

# **The Troponin Nutrition Macronutrient Guidebook**

**with Sample Meal Plans for Carbohydrate Cycling**



By Shelby Starnes and Justin Harris

This guide was written to assist dieters in creating meal plans with given macronutrient profiles. It is written from the standpoint of a carbohydrate cycling diet approach, but the information is applicable to other types of diets as well. Depending on your goals, it can be used for either fat loss or gaining lean, muscular weight.



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## **Introduction**

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First, let's review some basics.

Everything that we eat causes a metabolic and physiological response in our body. For cosmetic purposes, the most important level to look at is the macronutrient level—the carbohydrates, proteins, and fats. Each macronutrient causes a different response in our body. By manipulating our intake, we can elicit the changes (fat loss, muscle gain) that we're seeking.

**Carbohydrates:** These are the sugars and starches that make up the bulk of energy for all living things. The body converts carbohydrates into glucose, causing a rise in blood sugar and the subsequent release of the anabolic hormone, insulin. Insulin aids in building muscle, but it can also cause fat to accumulate if it isn't managed properly.

**Proteins:** These are the so-called “building blocks of life.” They are the amino acid structures that rebuild and repair the body. Protein intake also stimulates the release of glucagon, a “fat burning” hormone.

**Fats:** These nutrients are essential for the health and maintenance of many bodily processes including immunity and hormone production. They are also an important energy source. However, consuming too many calories from fat, especially when combined improperly with the other macronutrients, will result in increased body fat.

## **Carbohydrate Cycling**

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Carbohydrate cycling is a style of dieting that we've used personally as well as with hundreds of our clients for years. It can be modified for lean muscular gains or fat loss as well as weight maintenance.

Put in simple terms, carbohydrate cycling involves consuming a high carbohydrate diet on some days of the week and a low to moderate carbohydrate diet on the other days.

The high carbohydrate days raise the body's insulin levels, fill glycogen stores, keep the metabolism burning efficiently, and stave off muscle catabolism.

The low carbohydrate days are the "fat burning days." They keep insulin levels low enough to allow for maximum fat burning while retaining muscle.

If your goal is to lose fat (and retain or even gain muscle), you should have only one or two "high carb days" per week. The other five or six days should be low to moderate carb days.

If your goal is to gain muscle (while keeping fat gain to a minimum), you should aim for two to four of these high carb days per week (the number will depend on your metabolism and work load or, in other words, how many days per week you train and at what intensity/volume). The rest of the week should be made up of low to moderate carb days.

## Sample Set-Up

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The following are general guidelines for each macronutrient on a typical high carb day and a typical low to moderate carb day.

Note that we lower protein on our high carb days and also keep fat as low as possible.

Keep in mind that for optimal blood sugar levels, metabolism, and amino acid turnover, it is best to divide your daily totals into 5–7 meals per day (about 2.5–3 hours or so).

<b>Males</b>	<b>Carbohydrate</b>	<b>Protein</b>	<b>Fat</b>
High carb day	2–3 grams per pound of body weight	1–1.25 grams per pound of body weight	as low as possible
Low to moderate carb day	0.5–1.5 grams per pound of body weight	1.25–1.5 grams per pound of body weight	0.15–0.35 grams per pound of body weight

Females have less metabolically active tissue than males and as such require far fewer calories. For females, these numbers are more applicable:

<b>Females</b>	<b>Carbohydrate</b>	<b>Protein</b>	<b>Fat</b>
High carb day	0.9–1.0 grams per pound of body weight	0.75 grams per pound of body weight	as low as possible
Low to moderate carb day	0.2–0.5 grams per pound of body weight	0.9–1.0 grams per pound of body weight	0.1–0.2 grams per pound of body weight

Note that these values only take into account the protein in protein foods, the fat in fat foods, and the carbs in carb foods. In other words, don't count the fat and protein in oats, for example, or the carbs and protein in peanut butter.

These incidental macros will typically add up to at least a couple hundred calories per day, depending on your overall macronutrient count.

