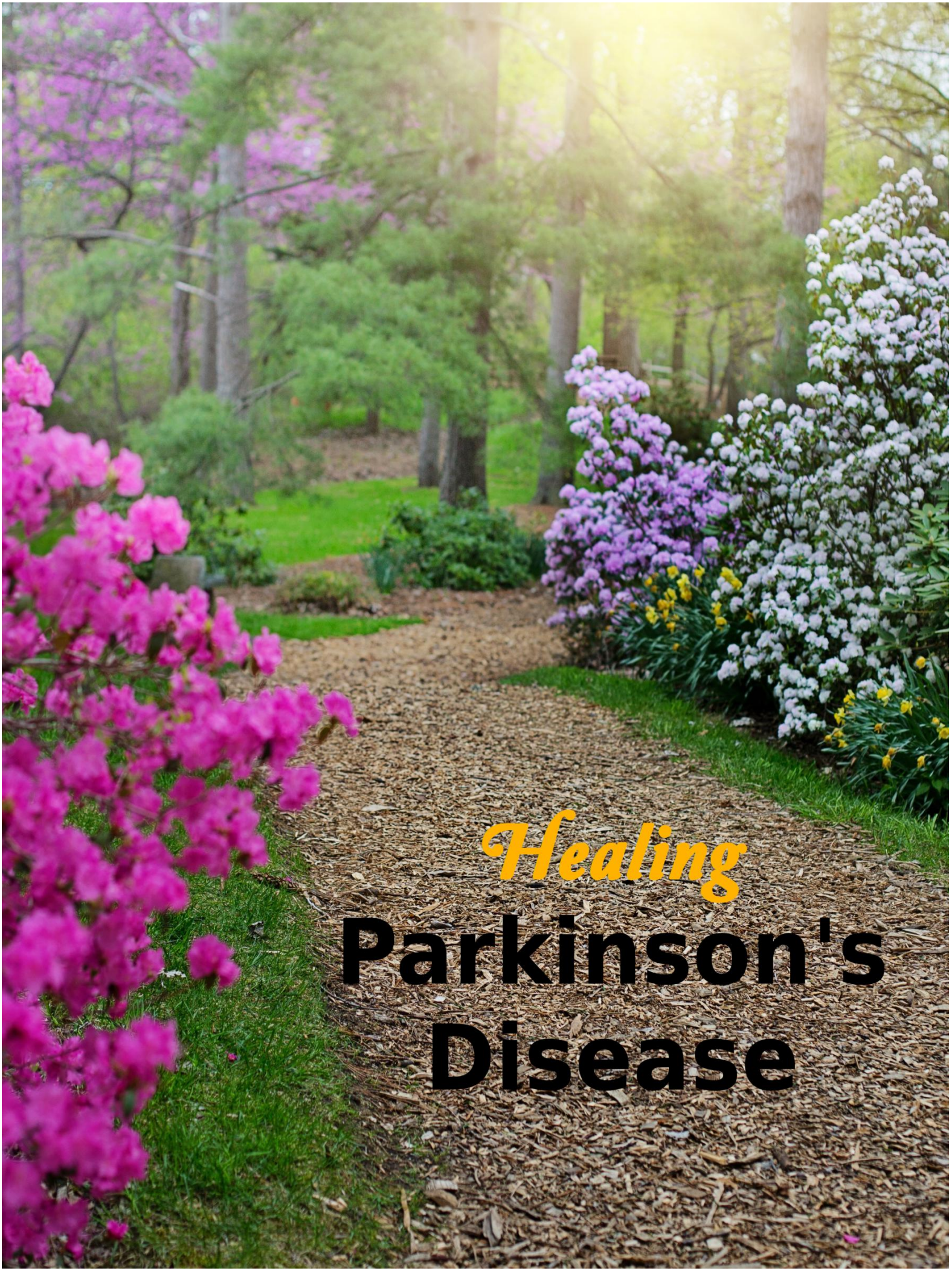

Healing
Parkinson's
Disease

Healing Parkinson's Disease

Information contained in this paper is for educational purposes only.
It represents my studied conclusions only and does not constitute personalized medical advice.

Compiled 2022 - by Dallas Roberts *Medical Detective*

Contents

The Medical Community's Description

According to many official sources, Parkinson's disease (PD) is a degenerative disease that affects the nervous system. It is the progressive degeneration of the dopaminergic neurons in the substantia nigra of the brain that can lead to altered motor movement. It is one of the most common debilitating diseases in the US. The medical system claims that the underlying cause of Parkinson's is unknown, but symptoms appear when there is a lack of dopamine in the brain.

