Restless Legs Syndrome

Dr. John Bergman
What is Restless Legs Syndrome?
• a neurological disorder characterized by
  • throbbing,
  • pulling,
  • creeping,
• or other unpleasant sensations in the legs and an uncontrollable, and sometimes overwhelming, urge to move them.
Symptoms

• "an itch you can't scratch"
• a "buzzing sensation"
• an unpleasant "tickle that won't stop"
• a "crawling" feeling
• limbs jerking while awake

• RLS patients have difficulty falling asleep and staying asleep
• As a result, the condition causes exhaustion and daytime fatigue,
• Impaired memory, or fail to accomplish daily tasks
• Eventually, RLS can cause depression
Epidemiology

• Effects 10-15% of the U.S. population
  • 3% experience daily or severe symptoms
  • Childhood RLS is estimated to affect almost 1 million school-age children

• 25% of pregnant women developed RLS during the third trimester
• RLS becomes more common with age
RLS is Associated with Several Conditions

- Varicose veins
- Folate deficiency
- Magnesium deficiency
- Fibromyalgia
- Sleep Apnea
- Uremia
- Diabetes
- Thyroid disease
- Peripheral Neuropathy
- Parkinson’s Disease
- Kidney Disease
- Spinal Stenosis
- Lumbosacral Radiculopathy
- Sjogren’s Syndrome
- Celiac Disease
- Rheumatoid Arthritis
- Periodic Limb Movement Disorder (PLMD)
- ADHD
Causes of RLS - According to Medical Doctors

• the cause of RLS is **unknown** (Idiopathic).

• may have a **genetic** component: Specific gene variants have been associated with RLS

• low levels of **iron** in the brain

• dysfunction in the brain’s basal ganglia circuits that use the neurotransmitter **dopamine**, which is needed to produce smooth, purposeful muscle activity and movement.

• Most research on the disease mechanism of restless legs syndrome has focused on the **dopamine and iron system**.
The Medical Solution

• **Dopaminergic Agents** (drugs that increase dopamine)
  • long-term use can lead to worsening of the symptoms in many individuals.

• **Benzodiazepines** (clonazepam, diazepam)
  • may induce or aggravate sleep apnea

• **Opioids** (codeine, propoxyphene, or oxycodone)
  • Side effects: dizziness, nausea, exacerbation of sleep apnea, and the risk of addiction

• **Anticonvulsants** (gabapentin, pregabalin)
  • Side effects: dizziness, fatigue, and sleepiness
“RLS is generally a **lifelong condition** for which there is **no cure**. Nevertheless, current therapies can control the disorder, minimizing symptoms and increasing periods of restful sleep.”

National Institute of Neurological Disorders

“There is currently **no cure** for RLS, but many treatment options are available to help **manage symptoms**.”

Restless Legs Syndrome Foundation
Antidepressants

1 in 10 Americans are taking Antidepressants - and 1 in 4 among women aged 50 to 64

Effects of Antidepressants
• may double your risk of bone fractures
• 45 percent more likely to suffer a fatal stroke
• 32% increased risk of heart disease
• Linked to violent behavior, murder, suicide and more
Anti-Seizure Drugs

• gabapentin (Neurontin, Grails, Horizant)
• pregabalin (Lyrica)

Effects

• increased risk of suicidal thoughts and behaviors
• increased risk of memory loss and dementia
Opioids

- oxycodone (Percocet, OxyContin)
- hydrocodone (Norco, Zohydro)

Effects

- Opioid drugs cause over 13,800 death each year
- All illegal drug overdoses = 10,000 per year
- 700,000 emergency room visits each year from adverse drug reactions
U.S. Food and Drug Administration (FDA)

- Properly prescribed and administered drugs cause about 106,000 deaths each year

- Prescription drugs are the 4th-leading caused of death in the U.S.
The Controversy

• Many Doctors express the view that the incidence of restless leg syndrome is **exaggerated by manufacturers of drugs used to treat it.**

• The Restless Legs Syndrome Foundation received 44% of its $1.4 million in funding from pharmaceutical groups.

“The pharmaceutical giant Glaxo Smith Kline (GSK) has been reprimanded by an industry watchdog for promoting an **unlicensed drug** to treat the disputed condition of restless legs syndrome.”

(The Sunday Times, August 6, 2006)
Innervation of the Legs

• Innervation of the legs = T12 - S3
• Compression or interference of these nerves can disrupt nerve flow

“In conclusion, our report suggests that restless legs syndrome may occur secondary to spinal cord lesions”

Journal of Neurology
Innervation of the Legs
Neuromuscular Junction

1. Acetylcholine is transported to the axon terminal
2. Acetylcholine binds to its receptor on the muscle
3. Sodium enters and depolarises the muscle fibre
Dopamine and Iron

- The substantia nigra region of the brain is where the dopamine regulating center is located.
- Iron is an essential co-factor for the formation of L-dopa, the precursor of dopamine.
- Most medical research is focused on the dopamine and iron system.
Iron

- Iron is a vital for the proper functioning of dopamine neurotransmitters.
- RLS is commonly associated with iron deficiency, however,
- 75% of individuals with RLS symptoms may have increased iron stores
- Only 1 in 5 RLS patients were actually iron deficient.

