

The Migraine Brain

*Your Breakthrough Guide to
Fewer Headaches, Better Health*

Carolyn Bernstein, M.D.,
and Elaine McArdle

SOUVENIR
PRESS

This edition published in Great Britain in 2020 by
Souvenir Press,
an imprint of Profile Books Ltd
29 Cloth Fair
London
EC1A 7JQ
www.profilebooks.co.uk

Previously published in Great Britain in 2010 by
Souvenir Press

First published in the USA by FREE PRESS,
A Division of Simon & Schuster, Inc.

Copyright © by Carolyn Bernstein, M.D. and Elaine McArdle, 2010, 2020

1 3 5 7 9 10 8 6 4 2

Printed and bound in Great Britain by
CPI Group (UK) Ltd, Croydon, CR0 4YY

The moral right of the author has been asserted.

All rights reserved. Without limiting the rights under copyright reserved above, no part of this publication may be reproduced, stored or introduced into a retrieval system, or transmitted, in any form or by any means (electronic, mechanical, photocopying, recording or otherwise), without the prior written permission of both the copyright owner and the publisher of this book.

A CIP catalogue record for this book is available from the British Library.

ISBN 978 1 78816 424 5
eISBN 978 0 28563 959 1



This book is dedicated to all the wonderful migraine patients
who have shared their stories and their ideas so generously.
It is a privilege to know and take care of every one of you.

In memory of my father, Daniel Bernstein, M.D., 1927–2007,
my first and finest teacher of medicine.
He taught me how to listen.

C.B.

For Jack and Cliff.

E.M.

NOTE TO READERS

This publication contains the opinions and ideas of its authors. It is intended to provide helpful and informative material on the subjects addressed in the publication. It is sold with the understanding that the authors and publisher are not engaged in rendering medical, health, or any other kind of personal professional services in the book. The reader should consult his or her medical, health or other competent professional before adopting any of the suggestions in this book or drawing inferences from it.

The authors and publisher specifically disclaim all responsibility for any liability, loss or risk, personal or otherwise, which is incurred as a consequence, directly or indirectly, of the use and application of any of the contents of this book.

Please note that the names and some identifying characteristics of migraine sufferers portrayed or quoted in this book, with the exception of public figures, have been changed. In some instances, individuals portrayed are composites, crafted to illustrate particular migraine symptoms or issues.

CONTENTS

Introduction—"I'd Rather Die Than Get Another Migraine"	1
Migraine Quiz	7

PART ONE

Chapter 1—Is Yours a Migraine?	13
The Migraine Checklist	21
Or . . . Is It a Tension Headache?	27
Mixed Headaches	28
Sinus Headache—Migraine in Disguise?	29
Other Kinds of Headaches	32
Kinds of Migraine	34
When to Call a Doctor—Beware of <i>Change</i>	37
Chapter 2—The Migraine Brain: How It's <i>Different</i> —and What That Means for You	40
Cortical Spreading Depression—the New Science of Migraine	41
Questions for the Doctor	45
The Trigeminal Nerve	46
Migraine and Seizure	48
The Genetic Link	49
The Heart-Migraine Connection: "PFO"	49
Your Migraine Brain May Change Over Time	50
What Migraine Is <i>Not</i>	51
A Strange, Fascinating Disease	52
Migraine Lore, Famous Migraineurs, and More	54
Chapter 3—The Four Stages of a Migraine	58
The Four Stages	59
Stage One: Prodrome	60

Stage Two: Aura—Visual and Other Changes	62
Stage Three: The Main Migraine or Pain Phase	66
Stage Four: Postdrome, or the Migraine Hangover	69
Building Your Migraine Profile	70
Chapter 4—Your Migraine Triggers	73
What’s Your List of Triggers?	73
The Headache Diary	77
How to Avoid Your Triggers	80
Your Personal Top Ten Migraine Triggers	97
Chapter 5—Female Hormones and Migraines Through the Life Cycle	101
The Role of Female Hormones	102
Are Your Migraines Related to Menstruation?	105
Migraines During Your Life Cycle	115
Planning for Pregnancy	115
Pregnancy	116
Perimenopause	122
Menopause	123
Chapter 6—Men’s Migraines	124
Important News for Men with Migraine	129
Men: Taking Care of Your Health	134