Primary Parkinson's is where the cells that manufacture the dopamine are damaged or destroyed.

Secondary Parkinson's is where the various dopamine receptors are somehow blocked, interfering with dopamine's action in the brain.

Because the medical community freely admits the cause of Parkinson's is unknown, they know of no cure for Parkinson's. Treatments and drug therapy are only focused on relieving symptoms to try to improve quality of life temporarily, but as the disease progresses, the efficiency of the drugs deteriorate and become less effective. Medical authorities have several theories about the cause of Parkinson's, but to date, none of them have been proven.

Symptoms of Parkinson's begins with mild to moderate tremors of the hand or hands while at rest, a general heavy and slow feeling, muscle stiffness, and tendency to tire easily. Later symptoms may include rigid muscles, drooling, loss of appetite, a stooped posture, a shuffling gait, tremors such as the characteristic "pill rolling" movement, impaired speech, and fixed facial expression. The body gradually becomes rigid and the limbs stiffen. Depression and/or dementia may accompany symptoms.

Parkinson tremors are most pronounced during rest. The tremors can be aggravated by tension or fatigue, and though there may be problems with Parkinson's patients having a hard time sleeping, if they do go to sleep, the tremors generally disappear during their sleep time.

What is Disease?

First of all, God states that there is no such thing as an "incurable disease."

*"Bless **the LORD**, O my soul, and forget not all his benefits: Who forgiveth all thine iniquities; who **healeth all thy diseases**;" Psalm 103:2-3*

When God says "All" - He means "All!" Therefore, I believe that **ALL** diseases, including Parkinson's, are curable. That simple text shows that even though man's medical system and man's supposed wisdom believes there is no cure for Parkinson's - the *Great Physician* already has the "cure."

God's methods of healing disease can be summarized as eight natural remedies (**Fresh Air**, **Exercise**, **Water**, **Rest**, **Temperance**, **Diet**, **Sunshine**, & **Trust in God**).

As a health reformer from the late 1800's correctly stated,

*"**Pure air, sunlight, abstemiousness, rest, exercise, proper diet, the use of water, trust in divine power--these are the true remedies**."*

Ministry of Healing p.127

It is important to realize that there is no such thing as an "effect" that does not have a "cause" - every "effect" has a "cause" that led to it. This means that the "cure" for any disease, is not to fight or attempt to remove symptoms with the man's poisonous drugs, but rather to use the symptoms as a "diagnostic tool" to ascertain what the original cause of the disease is - and then cure the disease by removing that cause!

Disease is exactly what it says in it's name, *Dis-Ease* (something in the body is not "at ease").

What the modern medical community like to call "symptoms" are simply nothing but "distress calls" from the body, attempting to explain just what the problem is, and showing the body's natural attempt to try to fix the problem itself. Let me state the definition of disease in other words -

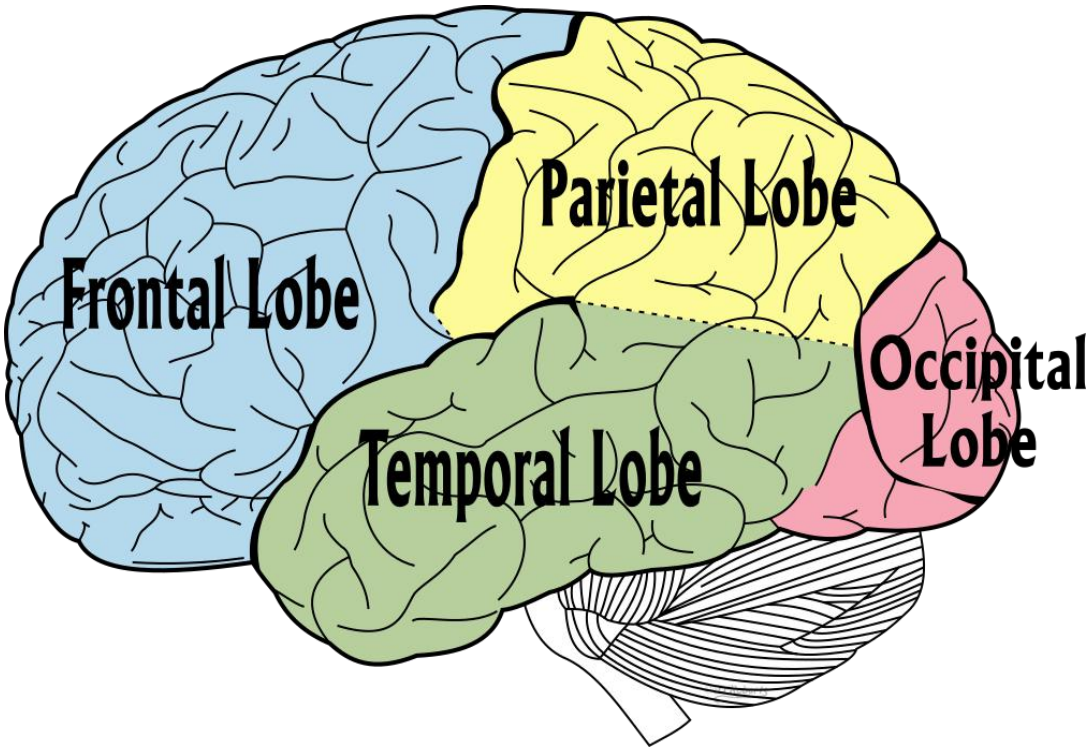
"Disease" is an effort of nature to free the system from the conditions that result from the violation of the laws of health!