Using the table above, a 250-lb male would follow a plan like this:

High carb days: 500–750 grams of carbohydrates, 250–375 grams of protein, very low fat

Low to moderate carb days: 125–375 grams of carbohydrates, 313–375 grams of protein, 38–88 grams of fat

A 150-lb female would follow a plan like this:

High carb days: 135–150 grams of carbohydrates, 113 grams of protein, very low fat

Low to Moderate carb days: 30–75 grams of carbohydrates, 135–150 grams of protein, 15–30 grams of fat

## **Meal Planning Tips**

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- ◆ Divide your daily protein intake evenly over your meals for the day.
- ◆ On high carbohydrate days, divide your daily carbohydrate intake evenly, just like you did with protein.
- ◆ On low and medium carbohydrate days, limit your carbohydrates to your first meal(s) of the day and your post-workout meal.
- ◆ For the added fats on low and medium days, spread them out evenly among your non-carbohydrate meals.

## Sample Meal Plans

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For a 150-lb female, a sample high and low to moderate day might look something like this:

### High day

Meal 1: 30 grams carbohydrate, 18 grams protein

- ◆ ½ cup oats (dry measure)
- ◆ ¾ cup egg whites (raw measure)

Meal 2: 30 grams carbohydrate, 18 grams protein

- ◆ ¾ cup brown rice (cooked measure)
- ◆ 2 ¼ oz. (63 grams) chicken breast (cooked measure)

Meal 3: 20 grams carbohydrate, 18 grams protein

- ◆ ½ cup sweet potatoes (cooked measure)
- ◆ 2 ¼ oz. (63 grams) chicken breast (cooked measure)

Meal 4: 30 grams carbohydrate, 18 grams protein (post-workout meal)

- ◆ ½ cup oats (dry measure)
- ◆ ¾ scoop (70 cc) whey protein powder
- ◆ Meal 5: 20 grams carbohydrate, 18 grams protein

- ◆ ½ cup sweet potatoes (cooked measure)
- ◆ 2 ¼ oz. (63 grams) chicken breast (cooked measure)

Meal 6: 20 grams carbohydrate, 18 grams protein

- ◆ ½ cup brown rice (cooked measure)
- ◆ 1 ¾ oz. (49 grams) top round steak (cooked measure)

### **Low to moderate day**

Meal 1: 20 grams carbohydrate, 28 grams protein

- ◆ ⅓ cup oats (dry measure)
- ◆ 1 ¼ scoop (70 cc) whey protein powder

Meal 2: 20 grams carbohydrate, 28 grams protein

- ◆ ½ cup brown rice (cooked measure)
- ◆ 3 ½ oz. (98 grams) chicken breast (cooked measure)

Meal 3: 28 grams protein, green vegetables, 8 grams healthy fat

- ◆ 2 ¾ oz. (77 grams) top round steak (cooked measure)
- ◆ 2 cups steamed broccoli
- ◆ 1 ½ teaspoons all-natural peanut butter

Meal 4: 20 grams carbohydrate, 28 grams protein (post-workout meal)

- ◆  $\frac{1}{3}$  cup oats (dry measure)
- ◆ 1  $\frac{1}{4}$  scoop (70 cc) whey protein powder

Meal 5: 28 grams protein, green vegetables, 8 grams healthy fat

- ◆ 3 oz. (84 grams) eye of round steak (cooked measure)
- ◆ 1 cup asparagus
- ◆ 16 almonds



For the 250-lb male, a sample high and low to moderate day might look something like this:

### **High day**

Meal 1: 90 grams carbohydrate, 40 grams protein

- ◆ 1  $\frac{3}{4}$  cup oats (dry measure)
- ◆ 1  $\frac{3}{4}$  scoop (70 cc) whey protein powder

Meal 2: 90 grams carbohydrate, 40 grams protein

- ◆ 2 ¼ cups brown rice (cooked measure)
- ◆ 5 oz. (140 grams) chicken breast (cooked measure)

Meal 3: 90 grams carbohydrate, 40 grams protein

- ◆ 2 ¼ cups sweet potatoes (cooked measure)
- ◆ 1 ½ cup egg whites (raw measure)

Meal 4: 90 grams carbohydrate, 40 grams protein

- ◆ 1 ¾ cup oats (dry measure)
- ◆ 1 ¾ scoop (70 cc) whey protein powder

Meal 5: 90 grams carbohydrate, 40 grams protein

- ◆ 2 ¼ cups brown rice (cooked measure)
- ◆ 5 oz. (140 grams) chicken breast (cooked measure)
- ◆ Meal 6: 90 grams carbohydrate, 40 grams protein
- ◆ 2 ¼ cups sweet potatoes (cooked measure)
- ◆ 1 ½ cup egg whites (raw measure)