PART TWO

Chapter 7—Measuring Your Migraine: The Best Self-Tests	139
Your Migraine Toolbox	141
Chapter 8—How to Find the Right Doctor	145
Finding a Headache Specialist	147
The First Appointment	150
Chapter 9—Medicines That Work	157
A Variety of Migraine Medications	158
Prevent, Abort, Rescue—the Three Types of Drugs	158
Preventive Drugs	159
Abortive Drugs	168

Rescue Drugs	172
Over-the-Counter Drugs	173
Surgery and Other Options	177
Chapter 10—When You Have to Go to the Emergency Room	179
How to Make Your A&E Visit Successful—A Signed Doctor’s Form	183
What to Take with You to A&E —Your A&E Kit	184
If You Are Admitted to the Hospital	185
Recovering from Migraine	186
Treatment for Medication Overuse Headache	188
Chapter 11—Complementary and Alternative Treatments	189
Biofeedback	194
Other Relaxation Techniques	196
Acupuncture	197
Yoga	200
Meditation	202
Massage	204
Ice Massage	205
Magnesium	205
Riboflavin, Coenzyme Q10	207
Herbs and Herbal Supplements	207
Energy Healing	209

PART THREE

Your Personal Wellness Plan

Introduction	211
Eight Steps to Wellness for Your Migraine Brain	214
Chapter 12— Exercise, Sleep, Nutrition, Relaxation	215
Exercise	215
Sleep	225
Healthy Eating	232
Relaxation and Stress Reduction	242
Chapter 13—Family, Home, Sex, Mental Health	242
Living with a Migraineur	243

How to Make Your Home Migraine-Free	250
Sex and Migraines	255
Mental Health and Migraine	257
Chapter 14—Migraines, Work, and Travel	269
Work	269
Travel	279
Chapter 15—Migraine Makeover: Creating Your Own Personal Migraine Plan	289
Migraine Makeover: My Personal Treatment Plan	304
Appendix	313
Index	331

The
Migraine
Brain

INTRODUCTION

“I’d Rather Die Than Get Another Migraine!”

Melissa is a waitress in her mid-thirties who has suffered from excruciating migraines since she was a little girl. A few months before she became my patient, she gave birth to her first child. I asked how her labour had gone.

“I hate to say this,” she confided, “but it was a piece of cake compared to what I’m used to.” When she went into labour, Melissa told me, the obstetrician instructed her to let him know when the pain got really intense so he could give her an epidural. Before she knew it, her daughter was born—without any anaesthetic.

“When people say childbirth is one of worst pains there is, I’m sorry, it’s not!” Melissa said, shaking her head. “For someone used to having migraine pain, childbirth doesn’t even come close.”

Terry is a businessman in his mid-sixties who has suffered from migraines for thirty years. Several times a month, he gets a horrible pounding in his head, vomits repeatedly, and can barely move. Last year, he was diagnosed with prostate cancer and began extensive chemotherapy. “You know something?” he said to me. “I’ve never missed a day of work from the chemo. But migraines? I get so sick I can’t walk. I can’t tell you how much work I’ve missed from migraines.”

Gwen is a high school teacher in her forties who has suffered from devastating migraines since she was a teenager. During an attack, she experiences intense throbbing and pounding down the side of her face, so painful she can do nothing but lie completely still in a dark room. Gwen also has heart problems, which means she is not supposed to take the effective new migraine drugs called triptans.

Not long ago, in a migraine support group I hosted in Cambridge,

Massachusetts, Gwen stood up and made a dramatic announcement: She was going to risk taking triptans. “I know they’re bad for my heart, but I can’t stand this anymore,” she said. “I’d rather die than get another migraine!”

The good news is, she doesn’t have to make that choice.

If you’ve ever felt like these patients did, you’re far from alone. Six million people in the United Kingdom get migraines. If you don’t get them, you certainly know someone who does: One in ten people in this country is a migraineur (a person who gets migraines).

Migraine is the ninth-leading cause of disability among women, and the nineteenth most-common disability in the world, more common than diabetes or asthma. It’s also one of the most painful and debilitating. The throbbing head pain and nausea can knock you out of commission, sometimes for days. About 60 percent of migraineurs say their families are significantly affected by their migraine sickness, one study found; in another, 85 percent said migraine significantly affected their ability to do household chores. Migraine runs up more than £600 million a year in health costs and nearly £800 billion in losses to industry due to absenteeism and reduced effectiveness at work.

Despite the fact that it’s so common and has so much impact on our society, migraine is one of the most misunderstood, misdiagnosed, and undertreated diseases on earth.