That single statement means that it is possible for God to cure *Any* and *All* Diseases - if His laws of health are obeyed and followed.

Parkinson's Mechanism of Action

In order to understand what is happening to a person's "motor movement" (their body's ability to move) in Parkinson's, it is necessary to understand what functions of the brain are effected, and what those functions do in a healthy person who is not suffering from Parkinson's.

The basic functional cells of the brain are called neurons, and neurons function together by exchanging electrical signals with each other. Each neuron releases its electrical signal in response to chemical stimulation from chemicals known as neurotransmitters. This means that the primary functions of the brain, that run the entire body, are complex combinations of chemical and electrical signals.



These are the main lobes of the human brain.

If the outside of the brain was transparent, and we could see through it, we would see these parts deep inside the center of it. The parts in light & dark purple are collectively known as the Basal Ganglia.

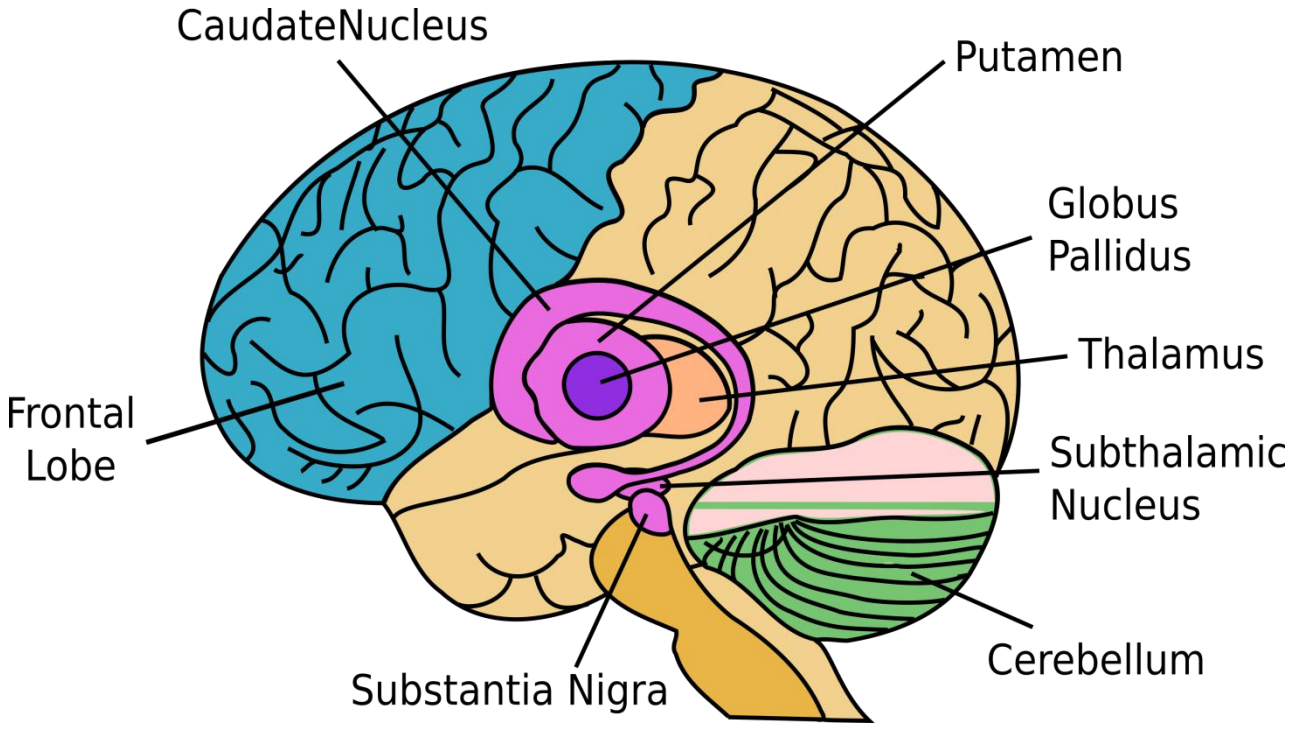


Figure 1

Below is a picture of the human brain (Figure 2) if it is sliced in half from side to side (Ear to Ear) & the parts in green are the various parts comprising the Basal Ganglia (a cluster of nuclei deep inside the brain).

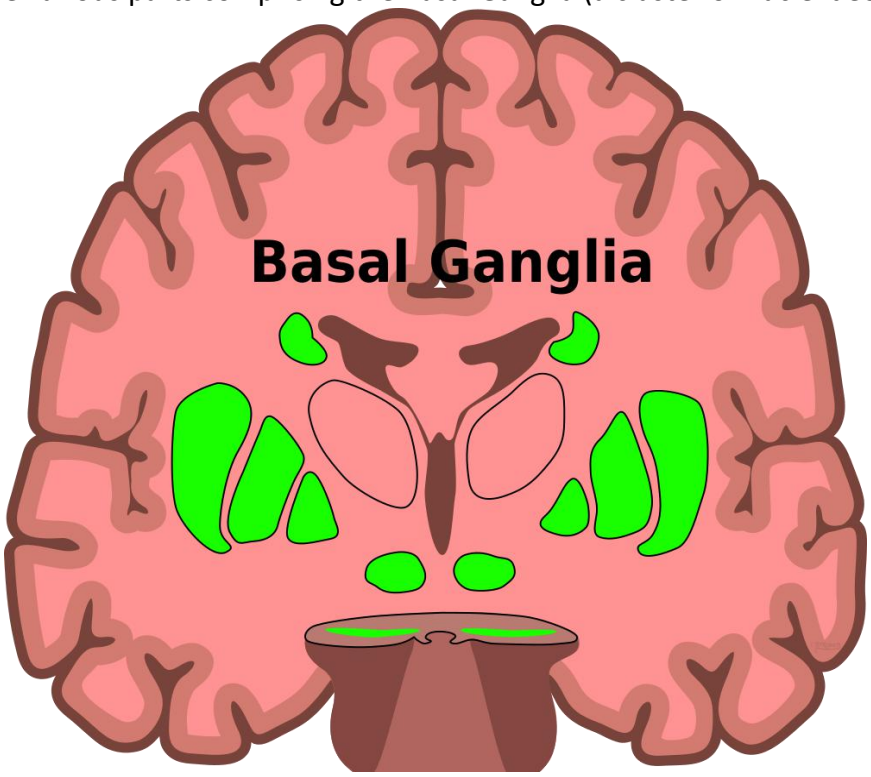


Figure 2

The different colored parts shown below in Figure 3, show the various parts of the Basal Ganglia of the brain that are involved with the motor movement problem among Parkinson's sufferers. (Both sides of the brain contain a Putamen, a Globus Pallidus External/Internal, etc. - while things like the Thalamus, which isn't part of the Basal Ganglia, are a single part in the center of the brain, but the act of slicing the brain in half makes it appear as two separated pieces.)