Meal 7: 90 grams carbohydrate, 40 grams protein

- ◆ 2 ¼ cups brown rice (cooked measure)
- ◆ 5 oz. (140 grams) chicken breast (cooked measure)

## **Low to moderate day**

Meal 1: 60 grams protein, 80 grams carbohydrate

- ◆ 1 ½ cup oats (dry measure)
- ◆ 2 ½ scoops (70 cc) whey protein powder

Meal 2: 60 grams protein, 50 grams carbohydrate, 5 grams healthy fat

- ◆ 1 ¼ cup sweet potatoes (cooked measure)
- ◆ 6 oz. (168 grams) top round steak (cooked measure)
- ◆ 1 teaspoon olive oil

Meal 3: 60 grams protein, 10 grams healthy fat, green vegetables

- ◆ 7 ½ oz. (210 grams) chicken breast (cooked measure)
- ◆ spinach salad
- ◆ 2 teaspoons slivered almonds

Meal 4: 60 grams protein, 80 grams carbohydrate (post-workout meal)

- ◆ 1 ½ cup oats (dry measure)
- ◆ 2 ½ scoops (70 cc) whey protein powder

Meal 5: 60 grams protein, 15 grams healthy fat, green vegetables

- ◆ 7 ½ oz. (210 grams) chicken breast (cooked measure)
- ◆ 2 cups steamed broccoli
- ◆ 2 tablespoons all-natural peanut butter

Meal 6: 60 grams protein, 15 grams healthy fat, green vegetables

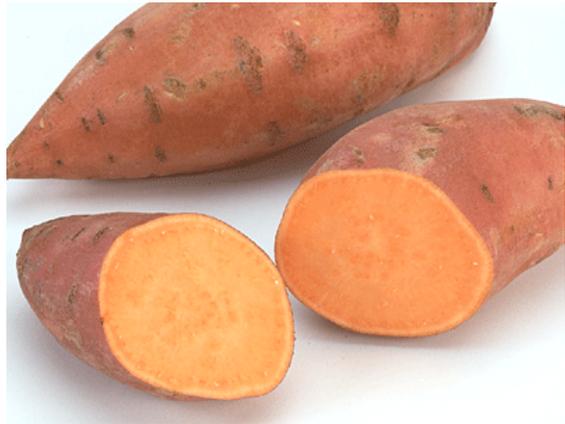
- ◆ 6 oz. (168 grams) top round steak (cooked measure)
- ◆ 1 cup steamed asparagus
- ◆ 1 tablespoon flax oil

## Macronutrient Table for Common Diet Foods

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Because not everyone has the same macronutrient needs as profiled in the sample meals, here is a table showing sample food amounts for varying macronutrient levels.

Please note that these measures are approximate. However, as long as you are consistent with how you measure, they will work just fine.



### Carbohydrates

20 grams carbs

- ◆  $\frac{1}{3}$  cup oats (dry measure)
- ◆  $\frac{1}{2}$  cup brown rice (cooked measure)
- ◆  $\frac{1}{2}$  cup sweet potatoes (cooked measure)

30 grams carbs

- ◆  $\frac{1}{2}$  cup oats (dry measure)
- ◆  $\frac{3}{4}$  cup brown rice (cooked measure)

- ◆  $\frac{3}{4}$  cup sweet potatoes (cooked measure)

40 grams carbs

- ◆  $\frac{3}{4}$  cup oats (dry measure)
- ◆ 1 cup brown rice (cooked measure)
- ◆ 1 cup sweet potatoes (cooked measure)

50 grams carbs

- ◆ 1 cup oats (dry measure)
- ◆ 1  $\frac{1}{4}$  cup brown rice (cooked measure)
- ◆ 1  $\frac{1}{4}$  cup sweet potatoes (cooked measure)

60 grams carbs

- ◆ 1  $\frac{1}{8}$  cup oats (dry measure)
- ◆ 1  $\frac{1}{2}$  cup brown rice (cooked measure)
- ◆ 1  $\frac{1}{2}$  cup sweet potatoes (cooked measure)

