

## Mount Kilimanjaro Nutrition and Exercise: 3 Month Plan

Joshua Neufeld, Personal Trainer – One-to-1 Fitness, Red Deer, AB Canada

### Important Notes Before Reading

- The following represents an ideal, and does not take into account the specific details and variables of one's life and lifestyle; rather, it is something that should be adapted to fit as ideally as possible into a working lifestyle. Please consider this is also an accelerated plan for this particular trip based on the remaining time from plan development until the trip. Ideally preparation would begin 5-6 months from the climb with similar training and nutrition to month 1.
- Food should be kept as consistent as possible, and is as important in your quest to climb as your training.
- Certain resistance training techniques should also be taken into effect when training, as strong legs and a strong core are essential to your climb.
  - Any static training exercises (ex. 3 sets X 10 reps with rest after each set) should be primarily multi-joint movements such as squats, deadlifts, rows, pull ups and variants. These compound movements promote improved posture and functional movement patterns by utilizing multiple muscle groups through long range of motion.
  - Some additional core specific attention could be a good addition, particularly for those with compromised function. (Desk Jockeys, previous injury, poor posture with pain symptoms on a semi-regular basis.)
  - Dynamic training through a series of exercises performed in succession with limited rest may provide additional conditioning and adaptation benefits. Exercise selection for this type of training should still remain as suggested above utilizing multi-joint compound movements. An example of this type of training would be the principles of the Crossfit training philosophy.
- LSD (long, slow, distance) training should be used predominantly, as this is the main type of exercise being used on the climb. Other forms of cardiovascular training (ie. Running, swimming, biking) are still good, however not specific enough to the actual climb and should be used in moderation
- HIIT (high intensity interval training) – This short duration style of training has been validated by significant research as a means of rapidly developing great VO2 capacity. It's been assumed that most of the participants of this event will have regular busy lifestyles and careers where abbreviated training parameters will be a valuable addition to preparation.
- Increases in time spent walking/training should be used more predominantly than speed or distance travelled, as on the climb it is the mass amount of time walking that will play a more predominant role than speed or distance
- You will note the beginning of each section will begin with a suggestion for a macronutrient ratio. Ratios are always just a suggestion but this plan does emphasize their importance as a measure of the body's adaptive process. To fully understand what these ratios mean please consider the following:

Total caloric intake is estimated through an equation called the REE.

Estimated Daily Calorie Needs Based on Resting Energy Expenditure (REE) and Activity Level

1. To calculate the REE, choose one of these 6 formulas:

|         |             |   |
|---------|-------------|---|
| Males   | 18-30 years | $(15.3 \times \text{weight in kg}) + 679$ |
| Males   | 30-60 years | $(11.6 \times \text{weight in kg}) + 879$ |
| Males   | > 60 years  | $(13.5 \times \text{weight in kg}) + 487$ |
| Females | 18-30 years | $(14.7 \times \text{weight in kg}) + 496$ |
| Females | 30-60 years | $(8.7 \times \text{weight in kg}) + 829$  |
| Females | > 60 years  | $(10.5 \times \text{weight in kg}) + 596$ |

2. Then, multiply the REE by a factor to account for activity level to estimate daily caloric needs:

| Level of activity | Activity factor (X REE) |
|-------------------|-------------------------|
| Very Light        | 1.3                     |
| Light             | 1.5-1.6                 |
| Moderate          | 1.6-1.7                 |
| Heavy             | 1.9-2.1                 |
| Exceptional       | 2.2-2.4                 |

- If your total daily caloric intake were 2000 calories for example than during the beginning phase of the program you would interpret the following: 50:30:20% (carbohydrate:protein:fat) to mean 50% carbohydrates or 1000cals per day, 30% protein or 600cals per day, and 20% fat or up to 400cals per day.

On average 2 oz of lean meat or ½ cup of a starchy carbohydrate or 1 piece of fruit will be approximately 100cals and comparatively about 5oz of any fibrous vegetable will be approximately 50cals. This should give you a point of reference for food selection outside of this program.