Most people with migraine illness don’t realize they have it. Only half of people with migraine have sought a doctor’s help, and half of these get the wrong diagnosis once they see a doctor. Many new, exciting treatments can bring tremendous relief. But because so many myths about migraine persist—even among doctors—millions of people are suffering needlessly.

The Migraine Brain will change that.

I got my first migraine when I was a medical student in my early twenties. At first, I thought I was just having bad headaches, but it didn’t occur to me to mention these headaches to my own doctor. Headaches, even painful ones, didn’t seem like an important medical concern. And the pain would always resolve, although sometimes I had to sleep it off. I was lucky because mine were not very frequent. But as I began to study neurology, my specialty field, I realized that I was actually having migraines. Sadly, there was very little useful information about migraines.

Most of what I found—even in medical texts—was condescending or dismissive. Some writers suggested that the migraine was my own fault; many scoffed at the severity of the pain that migraineurs feel. I was shocked at the absence of solid medical data and horrified by the lack of sympathy.

I learned what many migraineurs already knew: People who don't get migraines—including many doctors—have a hard time believing how debilitating they are. Since migraine isn't fatal, and we don't seem to suffer any lingering health problems after a migraine attack ends, how can we be as sick as we claim? How can the pain really be *that* bad, they ask. They don't understand why we live in fear of the next attack and may think we're hypochondriacs, or drug seekers making up our symptoms in order to get painkillers. Some of this dismissive attitude may be based on certain prejudices or preconceptions, since migraine affects more women than men. Even today, attention and research dollars for many health issues that predominantly affect women have lagged behind those for men's illnesses. But men with migraines run into prejudice, too.

Countless patients tell me that their friends or employers—and, sadly, even doctors—have ordered them to "just deal with it!" Afraid of being tagged as whiners or malingerers, many migraineurs try to ignore their illness and steel themselves to soldier on through the pain, continuing on at work and other activities no matter how awful they feel. Once the attack ends, many suffer from a kind of "migraine anticipatory anxiety," where they worry when the next attack will suddenly appear to derail their plans for a productive, happy day.

At the time of my first migraine, I'd already decided to specialize in neurology. But it was my own experience with migraine, and the realization that we in the medical world still had so much to learn, that led me to investigate this fascinating disorder.

Over the past seventeen years as a Harvard Medical School faculty member and practising neurologist, I've treated thousands of women and men who suffer from migraines. I've listened to myriad individual stories about migraine and how it affects my patients' lives. I've seen enormous variety in their symptoms, the factors that trigger their attacks, and the treatments that help them feel better. And it's been deeply gratifying to see how many of my patients are able to make huge improvements in their health and really turn around their lives.

In March 2006, I founded and became director of the Women's Headache Center at the Cambridge Health Alliance in Cambridge, Massachusetts, a teaching hospital for Harvard Medical School. The centre is one of the first clinics of its kind in the world, designed by female patients who suffer from migraines and other headaches to meet their special needs and requests. We offer medical treatment through two staff neurologists and a psychiatrist, as well as a full complement of other services including migraine support groups, a biofeedback specialist, a nutritionist, and a broad menu of assistance designed to help our patients reach optimal health.

Within just a few days of opening, the Headache Center was swamped with new patients, and emails and phone calls came from migraineurs all over the country. One woman flew from Philadelphia to meet with me, another called from Florida. I've had phone calls from overseas as well. Clearly, millions of people desperately want relief from migraine but can't find the help they need.

For centuries, migraine has been a poorly understood disease, of interest only to a narrow segment of the medical community. But in the past ten years, a revolution has taken place. Migraine is now one of the hottest medical issues, and it is of growing interest to researchers, doctors, and laypeople. Today, numerous studies in hospital and research facilities around the world are investigating a wide range of topics related to migraine. Neurology and other medical journals are publishing news about migraine in every issue, almost every week. After decades of no progress, the explosion of information about migraine is unprecedented, exciting, and hopeful, with new treatments on the horizon for migraineurs.

In this book, I and my co-author, Elaine McArdle—also a longtime migraineur—have gathered the information and tools you need from the most up-to-date, credible sources. We include all the latest and best data about migraine—cutting-edge information you won't find in any other book. We draw on groundbreaking research that demonstrates, for the first time in history, that the Migraine Brain really is different—and we explain what that means for you. We discuss the biochemical basis for migraine, the influence of hormones, and the newest drugs and other treatments, and why they work. We address every aspect of migraine about which you need to know in order to lead a healthier, happier life.

