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# **Preface**

### Dear Reader,

Congratulations—and thank you for downloading this e-book. By doing so, you've invested not just in a few pages, **but in yourself, your health, and your well-being.** 

In today's fast-paced world—filled with processed foods, constant distractions, and chronic stress—we often lose sight of one essential truth: the deep connection between body, mind, and nutrition.

Many people feel tired, unmotivated, irritable, or just "off" without realizing that the root of their imbalance might be in their **gut**.

I'm not a doctor or a scientist. I'm a **certified epigenetics coach** with a mission: to make health understandable, practical, and truly holistic.

My goal is to break down the **complex relationships between the gut, the mind, cellular energy**, and nutrition—so you can not only understand them but also apply them in your everyday life

### This e-book is your entry point into a new perspective:

- How your gut talks to your brain—and why that connection matters
- Why your digestive system is far more than just a food processor
- What real food energy actually means—and how empty calories drain more than they fuel
- And what nucleotides are—the quiet cellular helpers that support regeneration, immunity, and vitality

You don't need to be a biologist to get value from this. But you do **need to stay curious**—and be willing to see your body not as the enemy, but as an **ally and a friend.** 

I invite you to take this journey—toward more energy, better digestion, stronger resilience, and a more conscious way of living.

Because real health begins from within—deep in your cells.

Warmly, **Marcel Schild** 

# Introduction

In a world full of obligations, digital distractions, and constant availability, one essential pillar of our health keeps slipping further into the background: **nutrition—not as a diet, dogma, or calorie count, but as true cellular nourishment.** 

Today, many people eat what's considered "healthy"—yet still feel tired, irritable, or emotionally drained. They struggle with digestive issues, mood swings, inflammation, or chronic fatigue. And the root cause often isn't just the food itself. It runs deeper—into the gut, the cells, the nervous system, and an overwhelmed metabolism.

We're lost in a jungle of nutrition trends: Low carb, keto, vegan, paleo, superfoods, detox, diet culture—what's praised as healthy today is often dismissed tomorrow.

### Many feel confused:

### What's actually good for me?

What's truly healthy, and what's just a trend? And why do so many people feel sick, depleted, or off-balance—despite "clean eating"?

# This e-book aims to help you find clarity.

Because nutrition isn't just about fueling your body—it's communication.

Between your **gut** and your **brain**.

Between your **cells** and your **environment**.

Between your microbiome, immune system, and mood.

You're not just what you eat— You are what you can digest, absorb, and transform into cellular energy.

### What you'll discover in this e-book:

This e-book takes you on a clear yet deep journey through four key layers of modern nutrition:

#### 1. Mind & Gut

How your emotional state and digestion constantly affect each other—and why your gut is more than a digestive organ.

#### 2. The Gut & Microbiome

How trillions of bacteria shape your health, mood, and even your gene expression.

### 3. The Underestimated Power of Digestion

Why eating "healthy" isn't enough—and how your body's ability to absorb and use nutrients makes all the difference.

### 4. Beyond Calories

What real food energy means—and what you should know about light energy, cellular health, and natural nutrition.

### 5. Eat for a Stronger Immune System

How conscious nutrition can support your immune defenses—naturally and powerfully.

### 6. Nucleotides – The Forgotten Nutrients

What these humble molecules do for your body—from DNA repair to immune response, regeneration, and healthy aging.

### Your Body Isn't a Machine - It's a Living System

Many health recommendations treat the human body like a machine:

Calories in, exercise out – done.

But your body is far more than that.

It's a finely tuned ecosystem, constantly communicating with light, food, emotions, environmental cues, and your genes.

- Your gut isn't just a digestion tube. It's the command center of your immune system – and a powerful emotional regulator.
- Your microbiome produces messengers like serotonin and GABA – directly shaping how you feel, think, and sleep.
- Your digestion determines whether even the healthiest foods are healing or harmful to you.
- Your cells need more than just vitamins they require structural components like nucleotides to regenerate, send signals, and produce energy.
- And your mental health isn't just shaped by thoughts it's also shaped by inflammation, gut health, and metabolic function.

### **Nutrition Is More Than Food**

### Real nourishment doesn't happen on your plate.

It starts with your choices, moves through your microbiome, takes shape in your digestion – and shows up in your energy, clarity, and quality of life.

### That's why this e-book isn't a meal plan.

It's an invitation to see nutrition through a deeper lens – as a bridge between biology, behavior, and self-care. No dogma. No pressure. Just insight, science, and practical tools

### By the end, you'll understand:

- How your gut and brain talk to each other every day
- How to support your digestion and microbiome intentionally
- Which foods actually give you energy beyond calories
- What nucleotides are and why they're among the most overlooked nutrients of our time
- And most importantly: How to create a way of eating that's smart, personal, and intuitive.

### Health Doesn't Come from Control – But from Connection

Connection to your body.
Connection to real food.
Connection to your inner balance.

If you're ready to rethink nutrition – not as a set of rules, but as a resource – then this e-book is for you.

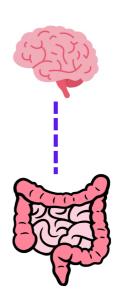
# Mind and Gut

# How Your Gut Affects Your Mood - and Vice Versa

You probably already know this: In the human body, everything is connected. We're not machines where a little "fuel" – like food and vitamins – is all it takes for things to run smoothly.

