

JEFF GALLOWAY

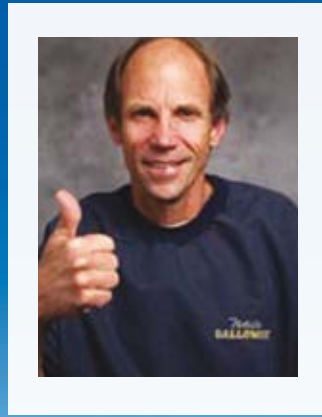
# NUTRITION FOR RUNNERS



WITH  
NANCY CLARK (RD)



MEYER  
& MEYER  
SPORT



**Jeff Galloway**, based in Atlanta, Georgia, was an average teenage runner who kept learning and working harder, until he became an Olympian.

He is the author of the best-selling running book in North America and a Runner's World columnist, as well as an inspirational speaker to over 200 running and fitness sessions each year.

Jeff Galloway has completed far more than 100 marathons, and he spends the time necessary to answer the questions of thousands of beginners, recreational runners, aspiring marathoners and time goal runners every year.



**Nancy Clark** is a registered dietitian (RD) who specializes in nutrition for sports performance. Her private practice is in the Boston area, where she helps runners and other athletes of all ages and abilities to win with good nutrition. Her best-selling *Nancy Clark's Sports Nutrition Guidebook* has sold over 550,000 copies. Nancy practices what she preaches. She is a runner and bicycle commuter and has completed several marathons.

## Nutrition for Runners

This book has been very carefully prepared, but no responsibility is taken for the correctness of the information it contains. Neither the author nor the publisher can assume liability for any damages or injuries resulting from information contained in this book.

Jeff Galloway with Nancy Clark, MS, RD

# Nutrition for Runners

Meyer & Meyer Sport

British Library Cataloguing in Publication Data  
A catalogue record for this book is available from the British Library

**Jeff Galloway with Nancy Clark, MS, RD: Nutrition for Runners**  
Maidenhead: Meyer & Meyer Sport (UK) Ltd., 2014  
ISBN 978-1-78255-693-0

All rights reserved, especially the right to copy and distribute,  
including the translation rights. No part of this work may be reproduced –  
including by photocopy, microfilm or any other means –  
processed, stored electronically, copied or distributed in any form whatsoever  
without the written permission of the publisher.

© 2014 by Meyer & Meyer Sport (UK) Ltd.  
Aachen, Auckland, Beirut, Budapest, Cairo, Cape Town, Dubai, Hügendorf,  
Indianapolis, Maidenhead, Singapore, Sydney, Tehran, Wien  
 Member of the World Sport Publishers' Association (WSPA) [www.w-s-p-a.org](http://www.w-s-p-a.org)  
ISBN 978-1-78255-693-0  
E-Mail: [info@m-m-sports.com](mailto:info@m-m-sports.com)  
[www.m-m-sports.com](http://www.m-m-sports.com)

# Contents

Preface From Jeff: “Do we eat to run...or run to eat?” .....	6
Introduction: Jeff’s Confession: “I was a fat kid.” .....	7
<b>Chapter 1:</b> Use Your Brain!.....	8
<b>Chapter 2:</b> What Do Runners Need to Eat? .....	18
<b>Chapter 3:</b> Good Blood Sugar = Motivation.....	26
<b>Chapter 4:</b> Eating with a Purpose .....	32
<b>Chapter 5:</b> Nancy Clark’s Key Concepts .....	40
<b>Chapter 6:</b> Eating for Energy .....	44
<b>Chapter 7:</b> Nutrients for Repair and Rebuilding .....	50
<b>Chapter 8:</b> Healthy Eating Guidelines .....	54
<b>Chapter 9:</b> Breakfast—The Meal of Champions .....	72
<b>Chapter 10:</b> Lunch .....	82
<b>Chapter 11:</b> Snacks .....	88
<b>Chapter 12:</b> Dinner.....	96
<b>Chapter 13:</b> Burning Fat.....	102
<b>Chapter 14:</b> Understanding Fat Accumulation and Burnoff.....	106
<b>Chapter 15:</b> Your Fat-Burning Tool Kit .....	114
<b>Chapter 16:</b> The Calorie Budget .....	122
<b>Chapter 17:</b> The Eating Plan—Meal by Meal .....	128
<b>Chapter 18:</b> Why We Store Fat .....	138
<b>Chapter 19:</b> Cognitive Fat-Burning Strategies.....	144
<b>Chapter 20:</b> Your Fat-Burning Training Program .....	158
<b>Chapter 21:</b> The Galloway Run-Walk-Run Method.....	166
<b>Chapter 22:</b> Nutrition and Exercise Myths.....	172
<b>Chapter 23:</b> Special Issues .....	176
<b>Chapter 24:</b> Recipes From Nancy Clark.....	186
<b>Chapter 25:</b> Fabulously Full-Figured?.....	192
<b>Chapter 26:</b> Heroes—People Like You Who Burned It Off .....	198
<b>Chapter 27:</b> Troubleshooting Performance Problems.....	206
<b>Chapter 28:</b> Staying Injury Free.....	216
<b>Chapter 29:</b> Choosing the Best Shoe for You .....	222
<b>Index:</b> .....	228
<b>Credits:</b> .....	232

### **Preface From Jeff: “Do we eat to run...or run to eat?”**

Barbara Galloway and I have this debate often. The answer is...both are correct. We must accumulate the right collection of nutrients during a week of eating to restock the fuel, to repair damage, and to keep energy flowing. But it's also OK to enjoy foods and beverages. By understanding the circuits in the brain and by using the methods in this book, you can gain control over your eating and exercise.