70 grams carbs

- ◆ 1  $\frac{1}{4}$  cup oats (dry measure)
- ◆ 1  $\frac{3}{4}$  cup brown rice (cooked measure)
- ◆ 1  $\frac{3}{4}$  cup sweet potatoes (cooked measure)

80 grams carbs

- ◆ 1  $\frac{1}{2}$  cup oats (dry measure)

- ◆ 2 cups brown rice (cooked measure)
- ◆ 2 cups sweet potatoes (cooked measure)

90 grams carbs

- ◆ 1  $\frac{3}{4}$  cup oats (dry measure)
- ◆ 2  $\frac{1}{4}$  cups brown rice (cooked measure)
- ◆ 2  $\frac{1}{4}$  cups sweet potatoes (cooked measure)

100 grams carbs

- 2 cups oats (dry measure)
- 2  $\frac{1}{2}$  cup brown rice (cooked measure)
- 2  $\frac{1}{2}$  cup sweet potatoes (cooked measure)

## **Protein**

18 grams protein

- ◆ 2  $\frac{1}{4}$  oz. (63 grams) chicken breast (cooked measure)
- ◆ 2 oz. (56 grams) eye of round steak (cooked measure)
- ◆ 1  $\frac{3}{4}$  oz. (49 grams) top round steak (cooked measure)
- ◆  $\frac{3}{4}$  cup egg whites (raw measure)
- ◆  $\frac{3}{4}$  scoop (70 cc) whey protein powder

22 grams protein

- ◆ 2  $\frac{3}{4}$  oz. (77 grams) chicken breast (cooked measure)
- ◆ 2  $\frac{1}{2}$  oz. (70 grams) eye of round steak (cooked measure)

- ◆ 2 ¼ oz. (63 grams) top round steak (cooked measure)
- ◆ ⅞ cup egg whites (raw measure)
- ◆ 1 scoop (70 cc) whey protein powder

28 grams protein

- ◆ 3 ½ oz. (98 grams) chicken breast (cooked measure)
- ◆ 3 oz. (84 grams) eye of round steak (cooked measure)
- ◆ 2 ¾ oz. (77 grams) top round steak (cooked measure)
- ◆ 1 cup egg whites (raw measure)
- ◆ 1 ¼ scoop (70 cc) whey protein powder

30 grams protein

- ◆ 3 ¾ oz. (105 grams) chicken breast (cooked measure)
- ◆ 3 ¼ oz. (91 grams) eye of round steak (cooked measure)
- ◆ 3 oz. (84 grams) top round steak (cooked measure)
- ◆ 1 ⅞ cup egg whites (raw measure)
- ◆ 1 ⅓ scoop (70 cc) whey protein powder

35 grams protein

- ◆ 4.25 oz. (119 grams) chicken breast (cooked measure)
- ◆ 4 oz. (112 grams) eye of round steak (cooked measure)
- ◆ 3 ½ oz. (98 grams) top round steak (cooked measure)
- ◆ 1 ⅓ cup egg whites (raw measure)

- ◆ 1 ½ scoop (70 cc) whey protein powder

40 grams protein

- ◆ 5 oz. (140 grams) chicken breast (cooked measure)
- ◆ 4 ½ oz. (126 grams) eye of round steak (cooked measure)
- ◆ 4 oz. (112 grams) top round steak (cooked measure)
- ◆ 1 ½ cup egg whites (raw measure)
- ◆ 1 ¾ scoop (70 cc) whey protein powder

50 grams protein

- ◆ 6 ¼ oz. (175 grams) chicken breast (cooked measure)
- ◆ 5 ½ oz. (154 grams) eye of round steak (cooked measure)
- ◆ 5 oz. (140 grams) top round steak (cooked measure)
- ◆ 2 cup egg whites (raw measure)
- ◆ 2 scoops (70 cc) whey protein powder

60 grams protein

- ◆ 7 ½ oz. (210 grams) chicken breast (cooked measure)
- ◆ 6 ⅔ oz. (187 grams) eye of round steak (cooked measure)
- ◆ 6 oz. (168 grams) top round steak (cooked measure)
- ◆ 2 ⅓ cup egg whites (raw measure)

- ◆ 2 ½ scoops (70 cc) whey protein powder

70 grams protein

- ◆ 8 ¾ oz. (245 grams) chicken breast (cooked measure)
- ◆ 7 ¾ oz. (217 grams) eye of round steak (cooked measure)
- ◆ 7 oz. (196 grams) top round steak (cooked measure)
- ◆ 2 ¾ cup egg whites (raw measure)
- ◆ 3 scoops (70 cc) whey protein powder