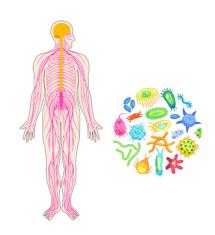
Our body is a highly coordinated network of systems that constantly influence each other.

For a long time, digestion was thought to be the stomach's job.
Today, we know: your **gut** is far more than a digestive organ.
It shapes **your mood**, **your thinking**, **your behavior** – and even your **genes**.



# The Gut-Brain Axis: A Two-Way Street

There's constant communication between your brain and your digestive system – a connection known as the **gut-brain axis**. And this isn't just metaphorical – it's biochemistry in action. Your gut sends signals to the brain, and the brain sends them back. This happens via nerve pathways (like the **vagus nerve**), hormones, messenger molecules, and even your gut bacteria – your **microbiome**.



Here's the surprising part:

Roughly **90% of the signals** in this communication flow come **from the gut** – and only **10% from the brain**.

No wonder scientists call the gut the "second brain".

# **How Bacteria Shape Your Emotions**

Inside your gut live billions of bacteria – the helpful microbes that make up your **microbiome**.

They don't just aid digestion. They also create crucial **metabolic substances** that affect your entire body – and especially your **mental state**.

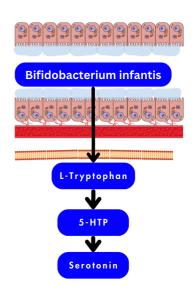
Some of these substances are **precursors for important neurotransmitters**, such as:

- Serotonin the "happiness hormone"
- Dopamine key for motivation and drive
- GABA your body's natural calming chemical

For example, a certain bacterium (**Bifidobacterium infantis**) produces the amino acid **L-tryptophan** – the building block of serotonin.

In fact, about 95% of your body's serotonin is made in the gut, not in the brain!

Even **GABA**, which helps reduce stress and anxiety, is partly



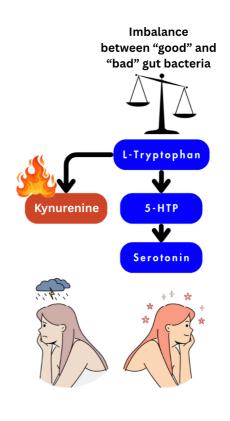
produced directly by gut bacteria.

# When Your Gut Microbiome Falls Out of Balance

So what happens when your gut microbiome gets thrown off—by stress, poor diet, or medication?
That's when a state of dysbiosis sets in—an imbalance between the "good" and "bad" bacteria in your gut.

And the effects can ripple through your entire body:

- Less tryptophan → less serotonin → low mood
- Less GABA → more stress, anxiety, and trouble sleeping
- More inflammatory compounds like kynurenine are produced



To make matters worse, **stress amplifies the problem**. When your body releases stress hormones like **norepinephrine**, your gut bacteria respond. Some of them stop doing their helpful jobs—and start producing harmful, **inflammation-triggering substances** instead.

Over time, this shift can contribute to:

- Depression
- Anxiety
- Brain fog
- Even chronic fatigue

# Gut Bacteria & Epigenetics: It's More Than Just Digestion

Your gut doesn't just break down food—it's directly connected to how your genes are expressed through a process called **epigenetic regulation**.

Some gut bacteria actually help convert dietary (**methyl-)folate** (vitamin B9) into a usable form your body needs for a process called the **methylation cycle**. And this cycle isn't just a side note in your biology—it's key for:

- Cell repair
- Neurotransmitter production
- Turning genes on or off (epigenetic regulation)

When your methylation cycle is **out of balance**, it can ripple into serious effects on both your mental and physical health—from mood disorders to chronic fatigue.

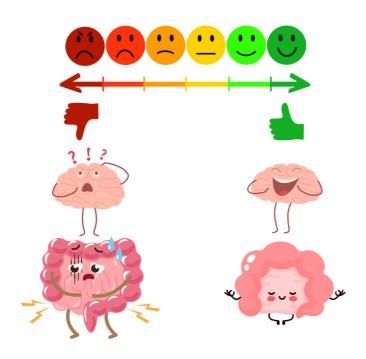


# Take Care of Your Gut - Your Mind Will Thank You

That "gut feeling" you've heard about? It's not just a saying—it's real biology.

When your gut is healthy, you can think more clearly, sleep more deeply, handle stress more effectively, and feel more emotionally balanced.

You don't need to be a gut health expert—but your "**second brain**" deserves more attention. Simple steps like nourishing foods, stress management, and targeted microbiome support can make a powerful difference in your energy, mood, and mental clarity.



# The Gut and Microbiome

Everyone's Talking About "Gut Feelings"—and for Good Reason What was once just a figure of speech is now backed by science: A healthy gut is the foundation of both physical and mental health.

And at the center of this complex system is something truly powerful: your **microbiome**.

### What Is the Microbiome?

Your microbiome is the vast community of microorganisms—bacteria, fungi, and other tiny life forms—that live in your gut. Over 100 trillion of these microscopic allies call your small and large intestines home—more than the number of cells in your entire body!

It's a true **symbiotic** relationship: You give them food and a place to live, they help you digest, support your immune system, and even produce crucial neurotransmitters.

