MARTIN BRINK

THE MIGRAINE REVOLUTION

Highly controversial, shockingly honest and utterly rebellious!

Scientific Guide to Effective Treatment and Permanent Headache Relief

WHAT THE CURRENT REGIME DOES NOT WANT YOUR BRAIN TO KNOW

With more than 1,600 scientific references, more than 300 graphs and pictures, and many awesome contributions from the world's leading migraine clinicians

Martin Brink

THE MIGRAINE REVOLUTION:

"WE CAN END THE TYRANNY!"

Scientific Guide to Effective Treatment
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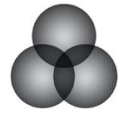
(WHAT THE CURRENT REGIME DOES NOT WANT YOUR BRAIN TO KNOW)



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Dedication

This book is dedicated to all those fed up migraine sufferers who have been waiting for this book; to the despairing ones who will feel encouraged to take their destiny into their own hands; and to the determined ones who can recognize this as their opportunity to finally end their migraine tyranny.

In order to make future editions even more better, I'm asking for your kind help. Please fill out the Reader's Feedback form on the book's website www.TheMigraineRevolution.com. Also, join TheMigraineRevolution yahoo group to share your experiences and benefit from the support of a rebellious community.

Acknowledgements

I'd like to take this opportunity to express my gratitude to all who've contributed to this book in one way or another. Names that spring to mind are (in alphabetical order):

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This book wouldn't have been possible without the work of countless researchers in the fields of medicine, pharmacology, genetics, physiology, psychology and neuroscience; and it wouldn't be the same without the many marvellous painters whose timeless works of art I've snatched from past centuries and incorporated.

A big thanks to the German company Brain Products who donated one of their top notch EEG signal acquisition systems. I'm deeply indebted to my publisher, editor and graphic artist ☺, but my most special thanks goes to my wonderful wife, who forced me to write this book and looked after everything else: Gosh, I love you.

"But what we call our despair is often
only the painful eagerness of unfed hope."

George Eliot

Table of Contents

Warning

This Book is Not for Everyone!

"There is always a well-known solution to every human problem –
neat, plausible, and wrong."

H. L. Mencken

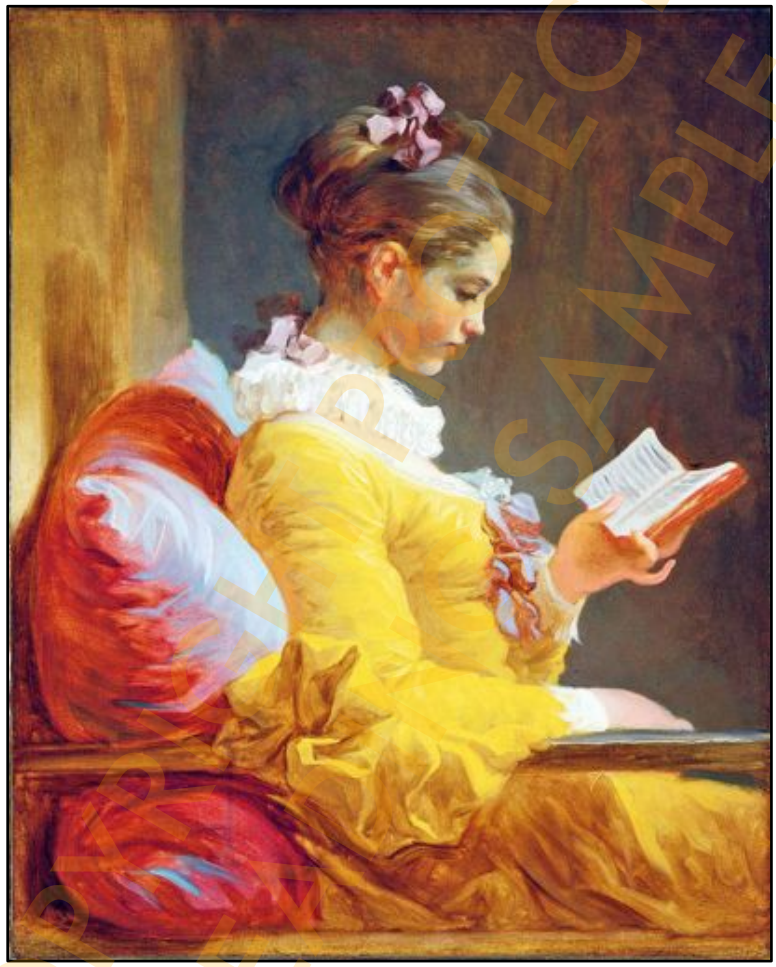
3 steps to beat an incurable disease?