## **Fats**

3 grams fat

- ◆ ½ teaspoon all-natural peanut butter
- ◆ ½ teaspoon healthy oil (olive, flax, walnut, safflower, etc.)
- ◆ 3 fish oil capsules or other encapsulated fats (make sure they're 1,000 mg each)
- ◆ 6 almonds or other nuts (medium-sized)

5 grams fat

- ◆ 1 teaspoon all-natural peanut butter
- ◆ 1 teaspoon healthy oil (olive, flax, walnut, safflower, etc.)
- ◆ 5 fish oil capsules or other encapsulated fats (make sure they're 1,000 mg each)
- ◆ 10 almonds or other nuts (medium-sized)

8 grams fat

- ◆ 1 ½ teaspoons all-natural peanut butter
- ◆ 1 ½ teaspoons healthy oil (olive, flax, walnut, safflower, etc.)
- ◆ 8 fish oil capsules or other encapsulated fats (make sure they're 1,000 mg each)
- ◆ 16 almonds or other nuts (medium-sized)

10 grams fat

- ◆ 2 teaspoons all-natural peanut butter
- ◆ 2 teaspoons healthy oil (olive, flax, walnut, safflower, etc.)
- ◆ 10 fish oil capsules or other encapsulated fats (make sure they're 1,000 mg each)
- ◆ 20 almonds or other nuts (medium-sized)

15 grams fat

- ◆ 2 tablespoons all-natural peanut butter
- ◆ 1 tablespoon healthy oil (olive, flax, walnut, safflower, etc.)
- ◆ 30 almonds (medium-sized)

## Shopping List

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This is a basic shopping list that you can use to make sure you cover all the dieting necessities.



Not all of these items are required, but it's a good list to work from.

### **Protein sources**

- ◆ Boneless, skinless chicken breast
- ◆ Top round steak
- ◆ Eye of round steak
- ◆ Protein powder (whey, casein, egg)
- ◆ Fish (salmon, tuna, tilapia, orange roughy)
- ◆ Fresh eggs

### **Carbohydrate sources**

- ◆ Old-fashioned oats

- ◆ Rice (brown, white, basmati)
- ◆ Sweet potatoes
- ◆ Red skin potatoes
- ◆ Baking potatoes

### **Fat sources**

- ◆ All-natural peanut butter
- ◆ Extra virgin olive oil
- ◆ Fish oil capsules
- ◆ Almonds
- ◆ Walnuts
- ◆ Cashews
- ◆ Flax oil

### **Vegetables**

- ◆ Broccoli
- ◆ Cauliflower
- ◆ Asparagus
- ◆ Cucumbers
- ◆ Pickles
- ◆ Celery
- ◆ Spinach
- ◆ Mushrooms
- ◆ Green salads

## **Condiments and spices**

- ◆ Salt
- ◆ Pepper
- ◆ Mrs. Dash seasonings
- ◆ Cinnamon
- ◆ Soy sauce
- ◆ Salsa
- ◆ Hot sauce
- ◆ Dijon mustard

## **Additional Tips**

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- ◆ Save time and money by doing all your grocery shopping on one day each week.
- ◆ Buy in bulk. Do your grocery shopping at a “warehouse” grocer such as Costco or Sam’s Club.
- ◆ Start off your mornings with a blended shake consisting of dry oats, a protein powder blend, and some healthy fats like walnuts or flaxseed oil. Prepare the shake “dry” at night by putting all the ingredients in a Tupperware container. In the morning, all you’ll have to do is put some ice and water in the blender, dump in the contents of the container, and blend for about thirty seconds. This way, you can prepare and consume your first meal of the day in just a few minutes.
- ◆ Prepare all your meals on one day of the week. Choose a day when you're not very busy, like Sunday, to cook all your meats, vegetables, rice, and other foods. Divide what you prepare into meals that you can freeze in separate containers (Ziploc, Tupperware). Then, each night before you go to bed, take out what you need for

the following day and let it thaw overnight in the fridge. This might sound like a lot of work at first, but after a couple of weeks, it will become part of your regular routine.