And here's the amazing part: Your microbiome is as unique as your fingerprint. No one else has one exactly like yours.



# **Diversity Is Health**

A **diverse microbiome**—meaning many different types of beneficial bacteria—is one of the strongest signs of a healthy gut. Some of the most important players include:

- Lactobacilli
- Bifidobacteria

These good microbes help your body absorb nutrients, create vitamins, and maintain a strong gut barrier.

Even "bad" bacteria and yeast have a place—but only in small amounts. Trouble begins when this **balance is disrupted**, a condition known as dysbiosis.

# The Impact on Your Body and Mind

A healthy microbiome doesn't just support digestion—it's deeply involved in your overall health:

- It's a vital part of your immune system
- It produces B vitamins, amino acids, and precursors to neurotransmitters (like tryptophan → serotonin)
- It even plays a role in gene regulation through processes like methylation (involving folate and B12)

### **Bottom line:**

Your microbiome influences your mood, your energy, your immunity— and even how your genes express themselves.



# **How Does Your Microbiome Develop?**

Your microbiome starts forming even **before birth**—and the way you're born and fed early in life plays a major role:

- Vaginal birth → exposure to the mother's vaginal flora + skin-to-skin contact → supports a rich, healthy bacterial diversity
- C-section birth → higher risk of an imbalanced microbiome (e.g., more Clostridia, fewer Bifidobacteria)

But it doesn't stop there.

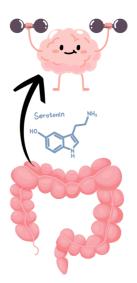
Your microbiome continues to evolve throughout your life—and is constantly shaped by your:

- Diet
- Sleep quality
- Environment
- Medication use
- Stress levels

# Microbiome, Digestion & the Brain

Your gut bacteria support your body in powerful ways:

- Breaking down dietary fiber
- Producing short-chain fatty acids (especially butyrate) → essential for gut lining health and reducing inflammation
- Creating mood-related compounds like serotonin, GABA, and dopamine precursors → which influence sleep, stress response, and emotional balance through the gut-brain axis



Here's a fun fact: About **95% of your body's serotonin** is made in your gut—not in your brain!

# What Happens When the Microbiome Falls Out of Balance

Common causes of **dysbiosis** (gut imbalance):

- Diet high in sugar
- Antibiotic use
- Chronic stress
- Weak digestion

Low fiber intake

#### Possible effects:

- Bloating, gas, or irregular digestion
- Inflammation and "leaky gut"
- Low mood, irritability, brain fog
- Fungal overgrowth (e.g., Mucor racemosus,
   Aspergillus niger) → can affect joints, blood vessels, mental clarity, and immune health



# **How to Support Your Microbiome**

- 1. Eat fiber-rich foods
  - → veggies, legumes, whole grains, flaxseeds
- 2. Avoid refined sugar
  - → sugars and syrups fuel harmful bacteria and yeast
- 3. Use prebiotics & probiotics
  - → Prebiotics = food for the good guys
  - → Probiotics = living beneficial bacteria (found in fermented foods or quality supplements)
- 4. Support your digestion
  - → stomach acid, pancreas, and liver must function well for proper nutrient absorption

### 5. Optional: Consider nucleotides

→ they help regenerate the microbiome

# **How Fast Can the Microbiome Rebuild?**

Faster than you'd think—some bacteria double **every 20** minutes!

With the right diet and digestive support, your microbiome can show significant improvement in just **2–6 weeks**.

### But here's the catch:

Many people already have an imbalanced gut *before* taking antibiotics—so prevention and long-term care are key.

# Warning: Gut Fungi Ahead

Fungal overgrowth in the gut can:

- Trigger inflammation
- Weaken immune function
- Contribute to symptoms like fatigue, depression, irritability, muscle pain, and brain fog

### Public enemy number one? Sugar.

Yeast *loves* sugar—the **more refined sugar** you eat, the faster it multiplies.

### **Smart Sugar Choices (In Moderation!)**

If you want to sweeten things up, go for more natural options like:

- Raw honey (the real kind)
- Coconut sugar
- Whole cane sugar
- Fruit concentrates or syrups (like apple, date, or pear)
- Stevia (in pure form)

A **healthy gut microbiome** isn't a luxury — it's **essential**. It supports your immune system, digestion, mood, and even your gene expression.

With the right nutrition, better stress management, and targeted support,

you can actively nourish your microbiome — and lay the foundation for lasting health, energy, and well-being.

# The Underestimated Power of Digestion

# **How Your Body Turns Food Into Real Energy**

At first glance, it seems simple:

We eat  $\rightarrow$  we get nutrients  $\rightarrow$  we get energy. **Done**.

But it's not that straightforward.

Nutrition is about much more than counting calories.

For your body to actually get **energy**, **essential nutrients**, **and cellular building blocks**, it has to go through a complex process first: **digestion**.

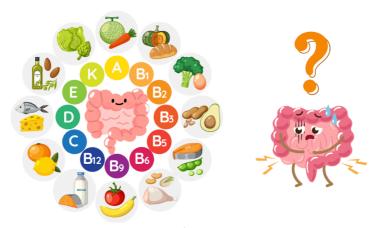
### **Not All Nutrients Are Created Equal**

Your food contains:

- Macronutrients (fats, carbs, proteins)
- Micronutrients (vitamins, minerals, phytonutrients)

But here's the real question:

Can your body actually absorb and use them?