- RLS has nothing to do with the amount of iron in your blood, however, there is a direct connection to low iron levels in your brain
Dopamine

• Most RLS sufferers have one thing in common: Their dopamine neurotransmitters aren’t functioning properly.

• Studies indicate that aluminum and other toxins clog receptor sites, causing even further malfunction.
Dopamine Disruptors and Neurotoxins

Aluminum and Glyphosate
Aluminum

• Aluminum is a known **neurotoxin**

• Almost **ALL** Vaccines contain aluminum

• Is directly linked to dementia, autism, and parkinson’s

• Orally ingesting aluminum: body will absorb between 0.2-1.5%

• *Injected aluminum: your body absorbs 100%*

• Fully vaccinated children are exposed to **6,150mcg of**
  aluminum
Adverse Effects of Aluminum

- DNA alterations, abnormal regulation of gene function
- Gene expression interference
- Damages cell membranes
- Disrupts energy metabolism
- Coagulates proteins
- Increased vascular endothelial adhesiveness resulting in increased cardiovascular disease
- Enhanced excitotoxicity in the brain and increased brain inflammation
The Confusion over Aluminum

“Aluminum is considered to be an essential metal with quantities fluctuating naturally during normal cellular activity. It is found in all tissues and is also believed to play an important role in the development of a healthy fetus.”

Dr. Paul Offit, Vaccine Education Center, April 2013

- Dr. Offit holds a patent on a childhood vaccine

“Aluminum is a widely recognized neurotoxin that inhibits more than 200 biologically important functions and causes various adverse effects in plants, animals and humans.”

Dr. Kawahara (International Journal of Alzheimer’s Disease)
Glyphosate

- GE crops absorb glyphosate through direct application and from the soil and **it cannot be washed off**
- Glyphosate has also been found in rivers, streams, air and rain.
- Genetically engineered corn has been found to contain **13 ppm** of glyphosate, compared to zero in non-GMO corn.
  - **13 ppm** is more than **18 times** the "safe" level of glyphosate set by the EPA.
- Organ damage in animals has occurred at levels as low as **0.1 ppm**.
The Mechanism of Glyphosate

• The Shikimate pathway
  • This pathway is absent in all animals which is why Monsanto claims it’s harmless to animals and humans
  • However, the Shikimate pathway is present in bacteria
  • Bacteria outnumber your cells 10 to 1: for every cell in your body you have 10 microbes which will respond to glyphosate

• Causes **extreme disruption** of the microbe's function and lifecycle
• Primarily affects *beneficial* bacteria, allowing pathogens to overgrow and take over
Number of children (6-21yrs) with autism served by IDEA
plotted against glyphosate use on corn & soy

$R = 0.9886$, $p \leq 6.646e-09$
Glyphosate

• In 2009, a French court found Monsanto guilty of lying; falsely advertising its Roundup herbicide as "biodegradable," "environmentally friendly" and claiming it "left the soil clean."

“Glyphosate is possibly the most important factor in the development of multiple chronic diseases and conditions that have become prevalent in Westernized societies."
Dr. Stephanie Seneff, Research scientist at Massachusetts Institute of Technology (MIT)
The Solution

- Relieve Nerve Compression
- Correct Spinal Misalignments
- Regenerate Intervertebral Discs

Movement Increases Dopamine
The Solution

• Detox your Body
  • **Chlorella**: binds to heavy metals and flushes them out of your body
    • Benefits of Chlorella: Repairs Nerve tissue, Improves digestion, normalizes blood pressure

**Magnesium**
• 80% of RLS sufferers are found to be deficient in magnesium
• magnesium malate: able to cross the blood-brain barrier
• Once absorbed, it magnetically binds with aluminum and other toxins that clog dopamine receptor sites, safely flushing these toxins from the body.
The Solution

Probiotics
• helps iron cross the blood-brain barrier
• breaks down vitamins and minerals from food so that they are more bio-available and useful to the body

Folic Acid
• A vitamin B complex and a key component to nerve health
• Allows for clearer communication between neurotransmitters within your cells.

Vitamin E
• improves circulation in the legs
• Protect nerves: involved in maintaining the myelin sheath
The 5 Keys to Health and Healing

- Proper nerve supply
- Regular Exercise
- Proper Nutrition
- Sufficient Rest
- Prayer and Meditation
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