If one of the goals is to (burn) lose fat and keep it off, Barbara Galloway and Nancy Clark offer this tip: “Give yourself a daily calorie budget.” This is only one of the many contributions from Barbara Galloway to this book. Over the four decades we have been married, she has changed my diet for the better. Based upon research, and food evaluation, she uses seasonings to give wonderful flavor to vegetables, fish, and lean chicken and turkey which are the main components of our diet.

So my content in this book is actually that of Barbara and myself, and you'll find her credited in many of the chapters. I want to publicly thank her for changing my life for the better in many ways.

## **Introduction: Jeff's Confession: "I was a fat kid."**

Like many children in Navy families, I attended 13 schools by the time I finished the 7th grade. At this point my father became a teacher, we moved to Atlanta, and my new school required each boy to exercise with an athletic team after school every day. Because of the moves, I had avoided exercise, did not have sports skills, had become lazy, and gained a lot of weight. The first few weeks were very tough and delivered a series of surprises. Even after the most exhausting workouts, I felt a boost to the attitude and spirit that I had not experienced before. The honest friendships that came from running kept me running through five years of gradual fat burnoff and modest improvement. I was hooked for life because running was transforming my brain in many positive ways. But whenever I was sidelined for a week or more due to injury, I envisioned that the fat would accumulate again. It took 20 years for this anxiety to go away.

During my first two decades of running I could find no books or guidelines on running nutrition, and I experienced about as many problems as one can have. I learned a lot about what worked best for me. But my first guru in sports nutrition was Nancy Clark. She was a marathoner in the 80's and is still a competitive runner. Her advice was based upon research and professionally guiding runners who had nutritional issues. It has been my privilege to conduct clinics with her and work on projects together. While you will find a few different interpretations of research and experience between the two of us, these issues are minor.

We want to cut through the confusing, conflicting, misinformation on running nutrition. The information we offer is based upon research and on what has worked for tens of thousands of runners.

May you run well, eat well, and enjoy both...until you are 100.



# Chapter 1: Use Your Brain!

To Manage Hunger, Cravings, Energy, Fatigue, Fat

by Jeff Galloway

**As humans, we can activate our conscious brain:**

- **Avoid mindless eating by managing our nutrition.**
- **Ensure we are getting adequate nutrients.**
- **Enjoy food without adding extra layers of fat.**
- **Mind and body can work together to achieve your goals.**

Average Americans today are significantly overweight or obese. I hear from many every week who tell me how dedicated I am for exercising and how they don't have the discipline to work out or eat right. My common response is "It's not really about discipline and dedication but about mentally focusing on the enrichment and pleasure that exercise brings to life." Many look at me like I'm crazy.

The fact is that all of us are capable of using our human, conscious brains to control what we do. In the process we discover far more joy throughout the mind-body network from making healthy food choices and exercising than we did eating potato chips, hot wings, etc. on the couch.

I also hear from thousands of talented runners every year who tell me that they tried to eat better but relapsed back into the "comfort foods" containing sugar, salt, and fat, which don't deliver the nutrients needed for repair and performance. Some are not overweight and some are running quite well. I tell them in the short run they may not notice a difference when they transition to healthier choices.

## Nutrition for Runners

But I've heard from thousands who have not had the performance capacity to stay ahead of the pick-up bus in their favorite marathon or qualify for the Boston Marathon, who found that a healthy dietary change became a catalyst during their improvement journey. Because they felt better with more energy, the workouts were better—especially on the tough days. A positive change in food choices has been shown to turn on brain circuits to improve quality in exercise.

By using the simple strategies in this book you can set up a cognitive eating plan that will put you in command of your food intake and feel better every day. This can significantly improve the way you feel when running and in your daily activities. When you combine aerobic, enjoyable running with mental focus on eating, you can feel better, prepare for performance better, reduce general fatigue, and burn more fat.

We have a powerful mind-body network that is interconnected. Eating influences mental activity and mental activity influences eating—all day long. But we have many subconscious eating patterns that are deeply embedded. In this chapter I will tell you about the exciting new research that shows how you can consciously activate brain circuits to give you control over subconscious eating patterns that lower our energy and reduce motivation for running.

Yes, you can harness this network to be the master of your nutrition, feel better, improve health while controlling diet, weight, and performance nutrition.

### **Who's In Charge: Conscious Brain or Subconscious Reflex Brain?**

At any given moment, you can choose one of two brain operating systems: 1) the more ancient subconscious brain (SBC) located in the brainstem or 2) the conscious brain (or human brain) located in the frontal lobe.