If you or a loved one suffer from severe migraine attacks and you are looking for a booklet about the "*Easy 3-Step-Breakthrough-Self-Help-Program*", which gives you a neat and plausible explanation for *headaches*, lists some catchy instructions as to which foods to avoid and promises to solve your entire *headache*-problem in one fell swoop, then this is not the right book for you. Whilst head pain is a common symptom during attacks, migraine is not "*just a headache*", at least not for us. Good news, booklets like that do exist!

Severe migraine is a serious problem that needs a savvy approach to make matters better, not worse. This is a sincere book that offers the interested reader a comprehensive, comprehensible, constructive, helpful and occasionally humorous, science-based *migraine education*. It thereby empowers the fed up sufferer with the deep understanding necessary to end the migraine tyranny.

Prerequisites are the ability to *read* and *understand* sentences with more than three words, a minimal amount of *healthy common sense* and openness to the possibility that positive statements might sometimes actually be true. The Dark Lords from the cult of hopelessness, who love dismissing anything that is different from their attitude of doom and gloom, will not enjoy this book.

If you firmly hold and cherish the unshakable conviction that **"MIGRAINE IS A GENETIC NEUROLOGICAL DISEASE THAT CAN'T BE CURED"**, then you may find this book very disconcerting and I advise against reading it.



Foreword

Are You Ready for the Migraine Revolution?

"Enlighten the people generally,
and tyranny and oppressions of body and mind will vanish
like evil spirits at the dawn of day."
Thomas Jefferson

What's the best way to deal with a bomb in the house?

A) Get rid of the bomb!
B) Use a fire extinguisher once the bomb goes off and starts a decent fire.

If you have your answer, **what would a sales rep for fire extinguishers say?**

Migraine attacks are a bit like explosions in the head. So it is no surprise that the sales reps from the medical industry do their very best to make sufferers believe that 'fire-extinguishers' (= meds for the 'attack-explosion') are the best available solution.

In order to get away with this obvious nonsense, the pharma-medical propaganda-machine has caught millions of migraineurs in a trap, made of lies and misleading misinformation. For example, they speak of the attack symptom 'head pain' as "*migraines*" to imply that migraine is *just a bad headache* and you're best off with medication. Not a bad solution for very rare "*migraines*"; just like fire-extinguishers are quite okay for infrequent explosions.

Yet, three quarters of migraineurs have at least one 'explosion' per month, 15% have more than one attack per week and are helplessly caught in the propaganda-trap of the current regime:

"MIGRAINE IS AN INCURABLE GENETIC HEADACHE-DISEASE CAUSED BY SWELLING AND INFLAMMATION OF BLOOD VESSELS AROUND YOUR HEAD"

In other words: **"THERE IS NOTHING THAT YOU CAN DO ABOUT THE EXPLOSIONS IN YOUR HEAD OTHER THAN BUYING PLENTY OF FIRE-EXTINGUISHERS."**

Isn't that pretty much exactly what we would expect from the sales reps for fire-extinguishers? We'd say the same in their shoes.

As a result three quarters of migraineurs worry that they'll have to put up with **"MIGRAINE DISEASE"** and its consequences for the rest of their lives.[1] From a sufferer's perspective, three aspects make this grim prognosis unbearable:[2]

- "*Being besieged by the attacks*" describes the experience of vulnerability, incapacitation and loss of control of one's life as well as the embarrassment and sadness about the isolation from others.
- "*Struggling in a life characterized by uncertainty*" refers to having to live in a state of constant alertness and readiness as well as dissatisfaction with and worry about medication.
- "*Living with an invisible illness*" expresses the fear of not being believed, of not being recognized as truly suffering, of exaggerating a mere headache as well as feelings of shame and guilt.

The intention of this book is to give migraineurs and their families, but also interested doctors and therapists, a very thorough and goal-oriented *migraine education*: The complete and current, science-based knowledge to gain the deep understanding necessary to pursue answer A ("Get rid of the bomb!") enabling the reader to eventually end the migraine tyranny.

