



**9 WEEK  
CHALLENGE**  
TAKE CONTROL

# Nutrition For Ongoing Success

Tuesday 22 March, 2016  
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# Basal Metabolic Rate

## BMR Caloric Intake for Men

$BMR = 66.5 + (13.75 \times \text{weight in kg}) + (5.003 \times \text{height in cm}) - (6.775 \times \text{age in years})$

## BMR Caloric Intake for Women

$BMR = 665 + (9.563 \times \text{weight in kg}) + (1.850 \times \text{height in cm}) - (4.676 \times \text{age in years})$



# Basal Metabolic Rate

Little to no exercise

Daily kcal needed = BMR x 1.2

Light exercise (1–3 days p/week)

Daily kilocalories needed = BMR x 1.375

Moderate exercise (3–5 days p/week)

Daily kilocalories needed = BMR x 1.55

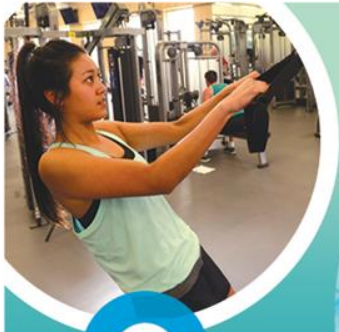
Heavy exercise (6–7 days p/week)

Daily kilocalories needed = BMR x 1.725

Very heavy exercise  
(twice per day, extra heavy workouts)

Daily kilocalories needed = BMR x 1.9





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# What is your Basal Metabolic Rate



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# CREATING A CALORIE DEFICIT

## Calorie Control for Fat Loss and Lean Muscle

### Creating a calorie deficit

**Sedentary Person:** Calorie Consumption – Basal Metabolic Rate = Calorie Neutral

**Active Person:** Calorie Consumption – Basal Metabolic Rate – Exercise = Calorie Deficit



# CREATING A CALORIE DEFICIT

## Calorie Control for Fat Loss and Lean Muscle

### Creating a calorie deficit

**Food Consumption** (2000 Calories)

- **Basal Metabolic Rate** (2000 Calories)

- **Exercise** (500 Calories)

**= Calorie Deficit (500 Calories)**

1kg Body Fat = 7200 Calories

7200 Calories / 500 Calories = **14.4 days to lose 1kg of Body Fat**



# CREATING A CALORIE DEFICIT

## 20 Ways to Burn 500 Calories

APPROXIMATE NUMBER OF <b>MINUTES</b> TO BURN 500 CALORIES							
BODY WEIGHT:	120 lbs. 54.5 kilos.	140 lbs. 63.5 kilos.	160 lbs. 72.5 kilos.	180 lbs. 82 kilos.	200 lbs. 91 kilos.	220 lbs. 100 kilos.	240 lbs. 109 kilos.
Aquaerobics	131	113	99	88	79	72	66
Boot camp workout	78	63	52	45	39	35	31
Boxing - Heavy Bag	66	57	49	44	40	36	33
Cross country skiing	56	48	42	38	34	31	28
Cycling - outdoor	75	64	56	50	45	41	38
Cycling - spinning class	53	45	39	35	32	29	26
Ice skating	75	64	56	50	45	41	38
Jogging - 6.5 miles/hour	53	45	40	35	32	29	26
Martial Arts	53	45	39	35	32	29	26
Pilates	150	129	113	100	90	82	75
Racquetball	61	53	46	41	37	33	31
Rollerblading	75	64	56	50	45	41	38
Rowing	66	56	49	44	39	36	33
Running - interval sprints	24	21	18	16	14	13	12
Strength training - maximum rest	110	94	82	73	66	60	55
Strength training - minimal rest	64	55	48	43	38	35	32
Swimming laps	71	61	53	47	42	39	35
Walking - 3.5 miles/hour	107	92	80	71	64	58	53
Yoga	210	180	158	140	126	115	105
Zumba	67	57	50	44	40	36	33