*She sure as hell isn't shopping in the candy aisle.*

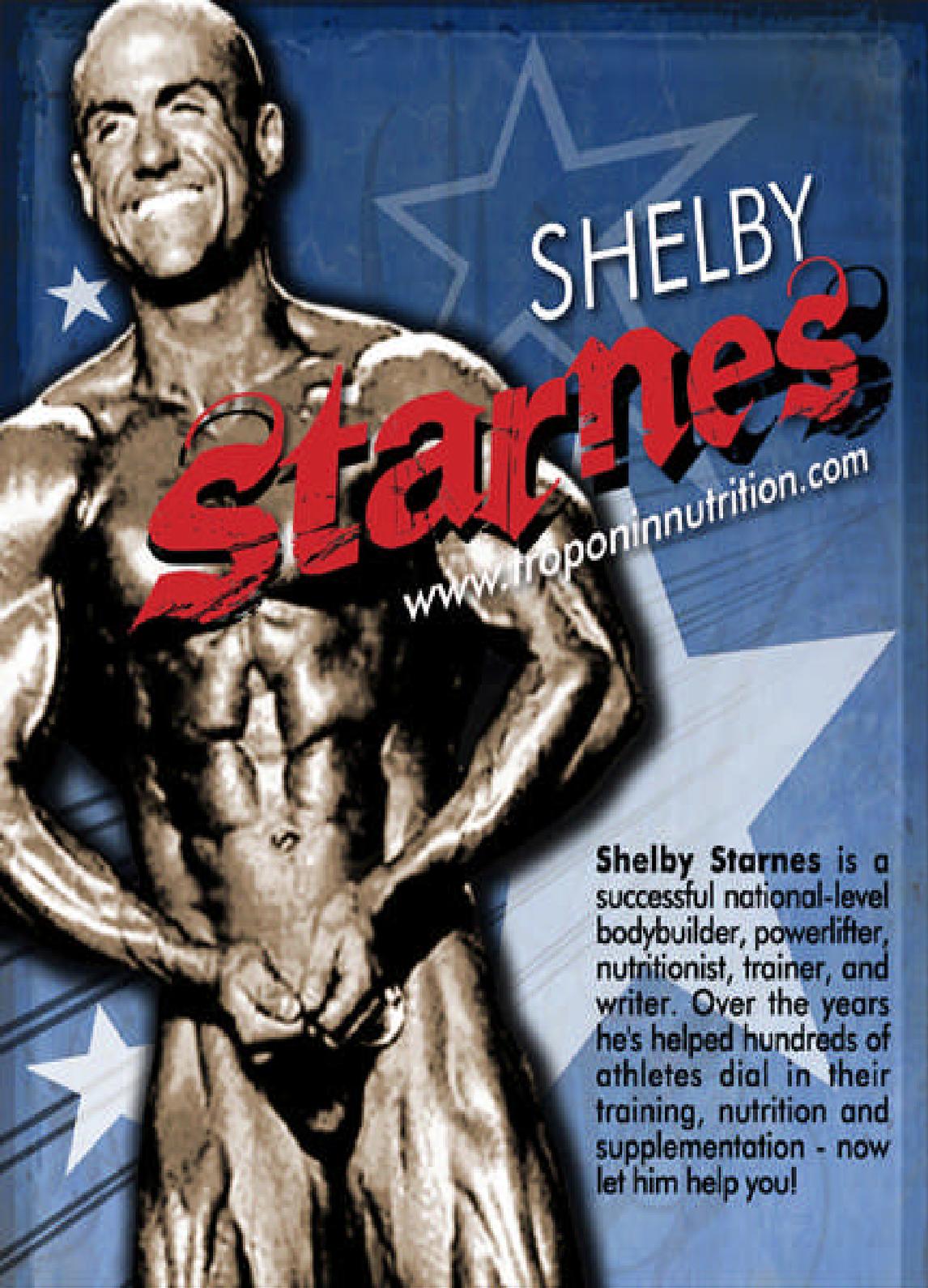
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A special thank you to Kari Keenan for giving us permission to use her photos in this publication.

Editorial assistance and page layout provided by E. Pirrung.



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**Shelby Starnes** is a successful national-level bodybuilder, powerlifter, nutritionist, trainer, and writer. Over the years he's helped hundreds of athletes dial in their training, nutrition and supplementation - now let him help you!

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