However, knowing how much hurt, disappointment and frustration most long-term migraineurs have experienced, I find it crucial to emphasize that this is *not* a catalogue of *miracle cures for everyone*. Attentive and diligent 'students' will benefit tremendously and find their way out, others will complain that three chapters into the book they still have "migraines": **"IT DIDN'T DO MUCH TO ME."**

I very strongly recommend reading this book from front to back and rather skim-read boring bits than jumping back and forth. Later chapters build upon the info and insights from earlier parts, not dissimilar to a *self-study course* with lessons (but more fun!).

Despite the many scientific references, the style is mostly conversational and deliberately colloquial. This book is also very *international*; written in Australia with German precision in American spelling and British-inspired, anarchic punctuation on an iMac built in China. Have fun and make the most of it!

Martin Brink, Queensland

[1] Harris Interactive online poll, cited in Brandes JL "The Migraine Cycle: Patient Burden of Migraine During and Between Migraine Attacks" Headache 2008;48:430-441

[2] Rutberg S et al "Migraine--more than a headache: women's experiences of living with migraine" Disabil Rehabil 2012;34(4):329-36

Introduction

The Tyranny: Suffering from Migraine

"No greater burden can be borne by an individual than to know:
no one cares or understands."

Arthur H. Stainback

Migraine is a cruel tyrant. The people under his volatile rule periodically experience excruciating head pain (agony) in combination with dreadful nausea (misery) and extreme revulsion at the relentless persecution and invasion by the outer world in the form of glare, noise and odor (assault).[1]

It's this unique combination of agony *and* misery *and* assault that rattles the Self, the core of one's being, the innermost center of spirit and soul, creating a sense of torture and defeat. And so migraineurs withdraw from life during an attack and hide in a quiet dark room, like a wounded animal in a cave.

Between the torturous episodes, patients are shaken by the latest attack and tormented by the primal fear of the next ride to hell.[2] They feel vulnerable and abandoned for not getting the protection they beg for. This lack of care makes them feel undeserving and unworthy.[3]

On top of that they struggle with shame and guilt, for being a disappointment to their children, for being a burden to their partner and for being unreliable and unproductive at work. In essence, they feel like a failed version of the person they want to be and could have been.[4] If only …

[1] Rutberg S et al "Migraine – more than a headache: Women's experiences of living with migraine" Disabil Rehabil 2012;34(4):329–336
[2] Freitag FG "The cycle of migraine: patients' quality of life during and between migraine attacks" Clin Ther 2007;29(5):939-49
[3] Leiper et al. 'Experiences and perceptions of people with headache: a qualitative study' BMC Fam Pract 2006; 7:27
[4] Cottrell et al. 'Perceptions and Needs of Patients with Migraine: A Focus Study Group' J Fam Pract 2002; 51(2): 142-147

And then there is the intolerable horror of feeling not understood, of being a nuisance, a spoilsport, a party pooper, a drama queen, a nutcase with hysteria or a whining malingerer; partly unwanted and somehow outcast.[1]

But the really sour icing on this bitter cake, adding insult to injury, is the hurt and humiliation caused by words that pierce the heart like a dagger, fuel resentment and fury and add something extra to the already callous burden.

It's the merciless abuse by dismissive words like:
"*You're exaggerating. It's just a headache. You'll have to live with it.*"

[1] Rutberg S et al "Migraine – more than a headache: Women's experiences of living with migraine" Disabil Rehabil 2012;34(4):329–336

Part I:

The Current Regime

Chapter 1

The Many Faces of Migraine

"Suffering is one very long moment. We cannot divide it by seasons."

Oscar Wilde

Patients typically experience two distinct phases of migraine: the *suffering during* the attacks and the *worrying between* the attacks. Considering the unpredictable timing of the onslaughts and the varying vulnerability to normally benign components of life—like sleep, meals, weather and moderate stress—who wouldn't worry about the question: "When will the next one strike?"

Nevertheless, clinical descriptions of migraine typically refer to *the attack only*, which can be divided into four phases, similar to those of epileptic seizures. As is the case in epilepsy, not all patients experience a *complete attack* with all four phases (or five, if you count the unease of the interval).

