Chronic Fatigue Syndrome

Dr. John Bergman
What is CFS?

“Chronic fatigue syndrome, or CFS, is a devastating and complex disorder. People with CFS have overwhelming fatigue and a host of other symptoms that are not improved by bed rest and that can get worse after physical activity or mental exertion.”

CDC
CFS is also known as:

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<tr>
<th>Condition</th>
<th>Preferred by</th>
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<td>Chronic Fatigue and Immune Dysfunction Syndrome (CFIDS)</td>
<td>those who consider the importance of the immune system in the development of chronic fatigue.</td>
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<td>Myalgic Encephalomyelitis (ME)</td>
<td>those who feel CFS is not specific enough and doesn't reflect the severity and different types of fatigue, and implies that fatigue is the only symptom</td>
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<td>Systemic Exertion Intolerance Disease (SEID)</td>
<td>a new term suggested in a 2015 report by the US Institute of Medicine, which implies that the condition affects many systems in the body (systemic); the word &quot;disease&quot; highlights the serious nature of the condition in some people</td>
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“More than one million Americans have CFS. This illness strikes more people in the United States than multiple sclerosis, lupus, and many forms of cancer.”

- CFS occurs **four times more frequently in women** than in men.
- The illness occurs most often in people in their **40s and 50s**.
- CFS occurs in all ethnic and racial groups and in countries around the world.
- People of all income levels can develop CFS.
Diagnosing Chronic Fatigue

-To be properly diagnosed with CFS, you must have 4 or more of the following 8 symptoms:

• post-exertion malaise lasting more than 24 hours
• unrefreshing sleep
• significant impairment of short-term memory or concentration
• muscle pain
• pain in the joints without swelling or redness
• headaches of a new type, pattern, or severity
• tender lymph nodes in the neck or armpit
• a sore throat that is frequent or recurring
For doctors, diagnosing chronic fatigue syndrome (CFS) can be complicated by a number of factors:

• There's no lab test or biomarker for CFS.
• Fatigue and other symptoms of CFS are common to many illnesses.
• For some CFS patients, it may not be obvious to doctors that they are ill.
• The illness has a pattern of remission and relapse.
• Symptoms vary from person to person in type, number, and severity.
Problems with Diagnosing Chronic Fatigue

“There's no single test to confirm a diagnosis of chronic fatigue syndrome. Because the symptoms of chronic fatigue syndrome can mimic so many other health problems, you may need patience while waiting for a diagnosis.”

Mayo Clinic
“Managing chronic fatigue syndrome can be as complex as the illness itself. There is no cure, no prescription drugs have been developed specifically for CFS, and symptoms can vary a lot over time.”
Causes of Chronic Fatigue

“Despite a vigorous search, scientists have not yet identified what causes CFS. While a single cause for CFS may yet be identified, another possibility is that CFS has multiple causes. Conditions that have been studied to determine if they cause or trigger the development of CFS include infections, immune disorders, stress, trauma, and toxins.”

CDC 3
"Researchers from around the world have studied if a single type of infection might be the cause of CFS, analyzed the data, and not yet found any association between CFS and infection. To date, these studies suggest that no one infection or pathogen causes CFS and that the illness may be triggered by a variety of illnesses or conditions."

"Studies have looked to see if changes in a person's immune system might lead to CFS. The findings have been mixed. Similarities in symptoms from immune responses to infection and CFS lead to hypotheses that CFS may be caused by stress or a viral infection which may lead to the chronic production of cytokines and then to CFS."
The central nervous system plays an important role in CFS. Physical or emotional stress, which is commonly reported as a pre-onset condition in CFS patients, alters the activity of the hypothalamic-pituitary-adrenal axis, or HPA axis, leading to altered release of corticotropin-releasing hormone (CRH), cortisol, and other hormones. These hormones can influence the immune system and many other body systems.

Disturbances in the autonomic regulation of blood pressure and pulse have been found in CFS patients.
Chronic Stress and Chronic Fatigue Syndrome

Definition of Stress:
• Any real or imagined threat and your body’s response to it

Fight
Flight
The Stress Response - First Stage

1. **The Amygdala**
   - Area of emotional processing in the brain
   - Interprets images and sounds
   - **Perceives** danger and instantly sends a distress signal to the hypothalamus

2. Hypothalamus
   - The Command center of the Body
   - Controls breathing, blood pressure, heartbeat, and blood vessel dilation/constriction
   - Communications with the Autonomic Nervous system
   - Activates the **Sympathetic Nervous System**
The Stress Response - First Stage

3. Autonomic Nervous System
   • Sympathetic: “Fight or Flight”
   • Parasympathetic: “Rest and Digest”
   • Stress activates Sympathetic response
   • The SNS sends signals to the adrenal glands
The Adrenal Glands