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# A Closer Look At Carbohydrates



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# CARBOHYDRATES

## How Do They Work?

### Carbohydrate Storage

- Liver and Muscle storage
- Stored as Glycogen
- Storage up to 1500-2000 calories of carbohydrate



# CARBOHYDRATES

## How Do They Work?

### Sedentary lifestyles

- Carbohydrate Storage is sufficient to get you through a typical day
- Body only needs a maximum of 600 calories



# CARBOHYDRATES

## How Do They Work?

Low carbohydrate diet – Liver and muscle glycogen stores depleted in 2 days to 2 weeks.

Weight Loss - Due to water shedding

Result - Dehydration



# CARBOHYDRATES

## How Do They Work?

Metabolism boosters - Intense weight training, or intervals

Fuel needed – Carbohydrates

Result – High Metabolism and Increased Lean Mass



# CARBOHYDRATES

## How Do They Work?

### Muscle Loss

- Metabolism drops
- Muscle burns calories
- Muscle positively effects metabolism



# CARBOHYDRATES

## How Do They Work?

Low carbohydrate diets

- low fiber intake

Side Effect

- Digestive cancers
- Cardiovascular Disease
- Constipation and Bowel Issues





# CARBOHYDRATES

## How Many Do You Need?

Every person requires a different number

Simple math to guide intake

High Volume Athlete = More Carbs

Low Volume (Sedentary) = Little Carbs



# CARBOHYDRATES

## How Many Do You Need?

### A high-carb diet

Carbs - 4.5 - 5 grams per kg of body weight.

Protein - 2 grams per kg

Fat - 0.35 grams per kg.



# CARBOHYDRATES

## How Many Do You Need?

### A moderate-carb diet

Carbs - 3 grams per kg of body weight

Protein – 2-2.5 grams per kg

Fat - 0.5 grams per kg



# CARBOHYDRATES

## How Many Do You Need?

### A low-carb diet

Carbs – 1 gram per kg of body weight

Protein – 3-3.5 grams per kg

Fat - 0.75 grams per kg



# CARBOHYDRATES

## How Many Do You Need?

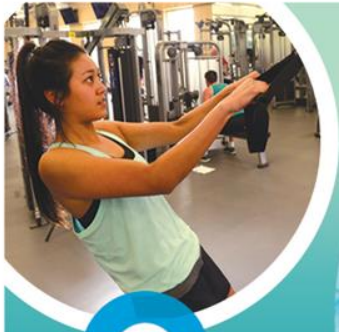
### A no-carb diet

Carbs – 30 grams per day

Protein – 3-3.5 grams per kg

Fat - 1.1-1.8 grams per kg





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# Can You Use These Diets To Your Advantage?



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# CARB CYCLING

## How to.....

### **What is Carb Cycling....?**

Changing the amount of carbs eaten per day

Rotating cycle over 5 – 7 days

Tricks the body in to burning more fat

Must be followed strictly and takes a lot of preparation



# MANAGING CALORIE INTAKE EFFECTIVELY

## Manipulating Your Needs

### High-carb day

- refuel your muscles' glycogen levels
- inhibits protein breakdown

### Recommendation

- Your toughest workout done this day



# MANAGING CALORIE INTAKE EFFECTIVELY

## Manipulating Your Needs

### Moderate-carb day

- Carbs to maintain glycogen stores
- No caloric deficit for weight loss

### Recommendation

- Train on these days.