The premonitory phase or prodrome

About 60% of migraineurs display some of the suspicious clues of an oncoming attack:

- Changes in *mood*: irritability, depression or euphoria
- *Cognitive* changes: slow thinking, difficulty concentrating
- *Speech*: reduced fluency, low motivation to talk
- Impaired *self-control*: restlessness, hyperactivity, impulsivity
- Reduced *alertness*: tiredness, fatigue, drowsiness
- Changes in *appetite*: food cravings (esp. sweets and other carbs), increased or decreased appetite
- *Water* balance: thirst and/or polyuria (= peeing a lot)
- *Digestion*: constipation or diarrhea
- Body *temperature*: feeling chilly or hot, clammy or sweaty
- Muscle *coordination*: stiffness (esp. stiff neck), clumsiness
- Aches and *pains*: neck pain, shoulder pain, back pain
- *Sensory* system: photophobia, phonophobia, osmophobia (= intolerance of light, sound or smell)

Feeling tired (72%), difficulty concentrating (51%) and stiff neck (50%) are the most common prodromal symptoms.

Most migraineurs recognize prodromal symptoms and so correctly *predict* the imminent attack. Some can even *feel* the attack coming, whereas others don't notice anything until other people tell them that they're different.

The range of strange alterations of brain function is reminiscent of a stroke or a sprawling brain tumor, presenting like a transitory selection from an encyclopedia of neurology.[1] Quite peculiar is that some symptoms can even show opposite expressions, e.g. euphoria or depression, diarrhea or constipation, unrest or fatigue. It is *characteristic* of migraine that the symptoms not only occur in puzzling diversity, but also vary greatly between patients and between individual attacks in quality, intensity and duration.

The aura phase

Only about one third of migraineurs experience an aura, typically on the last stretch before the headache phase. Of those patients some have an aura sometimes, very few have one with every attack. The symptoms tend to develop slowly over 5 to 20 minutes and last up to an hour.

- Visual aura is the most common form and consists either of *visual hallucinations* (e.g. bright dots, zigzag lines, flashes, oscillating patterns and so forth) or of *disturbances of the visual field itself* (e.g. blurred or tunnel vision, blind spots, holes and the like). One or both sides may be affected.
- Somatosensory aura refers to the perception of *tingling* or *numbness*, typically beginning in one hand or in the face.
- Motor aura means *weakness* or *paralysis* of muscles.
- Olfactory aura is the term for the illusion of *smelling* scents and odors that aren't actually there.
- Auditory aura is *hallucinations* of various *sounds* or noise.
- Speech can be affected big time and that includes difficulty *finding* and *saying* words as well as language *comprehension*.

More common in children than in adults is the *Alice-in-Wonderland* syndrome, which describes curious distortions of one's own body image, sense of space and time, and of all other sensory channels (= senses: vision, hearing …).

[1] Sacks OW "Migraine" First Vintage Books Edition 1999 New York, page xvii

The headache phase

The gradual onset of the headache marks the beginning of the most dreaded part of an attack for most sufferers.

- 85% get hammered by a throbbing head pain of moderate to very severe intensity which usually gets worse with movement and activity, in 60% it's the typical unilateral (one-sided) pain, 25% have it on both sides of the head (bilateral), untypical, yet common
- 80% can't stand bright light (photophobia)
- 70-90% feel extra-miserable due to nausea
- 30% enjoy the ambiguous pleasure of vomiting, some have diarrhea

Other common symptoms are dizziness, phonophobia (= noise intolerance), osmophobia (= odor intolerance), stuffed or runny nose, teary eyes, allodynia (= even light touch is painful), chills and hot flashes, dehydration or fluid retention, mental confusion and any form of emotional turmoil up to panic attacks.

Another symptom is very common, but rarely mentioned as such: the *social withdrawal* and wish to be alone, which is partly understandable, given the presenting symptoms, but still not fully explained. One could still wish for silent company in the quiet, dark room; but migraineurs typically seek solitude.

The headache phase lasts from a few hours up to three days. After that it's called *status migrainosus* (= migraine state) and warrants hospital admission.

Interestingly, headache does *not* occur in 15% of attacks. So, considering the numbers, you could also call it the *nausea phase*.

The postdrome

Most migraineurs experience a decent 'hangover' after the headache is gone and this may last for days.

- Energy: feeling tired, washed-out and lethargic
- Mood: depression, irritability
- Cognition: impaired concentration and comprehension
- Pain: scalp tenderness, feeling sore

There are suspicions that these so-called postdromal symptoms are not true attack symptoms, but indeed a hangover and mainly caused by migraine medication.