In the last fifteen years, new medications developed just for migraine

have revolutionized treatment, bringing unprecedented relief to most people who try them. Yet only a small percentage of migraineurs are using these medications. While some people may not want to use drugs—a personal choice we understand and support—this statistic suggests a more challenging problem: most migraineurs simply aren’t getting the most up-to-date information about their disease. Most migraineurs have never been offered the option of trying these drugs, which have the potential to change their lives. Meanwhile, a whole host of complementary and alternative medical treatments—including biofeedback, ice massage, yoga, and acupuncture—have been shown to help, but most migraineurs know nothing about these options, either.

For years, my patients have been asking me to write a book that shares the latest research about migraine and explains the newest and best treatments—and that also lets patients share their stories of migraine success.

That’s what’s here in *The Migraine Brain*.

I love my work as a physician. I’m in a unique position to help patients understand their bodies and lead healthier, happier lives. There is a wonderful, positive energy between me and each person I take care of, a powerful relationship built on mutual respect and trust. My most important role is as a careful listener and clear thinker. When patients tell me their stories, I pay close attention to each detail so I can understand them in the full context of their lives. Then I think creatively, scientifically, and sympathetically to help them create a treatment plan that will work for them. My patients and I truly are partners in their health care.

In the same way, *The Migraine Brain* is creating a partnership with you. You and I are going to face every aspect of your migraine disability. We’ll address each facet of your life—your family, job, healthy history, personal goals—to devise an individualized treatment approach that works for your body, your personality, and your lifestyle. No two people are alike when it comes to migraine, and what works for your friend or neighbour probably won’t work for you. It may take trial and error to find the right mix of treatments for you, but I am certain that, with some time and thought, you can feel much, much better.

Beware of anyone who promises you a “migraine cure.” Migraine isn’t curable—not yet. I can’t promise you that you’ll never have another migraine. But migraine is a treatable disease. Most of my

patients see a significant, measurable increase in their well-being when they follow their treatment plan. Through a healthy lifestyle—regular exercise, not smoking, regular and healthy meals, enough sleep—you, too, can reduce the number of attacks you get. And, on those occasions when you do get a migraine, despite your best efforts to avoid it, there are still plenty of things you can do to minimize the pain and disability—even stop the attack in its tracks. With the right approach, you can lead a much happier, healthier life with fewer migraines and much less pain.

I want you to realize that you are not alone. Until very recently, we migraineurs tended to suffer in silence because we often felt we weren't taken seriously—except by each other. In the company of other migraineurs, we got the understanding we needed. We empathized with each other, and shared migraine stories and advice on how to fend off an attack. *The Migraine Brain's* stories from your fellow migraineurs show just how widespread this illness is, yet how differently it presents itself in each person. These stories—some funny, some heartbreaking—also highlight our many examples of success, to show you that you, too, can see significant improvement.

For the first time in history, our disability is emerging from the shadows and starting to get the attention it deserves. Many athletes, artists, and celebrities get migraines including NFL giants Terrell Davis and Troy Aikman, tennis great Serena Williams, basketball superstar Kareem Abdul-Jabbar, and baseball stars Jon Papelbon and Johnny Damon; actors Ben Affleck and Whoopi Goldberg; musicians Loretta Lynn, Carly Simon, and Jeff Tweedy. As they step forward to discuss migraine in their lives, they raise public awareness and dispel myths and misunderstandings. We hope you will share this book with your family and others in your life. We want your loved ones, co-workers, and the general public to understand what migraine is—and what it isn't.

Six million people in the United Kingdom get migraines. Almost half have never been diagnosed with migraine, and another 25 percent have been misdiagnosed with other ailments.

I've continued to get an occasional migraine over the past twenty years. Sometimes I've ended up lying on the floor of my office, so sick I'm unable to move. But today, with the option of many new treatments and a commitment to a healthy lifestyle, I've reduced the number of headaches I get. I know what I can do to make them less likely to happen, and how to treat

them when they come—so I can enjoy my life. That’s my hope for you, too. While migraines aren’t something you can completely avoid, you’re not going to let them run your life, either.

We’re in this together. And together, we can all lead happier, healthier lives.

Our Migraine Mantras

- Migraine is a treatable illness—you *can* feel much better.
- You have a right to make your health a priority.
- Controlling migraines is 50 percent education and 50 percent treatment.