Nutrients only become available to your body once they successfully pass through **your gut and into your bloodstream**.

Without healthy digestion, even the most nutritious diet can be ineffective—or worse, become a burden.

# How Digestion Works - Step by Step

#### 1. It Starts in the Mouth

This is the only part of digestion you can consciously control: **chewing**.

Here, food is broken down and mixed with saliva and enzymes—especially those that begin breaking down carbohydrates. **Tip:** Chew each bite **20–30 times** until it's almost liquid.

### 2. In the Stomach - The Protein Boss

Your stomach mixes food with **stomach acid (HCI)** and the enzyme **pepsin** to begin protein digestion. It also prepares **vitamin B12** for absorption in the small intestine. **Important:** Stress, medications, drinking too much with meals, or eating too fast can reduce stomach acid—leading to reflux, bloating, or nutrient deficiencies.

### 3. In the Small Intestine - The Breakdown Continues

Now the big players join in:

 Bile from your liver (stored in the gallbladder) helps break down fats.

- Pancreatic enzymes break down fats, proteins, and carbs.
- The intestinal lining and microvilli absorb the digested nutrients.

Only when all of this runs smoothly do vitamins, minerals, and other nutrients **reach your cells**.

# What Can Disrupt Digestion?

### Mouth-related issues:

- Eating too fast
- Stress
- Not chewing enough
- Dry mouth (e.g., from medications)

### Stomach-related issues:

- Low stomach acid (from PPIs, stress, H. pylori)
- Poor protein breakdown
- Impaired vitamin B12 absorption

### Small intestine issues:

- Bile deficiency or liver stress
- Low digestive enzymes

- Damaged or inflamed intestinal lining (e.g., celiac disease, dysbiosis)
- Medication effects (e.g., birth control, NSAIDs, antidepressants)

### Colon-related issues:

- Constipation → poor detox
- Diarrhea → nutrient loss
- Bacterial overgrowth (SIBO) → gas, bloating, discomfort

# <u>Digestive Hygiene – The Foundation of Gut Health</u>

### Here are simple practices you can apply right away:

### 1. Eat slowly:

Give your body time to release enzymes and digestive juices.

### 2. Chew thoroughly:

20-30 times per bite, until food is nearly liquid.

### 3. Sit while eating:

Shift into "rest & digest" mode (parasympathetic nervous system).

# 4. Avoid drinking too much with meals:

Large amounts of fluid dilute stomach acid. Try drinking 20 minutes before meals.

### 5. Breathe and eat mindfully:

Take a few deep breaths before eating. No screens, emails, or arguments at the table.

### 6. After eating, don't rush off:

Give your body 15–20 minutes to begin digestion in peace.

# "You are what you digest — not just what you eat."

You can eat as healthy as you want, but if your body can't digest and absorb it, it won't help you.

In fact, poorly digested food can lead to **inflammation**, **food sensitivities**, **and chronic fatigue**.

Your digestive system is a masterpiece—but it needs **care**, **support**, **and rest**.

When you understand how digestion really works, you can avoid many common issues and give your body the energy it truly needs.

# **Beyond Calories**

# Why Real Energy Is More Than Just Calories

Many people think of food as simple fuel: you eat, your body "burns" calories, and you move on.

But that view is way too narrow.

Real food isn't just fuel — it's life energy.

And this energy isn't just something you feel — it can be measured.

It influences your metabolism, yes — but also your regeneration, your mood, and the health of your cells.



# Food as Medicine

The right nutrition can do so much more than "keep the engine running."

It can:

- Prevent disease
- Support healing
- Slow down aging
- Increase your overall energy levels

But it's not just about what you eat — it's about how **fresh**, **natural**, **and unprocessed** your food is... and **where** it comes from.



# What Is "Life Energy" Anyway?

Life energy isn't just a spiritual buzzword — it can actually be observed and measured.

Biophysicist Fritz-Albert Popp demonstrated in the 1970s that:

→ Fresh, ripe, unprocessed plants emit **light** — tiny packets of light called **biophotons**.



This light is connected to how well your **cells communicate, repair themselves, and metabolize nutrients.** The more light (life energy) a food emits, the more it helps **organize and strengthen** your entire system.

# **Why Life Energy Matters**

As we age or deal with illness, our life energy levels tend to drop. That means:

- Slower metabolism
- · Reduced ability to absorb nutrients
- Weaker detox, repair, and immune function

The more life energy your food contains, the better your body can:

- Absorb nutrients
- Produce energy
- Heal itself

#### Why Kids Handle Junk Better Than Adults

Healthy children usually have high life energy — which is why they can "get away with" a poor diet better than older adults. But as we get older or face chronic illness, our enzyme activity and energy drop, and we need more nutrients... yet absorb less.

Bottom line: It's not just about how much nutrition is in the food — but how much your body can actually use.

#### What Affects the Energy of Your Food?

- Farming practices: Organic, local, pesticide-free
- Sunlight exposure: Plants grown naturally in sunlight store more photons
- Processing: Less processing = more energy retained
- Preparation: Steaming preserves more energy than boiling or frying

#### **Less Heat = More Energy**

Gentle cooking methods like steaming or eating raw foods can preserve food's natural structure and energetic charge.