Interesting to note that, once nausea and headache are gone, some migraineurs feel …

- refreshed, renewed, alert, even euphoric. This condition of miraculous recovery may well be the natural state after or even the purpose of a migraine attack.[1]

The interictal phase

'Ictus' is the medical term for attack and is used for epileptic seizures and migraine attacks; so the 'interictal phase' or 'interictum' is simply the period *between* attacks.

Many people—including many doctors—erroneously believe that once the headache is gone, migraineurs are symptom-free. Unfortunately that is not the case. The majority of patients feel that they don't even recover from the attacks completely.[2]

Migraineurs usually experience more symptoms and greater emotional distress than non-migraineurs, as well as disturbed contentment, vitality and sleep in the interictal phase.[3]

One major factor of emotional distress for many is the worry about the next attack, which is an expression of the understandable *conscious fear* and apprehension.[4] Besides, it is reasonable to assume that every patient with recurrent nasty symptoms is also under *unconscious* distress due to the uncertainty of the next flare-up.[5]

Surprisingly many migraineurs negate vehemently being even the slightest bit emotionally distressed, which is in stark and obvious contrast to the emotional charge with which this denial is normally expressed:[6] **"I'M NOT DISTRESSED AT ALL!"**

This contradiction indicates that many migraineurs are deeply concerned that, if they admitted their emotional tension, they might get classified as a 'psychological' case with all its awkward implications. It is appalling that many people—including doctors—still equate 'psychological' with 'not real' or 'fake' or even 'nuts'.

---

[1] Sacks OW "Migraine" First Vintage Books Edition 1999 New York, page 8 and page 202
[2] Buse DC "Assessing and Managing All Aspects of Migraine: Migraine Attacks, Migraine-Related Functional Impairment, Common Comorbidities, and Quality of Life" Mayo Clin Proc 2009;84(5):422-435
[3] Dahlöf CG et al. "Migraine patients experience poorer subjective well-being/quality of life even between attacks" Cephalalgia 1995;15:31-36
[4] "New survey reveals worrying between attacks can extend suffering for migraineurs" (press release) Titusville, NJ: Ortho-McNeill; June 8, 2006
[5] Brosschot JF "Daily worry is related to low heart rate variability during waking and the subsequent nocturnal sleep period" Int J Psychophysiol. 2007;63(1):39-47
[6] Cottrell et al. 'Perceptions and Needs of Patients with Migraine: A Focus Study Group' J Fam Pract 2002; 51(2): 142-147

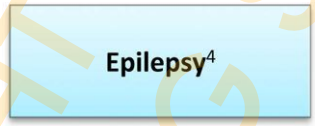
Migraine and comorbidities

'Morbus' is the Latin word for ailment; 'co' means with, so a 'co-morbidity' is an *ailment that comes with*. There are quite a few ailments that tend to come with migraine, meaning that they occur *more frequently in migraineurs than in non-migraineurs*. That implies that migraine and the comorbidity are somehow related through a variety of possible mechanisms.[1]

One of those mechanisms is, that migraine can lead to the comorbid condition, as is the case for these:

Tension-type headache and migraine officially are separate diagnostic categories, but in reality rather form a continuous spectrum of symptoms including head pain.[3]

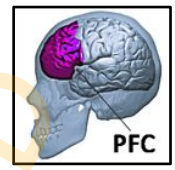
Another explanation why a condition is comorbid with migraine is, that both are 'brain-instabilities':[4]



Based on the similarity of electrical events in the brain, migraine attacks are also considered as 'non-epileptic seizures' and some forms of migraine have epilepsy-like characteristics.[5]

Epilepsy and migraine are often connected with too much 'excitement' in certain layers of brain cells.[6] And when the brain is too excited, the mind also gets revved up and we experience …

[1] Scher AI et al "Comorbidity of migraine" Curr Opin Neurol 2005;18:305–310
[2] Russel MB "Genetics of tension-type headaches" J Headache Pain 2007; 8(2): 71–76
[3] Cady RK "The Convergence Hypothesis" Heache 2007;47 Suppl 1:544-551
[4] Bigal ME et al "Epilepsy and migraine" Epilepsy Behav. 2003;4 Suppl 2:S13-24.
[5] Carreño M "Recognition of Nonepileptic Events: Migraine" Semin Neurol. 2008;28(3):297-304
[6] Lipton RB et al. "Comorbidity of migraine: the connection between migraine and epilepsy" Neurology. 1994;44(10 Suppl 7):S28-32
[7] Sevillano-García MD et al "Comorbidity in the migraine: depression, anxiety, stress and insomnia" Rev Neurol. 2007;45(7):400-5
[8] Vgontzas A et al "Are sleep difficulties associated with migraine attributable to anxiety and depression?" Headache 2008;48(10):1451-9