Three keys to keeping migraines at bay:

- **Prevent** them by making sure you do not set off the chemical reaction that leads to an attack. This means making your health a priority, and identifying and avoiding your personal migraine triggers.
- **Abort** them when they get started. You’ll learn how to halt a migraine in its tracks when you feel one coming on—before you get sick.
- **Rescue** the situation: When you aren’t able to prevent or abort a migraine, you can still reduce the severity of the pain, and the length of your attack.

Migraine Quiz

Before you read *The Migraine Brain*, take this quiz to see how much you know about migraine.

True or False?

1. Migraine is just a type of headache.
2. People with migraines have a low pain tolerance.
3. Migraine can be fatal.
4. Migraine attacks include weird visual changes like flashing lights before your eyes.
5. People with migraines are more likely to be depressed.
6. Migraine attacks tend to peak when you’re in your thirties and forties.
7. Chocolate, red wine, and bananas cause migraines.

8. Women get migraines more than men.
9. Children rarely get migraines.
10. Migraine pain is always felt on only one side of the head.

Answers

1. Migraine is just a type of headache.

False. This is the single biggest misunderstanding about migraine. Migraine is a neurological illness caused by an abnormality in your brain chemistry. A migraine attack almost always includes at least several physical reactions, sometimes dozens of symptoms. Headache is just one of migraine's many possible symptoms.

2. People with migraines have a low pain tolerance.

False. Actually, studies show that people with migraine develop a very high pain tolerance since the head pain is typically severe and they learn to function despite it.

3. Migraine can be fatal.

False. Migraine usually is a benign illness: once the migraine attack is over, the symptoms go away and there's normally no lasting medical effect. But migraineurs often are so sick they feel like they're dying: 75 percent report the pain as severe to extremely severe. This is how one patient describes her attacks: "Imagine the worst seasickness you've ever had, with violent vomiting and then endless dry heaves. And horrible pain in your head, like an iron pole being thrust in and out of your eyeball with each beat of your heart."

4. Migraines attacks include weird visual changes like flashing lights before your eyes.

Not for everyone. Fewer than 20 percent of migraineurs get visual changes during a migraine attack.

5. People with migraines are more likely to be depressed.

True. People with migraines have a higher incidence of depression. Even between migraine attacks, they report a lower quality of life than people with diabetes, hypertension, osteoarthritis, or asthma. The more migraine attacks they get, the lower their sense of well-being.

6. Migraine attacks tend to peak when you’re in your thirties and forties.

True—sort of. For many people, migraine attacks typically peak when they’re in their thirties and forties, just when life is at its most demanding—when you’re juggling work, kids, aging parents, and finances.

But here’s an important rule about migraines: there aren’t many rules. Each person’s migraine profile is different in its symptoms, triggers, and the treatments that work, as well as the point during his or her life span when migraines are at their worst. Most women patients begin getting migraines around the time of puberty, but I have patients who never got migraines until they were in their fifties or older. Others got migraines as children that went away when they reached their teens.

7. Chocolate, red wine, and bananas cause migraine attacks.

False. First of all, foods or other factors don’t cause migraines—abnormal brain chemistry causes migraines. But for some people, certain foods can set off or trigger that abnormal brain chemistry. This is true of only a minority of people, however, recent research shows. The foods—if any—that trigger migraines vary from one person to the next.

8. Women get more migraines than men.

True—by a 3 to 1 ratio. While some of this has to do with women’s menstrual cycles, a new study out of UCLA suggests that women’s brains may be more susceptible to excitation—meaning they react more easily to stimuli—than men’s brains, leading to the chemical chain reaction believed to cause migraines.

9. Children rarely get migraines.

False. One in twenty primary school children gets migraines (although they may get what we call “abdominal migraines,” which are stomachaches without any headache), and 15 percent of high school students get them.

10. Migraine pain is always on one side of the head only.

False. For most people, migraine headaches are usually felt on

one side of the head, but this isn't true for everyone. Some feel pain on both sides of the face or head, or on the top of their heads, or in the back of the head or neck.

We hope these facts dispelled some common migraine myths you may have heard. Many new studies show that a variety of factors—including sleep, gender, exercise, and serotonin levels in your brain—affect the brain's susceptibility to migraines.

In *The Migraine Brain*, you'll find the latest, most important information and advice—everything you need to feel better and keep your migraines at bay.