#### Quick tips:

- Eat one serving of raw fruits or vegetables daily
- Steam instead of fry especially for delicate veggies like broccoli or spinach
- Avoid heavily processed foods they may have nutrients on the label, but lack real energy

#### Simplicity Is Power

The simpler and more natural your meals, the more energy they provide.

Try to avoid:

- Processed sugar
- Refined white flour
- Overheated or ready-made foods

#### And choose instead:

- Fresh, colorful, whole foods
- Organic veggies, legumes, herbs, nuts, and seeds
- Sun-ripened produce

#### Meridians & Light Energy

According to traditional Chinese medicine, life energy flows through **meridians** — invisible energy channels in the body. Emerging science suggests **photons** may travel along these same pathways.

→ Meaning: Fresh, living foods nourish your body with "information light."

#### Feel Your Food — Don't Just Count It

When you start to see food as **life-giving**, not just filling, you'll realize.

- Not every calorie is life
- Not every meal is healing
- Not every organic label guarantees high energy

But every day, you get to choose: **Fuel your life — or drain it.** 

#### **Your Simple Formula:**

- Natural + Fresh + Unprocessed = More Energy for You
- Seasonal Veggies + Gentle Prep = Real Cellular Power

# Eat for a Stronger Immune System

### How to Strengthen Your Immune System Through Smart Food Choices

Your immune system is your shield — against viruses, bacteria, fungi, parasites, and even mutated cells.

But it doesn't run on autopilot.

Its strength — or weakness — is deeply connected to how you eat.

A microbiome-friendly, nutrient-rich diet can help:

- Fight off infections
- Calm chronic inflammation
- Ease autoimmune reactions
- And even support cancer defense mechanisms

#### 4 Core Pillars of a Strong Immune System

#### 1. Nutrient Density

Proteins, healthy fats, vitamins, and minerals are the raw materials your immune cells need to function properly and regulate inflammation.

#### 2. A Healthy Gut

Roughly **70–80% of your immune system** is based in your gut.

A diverse microbiome strengthens your defenses — an imbalanced one weakens them.

#### 3. Less Toxic Load

Pesticides, heavy metals, radiation — they all put pressure

on your immune system. Organic and naturally grown foods can reduce that burden.

#### 4. Mental & Emotional Balance

Chronic stress, anxiety, and emotional overload can suppress your immune system.

Trust, peace of mind, and emotional grounding help it thrive.

#### **How to Support Your Immune System Through Nutrition**

#### 1. Eat Whole, Nutrient-Dense Foods

Key immune-boosting nutrients and where to find them:

- Vitamin C → kiwis, broccoli, bell peppers, citrus
- Beta-Carotene → carrots, sweet potatoes, pumpkin, leafy greens
- Vitamin E → sunflower seeds, almonds, wheat germ oil
- Vitamin D → sunlight, mushrooms, fatty fish, (or supplements if needed)
- **B Vitamins** → whole grains, legumes, quinoa
- Zinc, Copper, Selenium → nuts, legumes, oats, amaranth
- CoQ10 → olive oil, eggs, meat, fish

**<u>Pro tip:</u>** Pair plant-based foods with healthy fats like olive oil to boost absorption of fat-soluble nutrients like carotenoids.

#### 2. Cut the Sugar — Free Your Microbiome

Refined sugars (white or brown) feed:

- Yeast overgrowth (like Candida)
- Inflammation
- Blood sugar rollercoasters
- And immune suppression

#### Better sweeteners:

- Raw honey
- Coconut or whole cane sugar
- Maple syrup, date syrup, agave
- Natural stevia (pure, unprocessed)

#### 3. Choose Real, Whole Foods

The more natural your food, the better it supports your gut and immune system.

#### Avoid:

- Refined flour products (white bread, white pasta, bleached flours)
- Refined oils (especially deodorized sunflower oil)
- Ultra-processed convenience foods

#### 4. Emphasize Plants

#### Plants offer:

- Fiber → feeds good gut bacteria
- Phytonutrients → antiviral, antibacterial, antiinflammatory
- Vitamins & minerals → essential for every immune cell

#### **Best choices:**

- Lots of veggies, herbs, legumes, nuts, seeds, whole grains
- Minimal animal products and choose organic or pasture-raised if possible
- For dairy: unsweetened, organic, and fermented (like yogurt or kefir)

#### What Weakens Your Immune System?

- Ultra-processed foods
- Sugary drinks & sweets
- Chronic stress & lack of sleep
- Environmental toxins & heavy metals
- Gut dysbiosis (caused by antibiotics, poor diet, etc.)

#### The Good News:

You don't need a complex diet or expensive supplements. You need:

- Natural foods
- Colorful, whole ingredients
- Strong digestion & a healthy gut
- Emotional regulation & stress relief

Because real immunity doesn't start in your medicine cabinet — it starts with your daily habits.

And most of all — it starts in your gut.

# Nucleotides – The Forgotten Nutrients

# How Tiny Molecules Can Make a Big Impact on Your Immunity, Cells, and Gut

When we think about nutrients, most people picture vitamins, minerals, fats, protein, or carbs.