Another mechanism linking migraine to a whole group of mood disorders is a common 'weakness' in a chief brain area, the prefrontal cortex (PFC), which I'll discuss later in this book. With a 'weak' PFC migraineurs have a higher statistical 'risk' (= chance) than non-migraineurs to also suffer from a mood disorder:

Major Depression: 3-fold risk[1]	**Bipolar Disorder:** 5-fold risk[2]	**Panic Disorder:** 4-fold risk[3]
General Anxiety Disorder: 5-fold risk[4]	**Agoraphobia:** 2.4-fold risk[5]	**Social Phobia:** 3.4-fold risk[5]

'Agora' is the Greek word for marketplace and agoraphobics were thought to be afraid of open spaces. Now we know that many patients with anxiety disorders avoid certain locations, where they fear they will have anxious or panicky feelings and this behavior of *experiential avoidance* is called agoraphobia.[6]

Now you might think: **"Okay, I have migraine, but I don't have depression or panic disorder. So these statistical risks have nothing to do with me."** That is a clever thought, but unfortunately what hasn't happened yet, can still happen:

new onset of depression 5.8-fold risk[7]	**new onset of panic disorder** 3.5-fold risk[8]

Migraineurs are not only at a higher statistical risk of *having* depression or panic disorder; they are also at a higher risk of *developing* depression or panic disorder during the course of their migraine odyssey.

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[1] Breslau N et al "Migraine and major depression: a longitudinal study" Headache. 1994;34(7):387-93.
[2] Breslau N et al "Migraine, psychiatric disorders, and suicide attempts: an epidemiologic study of young adults" Psychiatry Res. 1991;37(1):11-23
[3] Breslau N et al "Headache types and panic disorder: directionality and specificity" Neurology. 2001;56(3):350-4
[4] McWilliams et al "Depression and anxiety associated with three pain conditions: results from a nationally representative sample" Pain 2004;111(1-2):77-83
[5] Merikangas KR "Migraine and psychopathology. Results of the Zurich cohort study of young adults" *Arch. Gen. Psychiatry* 1990;47: 849–853
[6] Wittchen HU et al "Agoraphobia and panic. Prospective-longitudinal relations suggest a rethinking of diagnostic concepts" Psychother Psychosom. 2008;77(3):147-57
[7] Breslau N et al "Comorbidity of migraine and depression: investigating potential etiology and prognosis" Neurology 2003;60(8):1308-12
[8] Breslau N et al "Headache types and panic disorder: directionality and specificity" Neurology 2001;56(3):350-4

Especially migraine and depression have a close relationship, each disorder increasing the likelihood of developing the other one. And if you think **"Of course you get depressed with frequent headaches"**, think again: Patients with tension-type headaches do *not* have the same risk of developing depression as migraineurs.[1] This confirms that one of the underlying mechanisms of migraine is also involved in depression: a functional deficit in the prefrontal cortex (PFC), a crucial brain area behind the forehead. Who would have thought.

In the horrible state of major depression one might wish to "end it all", and in the absence of promising alternatives and driven by feelings of *hopelessness*, two sad steps can become tempting: contemplating suicide and actually doing it. Especially migraineurs with aura carry a higher risk of taking those two sad steps:

Please note that these numbers are adjusted for depression, substance abuse and other psychiatric disorders that could explain the wish to die; this is the (statistical) effect of migraine only.

Sure, it is unpleasant to write and read about suicide, but we can't close our eyes to the fact that 23% of migraine kids with aura (13-15 years young) consider taking their own life.[3]

These shocking and awful figures should be sufficient evidence that the current treatment regime for migraine is completely unacceptable; it's simply not good enough; it's time for a migraine revolution. What do you reckon?

Another option for adult migraineurs is to wait and see what destiny has in store. These are the odds:[4]

The medical term for heart attack is 'myocardial infarction': heart muscle cells die due to blocked coronary blood flow.