### **Month 1 – Increase LSD Training**

- 50:30:20% (carbohydrate:protein:fat)
  - 6 meals per day should be eaten to emphasize the idea of consistency
  - Food will be eaten in moderation and should have a focus on eating for satiety
  - Protein at each meal (Any one of the following)
    - 3-4 oz. – lean beef, game meats, chicken
    - 3-5 egg whites + 1 whole eggs
    - ½ cup-1 cup – cottage cheese
    - 1-1 ½ scoops – whey protein powder (whey powder should be discontinued 6 weeks prior to the climb, some soy could be used in its place. However it is our belief soy consumption should be at a minimum for other health reasons.)
  - Starchy carbohydrate at each meal (Any one of the following)
    - ½ cup-1 cup – rice, couscous, brown rice pasta, rolled oats, (potato used in moderation)
    - 1-1 ½ pieces of fruit – generally used before or workout, or as breakfast
  - Vegetables
    - Should be consumed at each meal to maximize fiber and nutrient intake
  - Fats
    - Will be taken in with the consumption of red meats and cottage cheese
    - However, moderate amounts of nuts/seeds can also be consumed
      - 1-2 oz. per day
- Exercise should be predominantly LSD (long, slow, distance training)
  - A pack of maximum 30lbs should be carried (optional)
  - Walking/hiking should be done with the boots you plan on using during the climb as much as possible
  - Using hiking trails is more appropriate for specific style of training
  - 1-3 days per week - Resistance training no more than 3 days per week for 30-45 min.
- 2-3 LSD cardiovascular sessions per week
  - Approximately 1.5-2 hours in length
- 1-3 HIIT training sessions per week

- 3 intervals of 30seconds-1 min work at 80%+ effort followed by 1-2 min recovery. (Or until you recover to no more than 60% Max HR)
- Ideally not on the same days as LSD training.

## Month 2 – Begin to Specialize Nutrition – Increase LSD Training

- 50:30:20% (carbohydrate:protein:fat) – first two weeks
  - 6 meals per day should be eaten to emphasize the idea of consistency
  - Food will be eaten in moderation and should have a focus on eating for satiety
  - Protein at each meal (Any one of the following)
    - 3-4 oz. – lean beef, game meats, chicken
    - 3-5 egg whites + 1 whole eggs
    - ½ cup-1 cup – cottage cheese
    - 1-1 ½ scoops – whey protein powder
  - Starchy carbohydrate at each meal (Any one of the following)
    - ½ cup-1 cup – rice, couscous, brown rice pasta, rolled oats, (potato used in moderation)
    - 1-1 ½ pieces of fruit – generally used before or workout, or as breakfast
  - Vegetables
    - Should be consumed at each meal to maximize fiber and nutrient intake
  - Fats
    - Will be taken in with the consumption of red meats and cottage cheese
    - However, moderate amounts of nuts/seeds can also be consumed
      - 1-2 oz. per day
- Exercise should be predominantly LSD (long, slow, distance training)
  - A pack of maximum 30lbs should be carried (optional)
  - Walking/hiking should be done with the boots you plan on using during the climb as much as possible
  - Using hiking trails is more appropriate for specific style of training
  - 1-3 days per week - Resistance training no more than 3 days per week for 30-45 min.
- 3-4 LSD cardiovascular sessions per week (for entire month)
  - Approximately 1.5-2 hours in length
- 2-4 HIIT training sessions per week
  - 4 intervals of 30seconds-1 min work at 80%+ effort followed by 1-2 min recovery. (Or until you recover to no more than 60% Max HR)
  - ½ on the same days as LSD training, ½ on non-LSD days, always one complete rest day per week.
- **6 weeks out** – 48:30:22% (carbohydrate:protein:fat)
  - Begin fat loading in diet to prepare body for an increase in long distance energy stores
  - Good sources of additional fats are found in :
    - Game meats
    - Nuts/seeds
    - Egg yolks
  - Fiber intake should be maintained; however ‘starchy’ carbohydrates should be monitored and tapered starting from 6 weeks out

- It is important to obtain a similar, if not exact, caloric intake; however more predominantly from healthy fats
- Starches should only be consumed at 5 meals per day
  - At a maximum of 1 cup per meal
- 1-3 days per week - Resistance training no more than 3 days per week for 30-45 min.
- LSD cardiovascular work being performed a minimum of 4 days per week – ½ hours minimum
- 2-4 HIIT training sessions per week
  - 4 intervals of 30seconds-1 min work at 80%+ effort followed by 1-2 min recovery. (Or until you recover to no more than 60% Max HR)
  - ½ on the same days as LSD training, ½ on non-LSD days, always one complete rest day per week.
- **5 weeks out** – 45:30:25% (carbohydrate:protein:fat)
  - 1-3 days per week - Resistance training no more than 3 days per week for 30-45 min.LSD cardiovascular work being performed a minimum of 4 days per week – ½ hours minimum
  - 2-4 HIIT training sessions per week
    - 4 intervals of 30seconds-1 min work at 80%+ effort followed by 1-2 min recovery. (Or until you recover to no more than 60% Max HR)
    - ½ on the same days as LSD training, ½ on non-LSD days, always one complete rest day per week.
  - Starches should only be consumed at 5 meals per day
    - At a maximum of 1 cup per meal