Hardly anyone thinks about nucleotides — even though they play a vital role in nearly every essential function in the body.

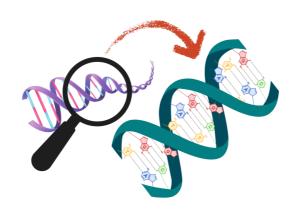
For a long time, nucleotides were overlooked in nutritional medicine.

But new research reveals: they're **critical building blocks** for cellular health, **DNA repair**, **energy production**, **gut regeneration** — and immune defense.

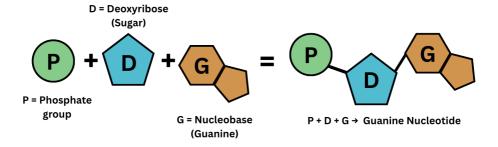
#### What are Nucleotides?

Nucleotides are bioactive molecules found in every plant and animal cell

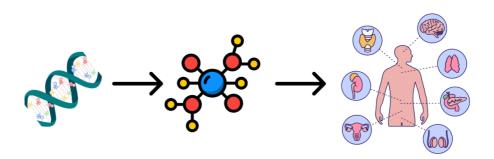
Each nucleotide consists of:



- a nitrogenous base (such as adenine, guanine, cytosine, uracil, or thymine)
- a sugar (pentose, typically ribose or deoxyribose)
- and one or more phosphate groups



They form the building blocks of our **DNA** and **RNA**, drive our energy metabolism (like ATP), act as **messengers within the cell** (such as cAMP), support **cell division**, and regulate countless processes on the **epigenetic level**.



#### Why does your body need nucleotides?

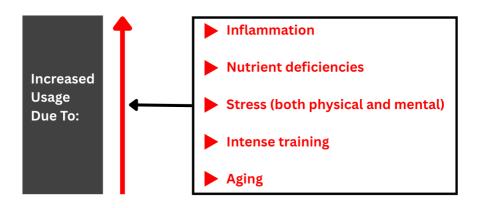
- Building and repairing DNA & RNA
- Producing ATP the main energy molecule in every cell
- Regulating cellular signaling (like cAMP, cGMP)
- Supporting **protein** production via ribosomes
- Providing antioxidant protection against cellular damage
- Maintaining and repairing the intestinal lining & immune system
- Supporting the function of your microbiome

Some cells – especially in the **gut**, **blood**, **immune system**, **and parts of the brain** – have **limited or no ability** to create nucleotides from scratch. They rely on what you get through food or recycling.

#### When does your need for nucleotides increase?

- Chronic or acute inflammation
- Physical or emotional stress (including oxidative stress)
- Nutrient deficiencies
- Intense exercise or athletic performance
- Aging

#### Digestive issues or gut disorders



#### How does your body get nucleotides?

Your body has three ways to access nucleotides:

#### 1. New synthesis (de novo)

→ This is energy-intensive and requires raw materials. Some cell types can't do it effectively.

#### 2. Recycling from cell breakdown

→ Limited supply, especially when your body is creating lots of new cells.

#### 3. Through your diet

→ This is essential—especially for cells that can't make nucleotides on their own.

#### Which foods are rich in nucleotides?

- High: Organ meats, muscle meats (especially beef and chicken), fish
- Moderate: Eggs, fermented foods
- Low: Plant-based foods (vegetables, fruits, grains)

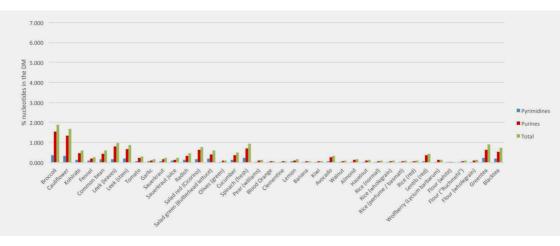


Figure: Nucleotides in Plant-Based Foods (Source: Healversity GmbH)

Vegetarian or vegan diets tend to be <u>low</u> in nucleotides. For older adults or people with chronic health issues, supplementing may be beneficial.

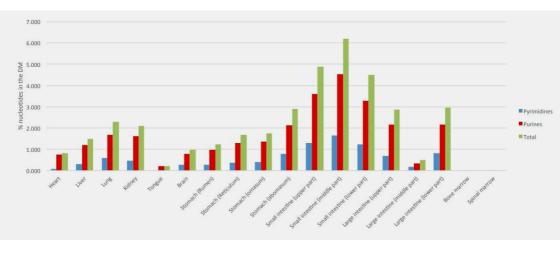


Figure: Nucleotides in Animal-Based Foods (Source: Healversity GmbH)

#### Is supplementation worth it?

In many cases, yes—especially if you're:

- · Eating a vegan or vegetarian diet
- Living with chronic illness
- Struggling with gut issues
- Under high physical or emotional stress
- Recovering from intense activity or illness
- → In these situations, **targeted nucleotide supplementation** can give your body the critical support it needs to heal, rebuild, and stay resilient.