4. Adrenal Glands

- Secrete Adrenaline (epinephrine)
  - Increases heart rate
  - Increases blood flow to muscles, heart, and other vitals organs
  - Increases pulse rate and blood pressure
  - Increases Breathing rate and Bronchodilation
  - Oxygen is sent to the brain to keep it alert
  - Sight, hearing and other senses become sharper
  - Triggers release of blood sugar from fat storage
The Second Stage of the Stress Response

Hypothalamus-Pituitary-Adrenal Axis
• Relies on a series of hormonal signals to keep the SNS active if the brain continues to perceive stress

1. **Hypothalamus** Releases corticotropin-releasing hormone (CRH)
2. Triggers release of Adrenocorticotropic hormone (ACTH) from the **pituitary**
3. Triggers release of cortisol from the **adrenal glands**
4. When the threat passes cortisol levels fall and the **parasympathetic nervous system** decreases the stress response
Are we under Chronic Stress?
Effects of Excess Cortisol

- Diminishes cellular utilization of glucose
- Increases blood sugar levels
- Decreases protein synthesis
- Increases protein breakdown that can lead to muscle wasting
- Causes demineralization of bone that can lead to osteoporosis
- Interferes with skin regeneration and healing
- Causes shrinking of lymphatic tissue
- Diminishes lymphocyte numbers and functions
**Stress and the Adrenals: Adrenal Fatigue**

If the Adrenals are depleted from chronic stress these are the consequences:

- Low body temperature
- Nervousness
- Depression
- Hypoglycemia
- Memory loss
- Osteoporosis
- Weak Immune system
- Inflammatory conditions
- Vertigo and dizziness
- Dry and thin skin
- Weakness
- Chronic fatigue

- Difficulty gaining weight
- Difficulty building muscle
- Irritability
- Confusion and Cognitive Impairment
- Autoimmune hepatitis
- Palpitations
- Low blood pressure
- PMS
- Headaches
- Unexplained hair loss
- Excessive hunger
- Indigestion
- Alternating diarrhea and constipation
- Autoimmune diseases
- Insomnia
Stress and the Thyroid

- Depression
- Heart disease
- Chronic fatigue
- Fibromyalgia
- PMS (premenstrual syndrome)
- Menopausal symptoms
- Muscle and joint pains
- Irritable bowel syndrome
- Autoimmune disease
- High cholesterol
- Irregular Menstruation

- Low Libido
- Infertility
- Gum Disease
- Fluid retention
- Skin conditions such as acne and eczema
- Memory problems
- Poor stamina
- Weight gain
- Lethargy
- Poor quality hair and nails
- Hair loss
- Cold hands and feet
- Constipation
Other Effects of Chronic Stress

• 4 times less blood flow to your digestive system
• Decreased metabolism
• Decreased enzymatic output in your gut
• Decreased nutrient absorption
• Decreased oxygenation to your gut
• Elevated cholesterol
• Elevated triglycerides
• Decreased gut flora populations
• Increased food sensitivity
Are we under constant stress?

Annual Stress Survey by the American Psychological Survey

- 25% of Americans are experiencing **High Levels of Stress**
- 50% of Americans experience **Moderate stress**

The 3 Types of Stress:

- **Emotional**
- **Physical**
- **Chemical**
The Perfect Recipe for Disaster

• Chronic Stress: Chemical, Physical, Emotional
• Adrenal Fatigue
• Thyroid hyper-stimulation
• Pancreatic overload
• Hormonal Imbalances
• Nutrient Deficient Diet
• A Sedentary Lifestyle
• Toxic environment
• Toxic, processed Food
• Antibiotics
• Medications
The First Step: Avoid the Following

- Vaccinations
- Antibiotics
- Medications
- Environmental Toxins
- Non-Organic, GMO Food
- Nutritional Deficiencies
- Chronic Stress
The 5 Keys to Health and Healing

Proper nerve supply
Regular Exercise
Proper Nutrition
Sufficient Rest
Prayer and Meditation
Proper Nerve Supply

- The nervous system controls every function of the body
- Neurological imbalance leads to disruption of endocrine function
- Chiropractic care is essential to stimulate the nervous system to promote healing and normal function

“76% of those patients reported a mental/emotional improvement, as well as positive changes in stress and life enjoyment over a period of several months following the chiropractic care.”
Proper Nerve Supply

Benefits of Chiropractic Care

• Alleviates pain
• Boosts Productivity
• Improves quality of life
• Improves Cognitive Function
• Reduces Dependency on Medication
• Improves quality of Sleep
• Reduces stress
• Boosts your Immunity

According to:
The Spine Journal
Journal of Vertebral Subluxation Research
Journal of Manipulative and Physiological Therapeutics
Altered structure causes Altered Function
Proper Exercise

Regular Exercise helps you:

• Get high-quality sleep
• Lose, gain, or maintain weight
• Improve your resistance to infections
• Improve your brain function
• Prevent and relieve chronic pain
• Improve your Emotional health
• Lower your risk of cancer, heart disease
How breathing affects your Health