### **Month 3 – Fat Loading – Build, Build, Build, Taper/Recovery**

- Exercise should be predominantly LSD (long, slow, distance training)
  - A pack of maximum 30lbs should be carried (optional)
  - Walking/hiking should be done with the boots you plan on using during the climb as much as possible
  - Using hiking trails is more appropriate for specific style of training
  - 1-3 days per week - Resistance training no more than 3 days per week for 30-45 min.
- LSD sessions should be 1.5-2.5 hours in duration
- 2-4 HIIT training sessions per week
  - 4 intervals of 30seconds-1 min work at 80%+ effort followed by 1-2 min recovery. (Or until you recover to no more than 60% Max HR)
  - ½ on the same days as LSD training, ½ on non-LSD days, always one complete rest day per week.
- Consider moving to site of climb for as many as four weeks in advance to help with acclimitization
- 4 weeks out – 45:30:25% (carbohydrate:protein:fat)
  - 1-3 days per week - Resistance training no more than 3 days per week for 30-45 min.
  - Increase consistency of LSD cardiovascular to 4 days per week – 2 hours minimum
  - 2-4 HIIT training sessions per week
    - 4 intervals of 30seconds-1 min work at 80%+ effort followed by 1-2 min recovery. (Or until you recover to no more than 60% Max HR)

- ½ on the same days as LSD training, ½ on non-LSD days, always one complete rest day per week.
  - Starches should only be consumed at 4 meals per day
    - At a maximum of 1 cup per meal
  - Minimum 4 oz. of meat at each meal (or) 1 cup cottage cheese (or) 3 egg whites with 2 whole eggs
- 3 weeks out – 40:30:30% (carbohydrate:protein:fat)
  - 1-2 days per week - Resistance training no more than 2 days per week for 30-45 min.
  - Increase consistency of LSD cardiovascular to 4-5 days per week – 2 ½ hours minimum
  - 2-4 HIIT training sessions per week
    - 4 intervals of 30seconds-1 min work at 80%+ effort followed by 1-2 min recovery. (Or until you recover to no more than 60% Max HR)
    - ½ on the same days as LSD training, ½ on non-LSD days, always one complete rest day per week.
  - Starches should only be consumed at 4 meals
    - At a maximum of 1 cup per meal
  - Minimum 4 oz. of meat at each meal (or) 1 cup cottage cheese (or) 3 egg whites with 2 whole eggs
- 2 weeks out – 35:30:35% (carbohydrate:protein:fat)
  - 1-2 days per week - Resistance training no more than 2 days per week for 30-45 min.
  - Increase consistency of LSD cardiovascular to 5-6 days per week – 2 ½ hours minimum
  - 2-4 HIIT training sessions per week
    - 4 intervals of 30seconds-1 min work at 80%+ effort followed by 1-2 min recovery. (Or until you recover to no more than 60% Max HR)
    - ½ on the same days as LSD training, ½ on non-LSD days, always one complete rest day per week.
  - Starches should only be consumed at 4 meals per day
    - At a maximum of ¾ cup per meal
  - Minimum 4 oz. of meat at each meal (or) 1 cup cottage cheese (or) 3 egg whites with 2 whole eggs
  - Consume at least 2-4 oz. of nuts/seeds on a daily basis
- **1 week out** – 33:33:33% (carbohydrate:protein:fat)
  - Minimum 4 oz. of meat at each meal (or) 1 cup cottage cheese (or) 3 egg whites with 2 whole eggs
  - Consume at least 3-4 oz. of nuts/seeds on a daily basis
  - Exercise should be tapered this week
    - **No HIIT training at all this week**
    - **6-7 days out, regular exercise, done at similar intensity**
    - **5 days out, ½ of a regular session**
    - **1-4 days out, no exercise, eat as normal, and ensure ATLEAST 8-10 hours of sleep per night**