

# HIIE (High Intensity Interval Exercise)

The effect of regular aerobic exercise (running or bicycle) on body fat is negligible. For most people HIIE is more effective at reducing subcutaneous and abdominal body fat than other types of exercise. You have a fat burning heart rate zone. Too low or high of a heart rate and your body will not burn fat.

It's well known that when your heart rate is low you don't burn many calories. When your heart rate is too high your heart and muscles switch from fat burning to sugar and glycogen burning. Your body will even breakdown your muscles to access the easy fast burning sugar/carbohydrate glycogen. Yes, you will lose muscle mass when your heart rate is too high for a long period of time.

Regular HIIE:

- Increases aerobic and anaerobic fitness
- Lowers insulin resistance
- Enhances skeletal muscle AND fat burning
- Improves insulin tolerance.

HIIE protocols vary considerably but typically involve repeated brief exercise at an all-out intensity immediately followed by low intensity exercise or rest. The length of both the exercise and recovery periods vary from 6 s to 4 min depending on your health status, age and the exercise.

HIIE can be any activity including running, bicycling, calisthenics, weights, cross training, resistance bands, isometrics, yard work, washing the car, mowing the yard, chopping wood, house cleaning, etc, etc, etc. You must get your heart rate up briefly, then back down, get your heart rate up briefly, then back down, get heart rate up briefly, then back down, repeat, repeat, repeat...







15-20 minutes of HIIE often provides more fat loss and muscle gain benefit than 30-60 minutes of running. Only well-trained athletes should do HIIE for more than 30 minutes.

Before starting any physical activity, you should have the approval from your healthcare provider. A certified personal trainer will provide the best guidance on an exercise program that best for you.

The following chart and pictures (not me) show some examples of what I do most mornings before breakfast. You can modify the exercise to suit your abilities, needs and time allowances. "Sets" is the number of times you repeat the Exercise and Rest activity. I do a shorter/easier version on days that I fast.

Most people find it's best to exercise early a.m. You can limit your exercise time to 20 minutes as more is not always better.

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Exercise	Photo example	Rest activity	Sets
10-20 Crunches		3 types of neck stretches and hip stretches 10 breaths	2-5
10-20 Leg lifts		Knees to the chest and other stretches for the lower back 10 breaths	2-5
10-20 Modified Pushups		Various back and shoulder stretching 10 breaths	2-5
Planks 10-20 breaths		Turnover, reach towards or touch the toes, 10 breaths	2-5
Squat 10-20 breaths		Quad stretch, 10 breaths	2-5
Lunge 10-20 breaths		Achilles tendon stretches	2-6 (3 with each leg)
<b>Shower and get on with your day! You will continue to burn more calories for several hours.</b>			

Reference Sources Include: Stephen H. Boutcher, High-Intensity Intermittent Exercise and Fat Loss, Journal of Obesity 2011; 2011: 868305.