

# National Strength & Conditioning Association

- **The National Strength and Conditioning Association (NSCA) is the world-leading membership organization for thousands of elite strength coaches, personal trainers and dedicated researchers and educators.**
- Colorado Springs
- International
  - Canada
  - Japan
  - -Italy
  - Spain
  - China
  - South Korea

# National Strength & Conditioning Association

- **CSCS** – Certified Strength & Conditioning Specialist
- **CSPS** – Certified Special Populations Specialist
- **NSCA-CPT** – Certified Personal Trainer
- **TSAC-F** – Tactical Strength and Conditioning Facilitator

# National Strength & Conditioning Association

- Membership Options
  - Student \$65/year, for full-time, undergraduate & graduate students
  - Professional \$120/year, for certified & non-certified professionals
  - Certified with Liability Insurance \$329/year, for certified professionals

# National Strength & Conditioning Association

- Regional 2018 NSCA events in the Great Lakes Region
  - March 24, Eastern MI University
  - April 14, Carroll Univeristy, WI
  - April 20, Kentucky
  - July 11-14, National Conference in Indianapolis
  - October 27, Ohio Wesleyan

# Maximizing Caloric Burn for Weight Loss

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**NSCA Great Lakes Regional Coordinator**

# Weight Loss

- *“Losing weight is about shedding fat, not muscle. To maximize fat burning, you'll want to strategically combine diet and exercise. You need to reduce calorie intake enough, but not too much, and workout- a combination of strength training, aerobic activity, and proper recovery are essential.”*

# Calories Count- Study 1

- Hypothesized 500-1000cal/day = 1-2lbs/week
- 12m & 12w
- All “exercised” 45-60min, 4x/week
- 21 days long
- All participants were 24-46yrs in age

# Calories Count- Study 1

- Results
  - Everyone completed the study
  - All lost at least 2lbs. (were sedentary)
  - Avg. male lost 2.4lbs (most 4.7lbs)
  - Avg. female lost 2.1lbs (most 3.1lbs)
  
  - Did not fulfill hypothesis, however it was close



# Increasing Caloric Burn for Fat Loss

- Thermogenesis
  - Heat the body produces/body's production of heat.
  - Calories are needed to generate heat or fuel the process of thermogenesis

# Food/Diet Induced Thermogenesis

- “It is possible to enhance the process of thermogenesis by choosing the right foods to eat; therefore burning extra calories on the process of digestion.”
- Thermogenesis begins after every meal, big or small, and can stay elevated for up to 6hrs.
- On average, 5%-15% of the food you eat is spent on digestion.

# Food/Diet Induced Thermogenesis

- What foods are capable of boosting thermogenesis?
  - High protein foods
  - Alcohol, although alcohol typically has little to no nutritious benefit and is typically considered empty calories
  - Caffeine, it also has been shown to assist in releasing body fat reserves
  - Generally speaking, carbs and fats have a little to minimal thermogenic effect

# Exercised Induced Caloric Burn

- **Move A LOT**
  - Supersets
  - Circuits
  - Shorter recovery periods
- **Move for a long time**
  - Add sets or reps
  - Add time
  - Add exercise sessions

# Exercise Induced Caloric Burn

- *Cardio or Weights?*
- **While cardio burns calories and fat when you're performing it, higher intensity (strength training) allows for Excess Post-Exercise Oxygen Consumption (EPOC) to occur. This term refers to how long your metabolism is elevated after exercise during recovery, enabling you to burn fat long after finishing your workout while recovering for your next workout.**

# *In other words...*

- “Someone exercising may only burn up to 9-12 calories per minute lifting weights, compared with as many as 12 plus for cardio, that individual will continue burning calories after they put the free weights down.”

# Why 800 calories of running is NOT THE SAME as 800 calories of walking

- Study 1: exercising for **80 minutes at 50% intensity** burned away 28.5 calories after exercise. But when the same exercise was performed for **80 minutes at 75% intensity**, 150.5 extra calories were burned away in the hours following the exercise. (up to 3hrs)
- Study 2: test subjects burned away 500 calories by exercising at 50% intensity or by exercising at 75% intensity.
- They burned away the same 500 calories during exercise in both cases, **but they burned away 45 extra calories after exercising at 75% intensity and only 24 extra calories after exercising at 50% intensity.** (up to 3hrs)
- The studies suggest, the more intense you go, the bigger caloric burning effect you can expect to get *after* exercise during recovery.

# How do you measure *intensity*

- Increase the duration of your exercise sessions
- Increase the number of sets/reps performed
- Increase the speed of exercise performed
- Keep everything else the same and split your exercise time into two or more sessions/day
- Increase the amount of multi-joint exercises



# Other factors increasing Thermogenesis

- Exercising in a colder (almost uncomfortable) environment
- Active cool down after exercise
- Oolong and Green Tea
- Apple Cider Vinegar (2-3oz/day)
- Massage
- Keeping a regular schedule (sleep/diet/exercise)

# Putting it all Together - Caffeine

- Caffeine
  - 7 cups / FDA's 1-2 per day
  - Water weight / body fat
    - 2-3 cups did not help lose water or body fat

***How does caffeine help?***

# Benefits to Caffeine

- What science has shown:
- 80 up to 150 calories a day
- Help release free fatty acids in the body's fat reserves
- May be most beneficial as part of a pre-workout
- May help reduce hunger (men)
- How much- up to 400mg, recommended is 200mg / day

# Putting it all together - Caffeine

- Possibly drink a safe pre workout with caffeine
- Exercise in a cooler environment
- Higher Intensities will burn more calories post workout, although for overall workout plans it is recommended to vary workouts with both cardio and strength training
- Eat to boost thermogenesis- high protein diets have shown to have a calorie burning effect

# Putting it all together

- Alcohol could have positive impacts to boosting thermogenesis; although it should be known that in most cases alcohol has been shown to be in addition *instead* of in replacement of other low thermogenic calories
- I am not saying to replace high nutrient meals with alcohol

# Putting it all together

- Actively cool down from workouts/exercise sessions
- Get a massage
- Keep a regular healthy schedule of eating/sleep/ and diet
- Give Oolong and Green Tea a try
- And maybe..give apply cider vinegar a try

# Thank You

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- Questions(?)