

Changing Up Your Cardio



Why Change Up Your Cardio?

- Keeps the body from reaching steady state
- Works different parts of the body
- OR
- Works the same parts in a different way
- Can cause an increase in EPOC*
- Leads to better weight loss results in less time!!
- Keeps workouts from getting boring
- WHY NOT!?!?!?

What is EPOC?

- **EPOC** = Excess Post-Exercise Oxygen Consumption
- EPOC is used to determine the increase in the Resting Metabolic Rate (RMR) after exercise or strenuous activity using amount of oxygen consumed.
- Also known as *oxygen debt*, *oxygen deficit* or also *exercise afterburn*.

What This Means...

- **RMR** = Amount of calories the body would burn in 24 hours with no activity being performed
- Doing exercise or any other strenuous activity and consuming small amounts of calories causes the body's metabolic rate to raise due to the body having to perform work.
- A rise in the body's metabolic rate causes continuous burn of calories beyond the body's Resting Metabolic Rate (RMR)

By the Math

$$\begin{array}{r} \text{RMR} \\ + \\ \uparrow \text{EPOC (During and After Exercise)} \\ - \\ \text{Calories from food} \\ = \\ \text{Total Daily Calories} \end{array}$$

Example with Long Distance:

What's the Difference?



Google Search: Olympic Sprinter



Google Search: Long Distance Runner

What's the Difference?

- Picture 1:
 - Has muscle tone, especially in legs, arms and abdominals
 - Performed a lot of resistance training for strength and sprints for speed
- Picture 2:
 - Has low muscle tone
 - Training consisted of endurance work and Long Distance Cardio

Why the Difference?

- Long Distance running burns more calories from muscle than sprinting
- Sprint workouts push the body into Anaerobic Work (Above 85% max HR) and then bring it back down to Aerobic (Below 85% max HR).
- This causes a greater burn of stored glucose and fat, leading to weight loss in as little as ¼ of the time.

Intervals

- Interval Training is a short 15-25 minute workout that has been shown to have major weight loss benefits, cardiorespiratory and cardiovascular increases, and incredible metabolic gains when compared to the Long Slow Distance cardio workouts most people base their weight loss attempts on.

By The Math

$$\begin{array}{r} \text{RMR} \\ + \\ \uparrow \text{EPOC (During and After Exercise)} \\ - \\ \text{Calories from food} \\ = \\ \text{Total Daily Calories} \end{array}$$

Example with Interval:

So What's the Plan?

- **Resistance Training**
 - 2-3 days/week
 - In the form of Circuits, Supersets, Tri-Sets, etc.
 - Work all major muscle groups through 8-10 exercises per session
 - 2-3 sets of each exercise
 - Allow 1.5-2 mins of rest between sets

So What's the Plan?

- **Cardio**
 - Change up cardio throughout the week
 - Include Intervals, Light Intervals, Long Slow Distance, Pace Runs, and change times and intensities.
 - Cardio is good to do up to 7 days/week.
 - Focus cardio work on being efficient in terms of metabolism for the best weight loss results.

Sample Plans

- **Beginners**
- Example Workout #1
- **Intermediate**
- Example Workout #2
- **Advanced**
- Example Workout #3
- **Athlete**
- Example Workout #4

Interval Workouts

Beginner

Start

- 5 minute warmup (Stairing pace + Fast Walk)

- 1 minute at 3.7 mph

- Repeat these two stages 6-8 times

- 3 minutes at 3.5 mph

(10-20 minutes total)

End

- 5-10 minute cooldown (Decreasing Pace)

Intermediate

Start

- 5 minute warmup (25-40 rpm)

- 30 seconds at 80-90 rpm

- Repeat these two stages 8-10 times

- 1.5 mins at 50 rpm

(10-20 minutes total)

End

- 5-10 minute cooldown (Decreasing Pace)

Advanced

Start

- 5-10 minute warmup (20-30 rpm)

- 20 seconds at "Red Out" intensity (90-100+ rpm)

- Repeat these two stages 10-15 times

- 45 seconds as low as possible (30-50 rpm)

(10-15 minutes total)

End

- 10 minute cooldown (Decreasing Pace)

Athlete

Start

- 5 minutes of Calisthenics/Kettlebell squats

- 1 "Red Out" 200 meter sprint

- Repeat 5-10 times

- 2 minutes of rest (30 seconds cardio movement)

(10-20 minutes total)

End

- 10 minute cooldown (light jogging + walking)

Resources

- Journal of Applied Physiology
 - <http://jap.physiology.org/aj/content/full/101/4/1619>
- Exercise After-Burn: A Research Update
 - <http://www.drtenkravitz.com/articles/epaarticle.html>
- Resting Metabolic Rate Calculator
 - <http://www.shaveit.com/1strestcalculator1.php>