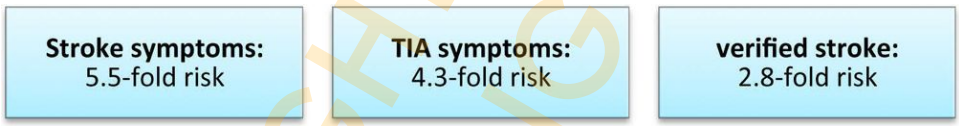
[1] Breslau N et al "Comorbidity of migraine and depression: investigating potential etiology and prognosis" Neurology 2003;60(8):1308-12
[2] Breslau N et al "Migraine, psychiatric disorders, and suicide attempts: an epidemiologic study of young adults" Psychiatry Res. 1991;37(1):11-23
[3] Wang SJ et al "Migraine and suicidal ideation in adolescents aged 13 to 15 years" Neurology. 2009;72(13):1146-52
[4] Bigal ME et al "Migraine and cardiovascular disease: a population-based study" Neurology. 2010;74(8):628-35

The well-known risk factors for cardiovascular diseases are also worse in migraineurs:[1]

Following the logic of cardiovascular risk factors, further trouble with perfusion has to be expected. What about the blood flow to the legs?

Claudication (= Latin for limping) is a disease of the peripheral arteries, a narrowing of the blood vessels, thereby restricting blood flow. Migraineurs have a 2.7 times higher risk *after* adjusting for other vascular factors. That's not good.

The brain also needs blood flow and, as expected, that is affected by migraine as well. Here are the numbers for migraineurs with aura:[2]



TIA stands for 'transient ischemic attack', which is a temporary lack of oxygen in the brain; a precursor to a proper stroke.

Even without an ischemic stroke, migraine causes various forms of brain damage. Numerous studies in recent years have consistently found:

[1] Bigal ME et al "Migraine and cardiovascular disease: a population-based study" Neurology 2010;74(8):628-35
[2] Stang PE et al "Headache, cerebrovascular symptoms, and stroke: the Artherosclerosis Risk in Communities Study" Neurology 2005;64(9):1573-7
[3] Valfré W "Voxel-based morphometry reveals grey matter abnormalities in migraine" Headache 2008;48(1):109-17
[4] Swartz RH "Migraine is associated with magnetic resonance imaging white matter abnormalities: a meta-analysis" Arch Neurol 2004;61(9):1366-8
[5] Kruit MC "Migraine is associated with an increased risk of deep white matter lesions, subclinical posterior circulation infarcts and brain iron accumulation: the population-based MRI CAMERA study" Cephalalgia 2010;30(2):129-36
[6] Tepper SJ et al "Iron deposition in pain-regulatory nuclei in episodic migraine and chronic daily headache by MRI" Headache 2012;52(2):236-43

This damage is visible in brain scans with different technologies and it gets worse with increasing migraine frequency and duration.[1] That urgently indicates that the migraine actually *causes* the abnormalities that were found. Researchers now highlight this long-term damage and call migraine a "*progressive brain disease*".[1]

One would think: **"That should be it, enough comorbidities and additional damage."** But wait, there is more. All these conditions are also more frequent in migraineurs:

- ADHD[2]
- Anger[3]
- Asthma[4]
- Atrial septal aneurysm[5]
- Back pain, chronic[6]
- Balance disorders[7]
- Bronchitis, chronic[8]
- Celiac disease[9]
- Cervical artery dissection[10]
- Chronic fatigue syndrome[11]
- Cognitive impairments[12]
- Endometriosis[13] / Menorrhagia[14]
- Enuresis (=bed-wetting, in children)[15]
- Excema (in children)[16]
- Fibromyalgia[17]
- Hay fever[8]
- Hostility[18]
- Impaired working memory[19]
- Irritable bowel syndrome[20]
- Kidney stone[21]
- Lupus erythematosus[22]
- Meniere's disease[23]

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We are not done yet. Here are a few more conditions that are comorbid or otherwise associated with migraine:

- Morbus Raynaud[1]
- Multiple sclerosis[2]
- Narcolepsy[3]
- Neck pain, chronic[4]
- Obesity[5]
- Obsessive compulsive symptoms[6]
- Oppositional defiant disorder[7]
- PTSD[8] / Persistent nightmares[9]
- Psoriasis[10]
- Restless leg syndrome[11]
- Rheumatoid arthritis[12]
- Rhinitis (in children)[13]
- Scleroderma[12]
- Sjögren's syndrome[12]
- Tinnitus[14]
- Tourette's syndrome[15]
- Tremor, essential[16]
- Vertigo[17]