- Reduces mental and physical fatigue
- Improves blood circulation and cell oxygenation
- Stimulates the Parasympathetic Nervous System
- Breathing acts as a pump to massage internal organs
- The action of your diaphragm helps push lymph throughout your body, which helps eliminate toxic waste and strengthen your immune system
- Toxic CO2 waste is eliminated directly through your breath
Proper Nutrition

- 90% of serotonin is produced in the digestive system
- The **Probiotic Lactobacillus Rhamnosus** has been shown to lower the stress hormone corticosterone, resulting in reduced anxiety and depression
- **Bifidobacterium Longum** has been shown to normalize anxiety-like behavior
- Eliminate processed foods, especially sugar
- Organic plant based diet
- Healthy fats such as coconut oil
- Fermented Vegetables
- Probiotic Supplements
Proper Nutrition: Vitamin D

- Helps **produce serotonin** in the brain
- Activated Vitamin D receptors **increase nerve growth** in your brain
- The combination of Vitamin D, Tryptophan and Omega-3 fats can naturally **elevate concentration of brain serotonin** without side effects
Vitamin D Deficiency is linked to:

- Digestive disorders
- Skeletal disorder including osteoporosis
- Depression, mental disorders
- Neurodevelopmental disorders ( Autism)
- Brain Dysfunction, dementia and Alzheimer’s
- Chronic infections
- Cardiovascular disease
- All types of Cancer
- Autoimmune Diseases
- Premature Aging
Optimize Your Vitamin D levels

• **UVB exposure** from the Sun is the best way to optimize your vitamin D levels
  • At least 20 minutes of **sun exposure daily** during mid day
  • Your shadow shouldn’t be longer than your height

• Most regions of the planet don’t get proper sunlight for **6 months** out of the year
• **Vitamin D3** supplementation during the winter
• Adults required about **8,000 IUs per day**
Vitamin D and Vitamin K2

• Vitamin K2 is essential for proper utilization of vitamin D

Sources of Vitamin K2

• Grass-fed organic animal products (eggs, butter, dairy)
• Fermented foods
• Certain cheeses (Brie, Gouda)
Omega 3

• Animal based Omega 3: Sardines, Mackerel, and Anchovies

• The single most important nutrient for optimal brain function

• Low DHA levels have been linked to depression, memory loss, and Alzheimer's and Alzheimer's
Magnesium

• A mineral used by every organ in your body, especially your heart, muscles, and kidneys
• 80% of Americans are magnesium deficient

• Magnesium is found in more than 300 different enzymes in your body and plays a role in the body’s detoxification process
• Researchers have detected 3,751 magnesium-binding sites on human proteins

• Calcium, vitamin K2 and Vitamin D must be balanced with Magnesium in order to utilize it properly
Magnesium is necessary for:

- Activating muscles and nerves
- Creating energy in your body by activating Adenosine Triphosphate
- Helping digest proteins, carbohydrates and fats
- Serving as a building block for RNA and DNA synthesis
- Acting as a precursor for neurotransmitters like Serotonin
Consequences of Magnesium Deficiency:

- Hormone imbalance and PMS
- Unexplained fatigue and Chronic Fatigue
- Weakness
- Abnormal heart rhythms
- Muscle spasms and twitching
- Depression, anxiety, panic attacks
- Bowel disorders
- Heart disease
- Insomnia
- Headaches and Migraines
- Tooth decay
- Blood Clots

- Osteoporosis
- Raynaud’s syndrome
- Musculoskeletal conditions
- Neurological disorders
- Kidney Disease
- Diabetes
- Fibromyalgia
- Asthma
- Hypertension
- Seizures
- Coronary Spasms
- Personality changes
Proper Sleep

• Proper REM sleep plays a very important role in Chronic Fatigue
• Any disruption of the Circadian Rhythm can result in loss of sleep which can develop into depression
• Light is your body’s primary cue
• Limit your exposure to artificial (Blue) light
• Expose your body to as much natural sunlight as you can
• Take the proper steps to achieve REM sleep
Prayer and Meditation

• Meditation can alter the physical structure of the brain
• This includes any repetitive activity that requires higher cognitive function
• The structure of the brain can change in response to repeated practice

Researchers at Harvard, Yale, and the M.I.T.
“Our data suggest that meditation practice can promote cortical plasticity in adults in areas important for cognitive and emotional processing and well-being.”
How to Deal with Emotional Stress

• Daily Prayer and Meditation
• Neurolinguistic Programming
• Daily Affirmations: “I Am” statements
• Emotional Freedom Technique (EFT)
• The Demartini Method: For Traumatic Emotional Events
The 5 Keys to Health and Healing

Proper nerve supply

Regular Exercise

Proper Nutrition

Sufficient Rest

Prayer and Meditation
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www.owners-guide.com

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