# MANAGING CALORIE INTAKE EFFECTIVELY

## Manipulating Your Needs

### **No- and low-carb days**

- caloric deficit
- “trick” your body into burning fat

### **Recommendation**

- cardio or rest for now/low-carb days
- train more than 3 x per week, you will have to lift on 1 or more of these days



# CARB CYCLING

## How to.....

### Training 2 x per week

- 4 low-carb days
- 1 moderate carb day
- 1 high-carb day
- a no-carb day
- and start over



# CARB CYCLING

## How to.....

### Training 3 x per week

- 3 low-carb days
- 2 moderate carb days
- 1 high-carb day
- 1 no carb day
- and repeat





# CARB CYCLING

## How to.....

### Training 4 x per week

- 3 low carb days
- 1 moderate carb day
- 1 high carb day
- and repeat



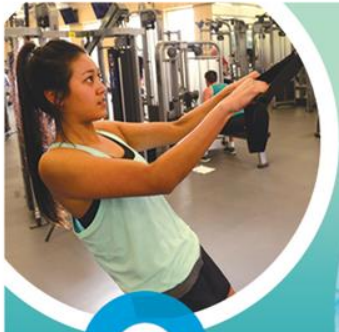
# CARB CYCLING

## How to.....

### Training 5 x per week or >

- 2 low carb days
- 1 moderate carb day
- 1 high carb day
- and repeat





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# How The Numbers Stack Up



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# Macronutrient Intake

## How Much Should I Have Of.....

### High Carb Day

Your **total calorie** consumption should come from the following:

- Carbohydrates: 60%
- Proteins: 30%
- Fats: 10%



# Macronutrient Intake

## How Much Should I Have Of.....

### Medium Carb Day

Your **total calorie** consumption should come from the following:

- Carbohydrates: 40%
- Proteins: 45%
- Fats: 15%



# Macronutrient Intake

## How Much Should I Have Of.....

### Low Carb Day

Your **total calorie** consumption should come from the following:

- Carbohydrates: 15%
- Proteins: 55%
- Fats: 30%



# Macronutrient Intake

## How Much Should I Have Of.....

### No Carb Day

Your **total calorie** consumption should come from the following:

- Carbohydrates: 5%
- Proteins: 50%
- Fats: 45%



# Macronutrient Intake

## How Much Should I Have Of.....

**Example:** 75kg Person

Your **total calorie** consumption should be 2000:

	High Carb	Medium Carb	Low Carb	No Carb
Carbohydrate	1200cal	900cal	300cal	*100cal
Protein	600cal	800cal	1100cal	1000cal
Fat	200cal	300cal	600cal	900cal

\*Note: Minimum calories from carbs on no carb day should be 120 (30g of Carb)







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# Which Carb Cycling Program Suits You?



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# WHAT CARBOHYDRATES DO YOU NEED?

## Fiber-rich carbohydrates

### Foods included

- vegetables, fruits and legumes.

### Rationale for Consumption

- absorbed slowly
- control blood sugar
- hunger

### Time for Consumption

- Eat them anytime.



# WHAT CARBOHYDRATES DO YOU NEED?

## Starchy carbohydrates

### Foods Included

- Quinoa, grain breads, potatoes, sweet potato, oats, grain pasta, cereals

### Rationale for Consumption

- Dense sources of carbs

### Time for Consumption

- Best consumed in the 3 hours post exercise
- Muscles are like a sponge and use carbs efficiently



# WHAT CARBOHYDRATES DO YOU NEED?

## Refined sugary carbohydrates

### Foods Included

- junk food, quick packaged snacks, candy bars, dates, raisins, and nutrition bars

### Rationale for Consumption

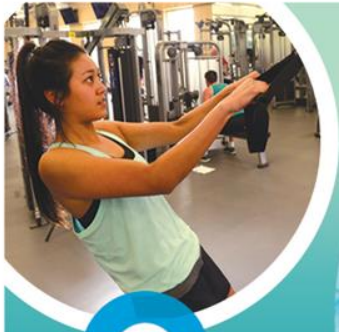
- not all refined sugar sources are bad for you
- Consume the healthy dense refined sugary carbs to assist in glycogen replenishment

### Time For Consumption

- Eat sugary carbs rarely, and only after exercise.







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# Create Your 7 Day Carb Cycling Diet



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