#### Scientific Studies: What Nucleotides Can Do



Dietary nucleotides: effects on the immune and gastrointestinal systems

JD Carver ≥

First published: 02 January 2007 | https://doi.org/10.1111/j.1651-2227.1999.tb01306.x | Citations: 114

#### Strengthen the Immune System

#### Research shows:

- → Supplementation increases antibody production and immune cell activity
- → Speeds up recovery after surgery
- ightarrow Boosts vaccine response in some cases, doubling antibody levels

#### **Support Gut Regeneration**

After 8 weeks of nucleotide supplementation:

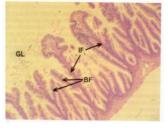
- ightarrow 25% increase in surface area of intestinal villi (see figure below)
- → Improved gut lining integrity
- → Fewer symptoms in IBS patients (see chart below)

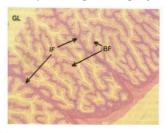
#### **Feed the Microbiome**

Nucleotides especially benefit **Bifidobacteria**, helping them thrive

 $\rightarrow$  They support microbial balance and promote a healthier gut ecosystem.

- +25% taller intestinal villi
- Increased surface area
- Improved gut integrity





Control

Ortega MA et al (1995).

**Nucleotide** 

Figure: Intestinal Villi (Source: Healversity GmbH)

Research | Open Access | Published: 08 June 2006

Nucleotide supplementation: a randomised doubleblind placebo controlled trial of IntestAidIB in people with Irritable Bowel Syndrome [ISRCTN67764449]

CP Dancey ™, EA Attree & KF Brown

Nutrition Journal 5, Article number: 16 (2006) | Cite this article

#### **Cell Protection & Anti-Aging**

Animal studies have shown:

- Reduced DNA damage under oxidative stress
- Slower progression of cellular aging

 Aging cells lose the ability to produce nucleotides — and young cells age faster when nucleotides are lacking

#### For Athletes and Recovery

- Lower stress hormone response after physical exertion
- Faster recovery after intense training
- Less immune system strain in high-performance athletes

#### Conclusion: Small Molecules - Major Impact

Nucleotides are essential building blocks of human health. They play a crucial role in:

- Cellular function
- Energy production
- Immune support
- Gut repair and resilience
- Microbiome balance
- Regeneration and healing
- Epigenetic stability

Despite their importance, nucleotides are often overlooked in modern diets—yet they're more important now than ever.

#### **Practical Tip**

#### If you:

- follow a vegan or vegetarian diet
- get sick frequently
- suffer from digestive issues
- live under chronic stress
- or engage in intense physical training

...then it may be wise to ensure your body is getting enough nucleotides—either through targeted foods or a high-quality supplement.

# **Epilog**

#### Dear Reader,

If you've made it to the end of this eBook — congratulations. You haven't just picked up nutritional facts; you've opened the door to a deeper understanding of your body, your energy, and the choices you make every day.

We live in a world where "nutrition" is often reduced to calories, diets, and macros. But as you've seen, real nourishment starts much deeper — at the cellular level, in your nervous system, in your gut microbiome, and within the delicate rhythms that shape your inner world.

My intention was to offer you a clear, practical, and grounded introduction to these complex connections — free from dogma, but rich in substance.

Maybe some ideas here inspired you. Maybe others challenged or even unsettled you. That's okay — growth starts with curiosity.

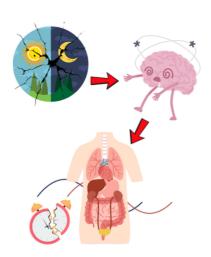
And if you feel called to go deeper — to better understand sleep, biochemistry, or how your body really works — then I invite you to continue the journey through the next levels.

#### E-Book: Sleep & Circadian Rhythm

If you feel like nutrition alone isn't getting you where you want to be — if you're still feeling tired, irritable, or low on motivation despite eating well — your inner rhythm might be the missing piece.

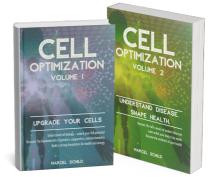
This eBook dives into how light, timing, hormones, and your circadian biology affect your metabolism and nutrient absorption — and how to realign your biological clock for deeper healing and better energy.

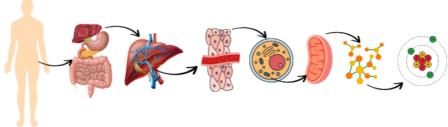




#### E-Book Series: "Cell Optimization" – Volume 1 & 2

This is where things go even deeper. These two volumes uncover the biochemical foundations of your health — from methylation and micronutrients to the regulation of your genes.

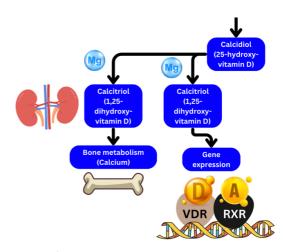




You'll discover how over 200 metabolic pathways are

interconnected, why cellular energy is often the bottleneck for your performance, and how you can take targeted action to change that.

Packed with visuals, clear explanations, and practical tools, this series will guide you step by step.



We'll also explore the vital roles of Vitamin D, Vitamin A, amino acids, minerals, and — most importantly — your individual lifestyle. Because all of these factors shape how your genes are expressed, and with that, how healthy you are today and in the future.

#### Curious to dive deeper?

As a thank you, use the code

### CELL30

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#### www.deafbiohacker.de

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There, I continuously release new ideas, research, and reflections — the kind that evolve over time and don't fit into a one-time eBook.

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Thank you for your trust — and I wish you restful nights, renewed energy, and deep inner balance.

