxing activity for at least 20-30 minutes prior to returning to bed. Devote 15-30 minutes to a relaxing bedtime routine. Maintain the same bedtime routine every night.
- ◆ Light exposure: Our level of sleepiness, or sleep drive, is in part influenced by the light in our environment. High levels of light promote wakefulness and low levels sleepiness. Exposure to overhead lights and electronics can trick the brain into thinking it is daytime and suppress feelings of sleepiness. Try to eliminate these within one hour of bedtime. Consider an audiobook instead of an e-reader.