This concludes the disconcerting overview of the co-morbidities of migraine. You can skip to the next chapter now, unless you are female and/or would like to have children. If that is the case, you might find the following interesting or concerning:

- Women with migraine experience more **severe nausea and vomiting** during pregnancy than pregnant non-migraineurs[18] and have a higher risk of:
- **short sleep** duration (1.6 x risk; if also overweight: 2.4 x)[19]
- excessive **sleepiness** (1.4 x risk; if also overweight: 2.3 x)[19]
- experiencing vital **exhaustion** (2 x risk; if also overweight: 2.8 x)[19]
- feeling more **distressed** (1.6 x risk; if also overweight: 2.6 x)[19]

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Pre-eclampsia is a pregnancy-induced high blood pressure condition with very serious risks for mother and fetus; eclampsia leads to convulsions and coma and has a high mortality rate.

Pregnant women with migraine are more likely than those without migraine …

- … to develop pre-eclampsia (2.3[1]- to 3.5[2]-fold risk)
- … to suffer a heart attack (2.1-fold risk)[1] or stroke (15-fold risk!)[1]

In other words, migraine is not good for pregnant women. But it is also pretty bad for the offspring. The risks are:

- placental abruption = tearing of the placenta (2.1-fold risk)[3]
- pre-term delivery = premature birth (3.5-fold risk)[4]
- poor intra-uterine growth = low birth weight (2[5] to 3-fold[6] risk)

Moreover, if the woman has severe migraine attacks during the first trimester, there is an increased risk of the child being born with a limb deficiency.[7] And even when all goes well: Children of migraineurs are twice as likely to have asthma.[8]

A promising solution for all these issues is marrying a male migraineur; they have up to twice the risk of *erectile dysfunction*![9]

Summary

- Many different *symptoms* can occur during a migraine attack; nausea, head and neck pain are the most common.
- Migraine has a bewildering number of *comorbidities*, covering all biological functions of the human body; problems with mood regulation (anxiety, depression) are the most prevalent.
- Migraine poses a threat to *mother and child*. Consider getting rid of it before becoming pregnant. Do your child that favor, please.
- **It is unacceptable to call an attack *"a migraine"* and thereby to imply that *"migraines"* are just bad headaches**. Analogue to *epilepsy*, *migraine* is the name of the condition, an episode is called *attack*. You wouldn't say **"I had an epilepsy last night"**, would you?

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Millions of tormented sufferers - enduring the **agony**, **misery** and **assault** of regular relentless migraine attacks - have become hopeless victims, targeted and enslaved by greedy pharmaceutical companies. Smug white-coated authorities **mislead** them into believing that migraine is an *"incurable genetic disease that causes swelling and inflammation of blood vessels around your head"* in order to seduce them to rely on medication and thereby boost **sales** and profit.

Desperate migraineurs have had **enough** of this terror regime. They want honest answers and real solutions. Understandably they've **lost** trust and hope, feel helpless and left alone with this **invisible** and **unpredictable** tyrant that nobody cares to understand, fearfully tip-toeing around potential 'triggers' and **worrying** that people think: "It's just a headache, barely real."

THE MIGRAINE REVOLUTION empowers the fed up reader not only with a comprehensive and **comprehensible** summary of the latest science, but also explains multiple **weapons** for body, mind and brain to **terminate** the tyrant's **terror**, backed by irrefutable evidence. The time has come for migraine sufferers to **arm** themselves with helpful knowledge and mutual support to **fight** the Migraine Revolution, to finally **break the chain** of suffering and pain. We can end the tyranny! **Are you with us?**

Topics: • Symptoms and Phases • Countless Comorbidities • Impact and Burden • Preventive, Abortive and Pain-Medication • PFO • Botox • Surgery • 'Trigger' Avoidance • Psychological Aspects • Common Difficulties • Misleading Myths • Disease versus Disorder • Neurobiology made easy • Treatment versus Rehabilitation • Sport and Exercise • Breathing • Relaxation • Diet and Nutrition • Herbs and Supplements • Sleep • Hormones • Trigger Points • Acupuncture • CBT • Schema Therapy • Resolving Trauma • Autogenic Training • Applied Psychophysiology • Applied Neuroscience/Neurotherapy • Coping with Change • Planning Rehabilitation • Getting Support

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