**The challenge:** subconscious brain gratification eating patterns. Most humans, most of the time, allow the subconscious “reflex” brain to choose what and

when to eat. This is natural because the subconscious brain (SBC) conducts most of our activities throughout the day. Hardwired in this ancient and continuously upgraded brainstem are thousands of genetically embedded and learned behavior patterns that evolved millions of years ago in response to the constant threat of starvation. To enhance survival, our SBC developed many circuits that stimulate us to eat whenever food is available and make us feel good when we eat sugar and fat. Brain circuits keep rewarding us with a “joy” hormone called dopamine even when we’ve eaten far more than we need for the next day or two—without feeling satisfied.

Overeating can compromise goals even for skinny runners. Even if you don’t need or want to lose weight, subconscious eating patterns can cause gastrointestinal issues that may keep you from your goals. The simple cognitive eating plans in this book can help you make the best choices before and after workouts and races so that you can perform at your best.

### **Use Your Conscious Brain and Gain Control Over Eating**

You can take control of your nutritional destiny by having a cognitive strategy for eating (or any other activity). This shifts control out of the subconscious brain and into the frontal lobe. As you focus on what you eat, how much and when the conscious brain overrides the SBC brain. This interrupts embedded emotional subconscious eating patterns and gives you a chance to choose foods that will keep you energized and healthy, while you avoid overeating. By having an eating plan, you can combine the foods you need to balance your nutrients, keep the energy supply flowing, and avoid dehydration.

You don’t have to give up the foods you love. But whether you want to ensure that you’re getting the right nutrients for health and strong running, or whether you want to burn some fat, an eating strategy will allow you to achieve your goals for eating and running.

### How Subconscious Brain Circuits Work

1. SBC circuits are set up to eat when food is available. Most of the energy and eating circuits were developed over millions of years ago when food was scarce and starvation was common. For survival, our appetite circuit is turned on when food is available and is not turned off until we have eaten far more than we need for that day and often the next day or two (i.e., a visit to the buffet). The extra volume not only promotes fat accumulation as a hedge against starvation, but a wealth of vitamins, minerals, and protein for repair and body function.
2. Subconscious dopamine reflex eating—no accountability. Many of the subconscious reflex brain eating patterns are not healthy or beneficial for running. Take the dopamine reflex reward pattern, for example. Dopamine is a neurotransmitter—a hormone that delivers a more powerful sense of joy than most. When you eat a food that has sugar, salt or fat, such as a potato chip (which has all three), you get a happy dose of dopamine which feels so good and is gone so fast that you reach for another and then another. If you choose to stay under the control of the subconscious brain, there is no accountability as you pile on the calories. Such eating patterns produced greater fat storage by our ancestors, which gave them a chance to make it through the weeks when food was not available. You'll find out more about this in the fat burning chapter of this book (chapter 13).
3. Stress stimulates subconscious eating patterns. Subconscious brain, when we allow it to be in control, will monitor overall stress. As stress level increases to (what it determines to be) overload, SBC will trigger the release of anxiety and negative attitude hormones. One of the most common circuits that is activated to counter this stress-negative attitude build-up is the dopamine reflex. Stress will trigger the release of negative attitude hormones. The simple subconscious fix, over millions of years, is to reach for sugar, salt, or fat and feel better quick (but only temporarily). Many runners justify “carbohydrate loading” by SBC snacking to counter the stress of an upcoming race or long run.

So it is common, when stressed or very tired, to subconsciously reach for sugary, salty, or fatty snacks to get a dose of dopamine. Unfortunately the reward is very temporary and then requires multiple doses, with no accountability. Again, the way you can gain control is to have a strategy which, will be presented in the fat burning chapter (chapter 13).

4. Damage from addictive eating patterns. Dr. Pam Peeke in her book *The Hunger Fix*, has noted the research showing how addictive eating patterns can damage the natural reward centers of the brain so that more and more junk food is needed for gratification. Ultimately there is no satisfaction and less and less dopamine when large amounts are ingested. She has also identified a detox program with exercise and eating plans that have helped thousands to enjoy eating healthy food. Here are some of the many insightful tips from this book:

- A diet full of unhealthy fat, salt, sugar switches on certain genes to cope.
- As one savors sugar, histones direct genes to increase insulin.
- Increased insulin, with excess unhealthy sugar calorie intake, increases fat storage.
- Regular, repeated insulin ingestions and secretions CAN result in insulin resistance and type 2 diabetes.
- Too much food intake stimulates creation of fat cells.
- Higher levels of fat trigger hormones that increase pain in joints and “weak links.”

## Energy is #1 Priority

Forward movement kept our ancient ancestors alive: the more territory covered, the more food gathering possibilities. Maintaining energy is top priority throughout the mind-body network, and there are many effective brain circuits that keep the energy flowing even when there are challenges.

**The brain's primary fuel is blood glucose.** When the supply of blood sugar is adequate, the brain will keep the many complex systems going, including an