Warm regards, Marcel Schild

# About the author

#### My Journey: From Deafness to Epigenetics



My name is Marcel Schild (born 1985), and my path has been anything but ordinary. I was born into a world of sound—but that world began to shift early. At just eight months old, I became seriously ill, and by the age of two, I was diagnosed with severe hearing loss.

But that wasn't the only trauma I faced growing up. As a school-aged child, I was sexually abused during a vacation in Italy. For a long time, I thought this would break me. But one thing helped me begin to process what happened: Taekwondo. This martial art became my anchor—strengthening my mind and helping me begin to heal from the inside out

Despite the challenges, I kept moving forward. I attended a school for the hearing impaired, but I often felt caught between two worlds: the deaf and the hearing. For years, I believed I was stuck in between. But over time, I discovered new ways of moving forward—step by step.

Sports became my compass. I reached the red belt (2nd Kup) in Taekwondo as a teenager and later earned the 5th student grade in WingTsun as an adult.

I trained as a technical draftsman and later completed a degree as a state-certified automation technician. On the side, I taught myself web design, Flash animation, and database development.

Then came 2013—a year of intense physical and emotional strain. I visited countless doctors and underwent endless tests, but no one could explain what was happening to my body. Eventually, I came across the condition known as NICO (neuralgia-inducing cavitational osteonecrosis)—hidden infections in the jaw that can wreak havoc on health. A surgery changed everything. It marked the beginning of a new chapter—one of holistic health, biohacking, and the power of epigenetics.

That was the spark. I immersed myself in the science of functional medicine and started to see that true health begins from the inside out. We are not passive victims of our biology—we are active participants in our well-being.

In 2017, I discovered Calisthenics—training with nothing but your own body weight. No gym, no machines—just full autonomy. It gave me strength not only physically, but mentally as well.

Then in 2020, I read *Neuroscience Calisthenics* by Jean Fallacara. It was a turning point. I realized that movement is more than just exercise—it directly affects our nervous system, our cells, and even our cognitive power.

That's when it clicked: Our bodies are built for the life of hunters and gatherers. I adjusted my training accordingly. Mobility and movement became daily habits—tools to maintain my natural flexibility and vitality.

But my health journey wasn't a straight line. I faced another maze of doctor visits, only to find that while symptoms were acknowledged, the root causes often weren't. Functional medicine was rarely considered. That cost me time—but taught me the most important lesson of all: I had to take responsibility for my own health.

During the COVID-19 pandemic, I began to reflect more deeply on society, the body, and the self. I saw how much our environment and culture shape our well-being—and how true transformation has to start from within.

Another key piece fell into place: my Christian faith. Before the pandemic, I never truly grasped its depth. But now I began to understand the connection between epigenetics, healing, and spirituality. I saw how mental, emotional, and physical health are inseparably intertwined.

Today, I no longer live in fear about my health. Thanks to epigenetics, I now understand how to take preventative action and shape my own vitality.

Want to follow my work?

Website: www.deafbiohacker.de

Instagram: @deafbiohacker

Patreon: <u>www.patreon.com/deafbiohacker</u>

I'm excited to share my insights with you. Warmly.

Marcel

## THE QUIET

#### POWER OF NUTRITION

DO YOU OFTEN FEEL DRAINED, RESTLESS, OR JUST OFF-EVEN THOUGH YOU EAT "HEALTHY"?

THE ISSUE MIGHT NOT JUST BE WHAT YOU'RE EATING—BUT HOW YOUR BODY PROCESSES IT, HOW YOUR GUT FUNCTIONS, HOW YOUR CELLS COMMUNICATE, AND WHETHER YOU'RE TRULY GIVING YOUR BODY WHAT IT ACTUALLY NEEDS.

THIS EBOOK DIVES INTO WHY MODERN NUTRITION OFTEN CREATES MORE CONFUSION THAN CLARITY—AND HOW YOU CAN START SEEING THE CONNECTION BETWEEN YOUR GUT, YOUR MENTAL HEALTH, YOUR CELLULAR ENERGY, AND YOUR IMMUNE SYSTEM IN A WHOLE NEW LIGHT.

HERE'S WHAT YOU'LL DISCOVER:

- . HOW YOUR GUT MICROBIOME AFFECTS YOUR MOOD
- . WHY REAL FOOD IS MORE THAN JUST CALORIES
- HOW TO SUPPORT YOUR DIGESTION WITH INTENTION
- WHAT NUCLEOTIDES ARE—AND WHY THEY MAY BE THE MISSING PUZZLE PIECE
- SIMPLE EVERYDAY TIPS TO BOOST ENERGY, RESILIENCE, AND INNER BALANCE

THIS ISN'T ANOTHER DIET MANUAL. IT'S A COMPASS.

A CLEAR, PRACTICAL GUIDE THROUGH THE JUNGLE OF WELLNESS TRENDS, CALORIE TRAPS, AND HEALTH MYTHS—BACKED BY SCIENCE, MADE FOR REAL LIFE.

IF YOU'RE READY TO UNDERSTAND YOUR NUTRITION ON A DEEPER LEVEL AND STRENGTHEN YOUR HEALTH FROM THE INSIDE OUT—THIS BOOK IS YOUR STARTING POINT.



4. SCHILD