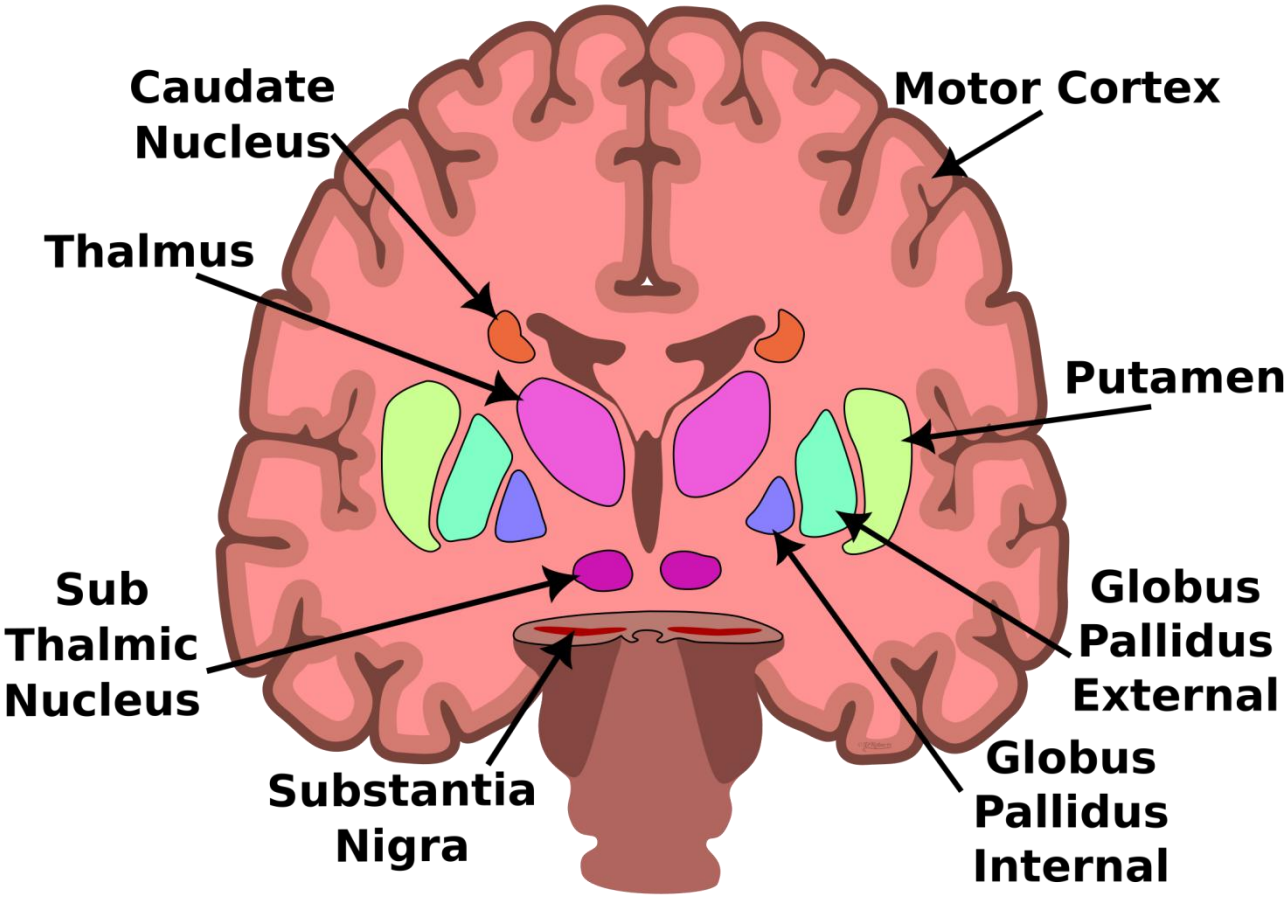


Figure 3

If a person wants to move their hand, the signal must first travel to the Thalamus, which is the "gate-keeper" so to speak, of the brain, it lets signals in and out of the brain. It is the Thalamus that will make the final decision to move the hand or not.

(Now don't let yourself be overwhelmed with all the big "scientific-sounding" names, just concentrate on getting a basic understanding of the process involved - this is the purpose of including the pictures, to help you (the reader) get a visual idea and picture of what is taking place in this process.)

The thought, that you want to move your hand, originates in the prefrontal cortex of the brain (the frontal lobe). This thought is then sent as a signal (aka "action potential") to the cerebral motor cortex of the brain. *(An "action potential" is the chemical/electrical signal that flows through the length of the neuron.)* But before the motor cortex can send the signal to the muscle of the hand telling it to move, it must first get permission from the Thalamus by, in essence, asking the Thalamus, "Can I move my hand?"

In order for this to happen, the motor cortex sends two signals or "action potentials" via two different pathways, a "*direct*" pathway and an "*indirect*" pathway. This action potential "signal" travels through neuron fibers to a cluster of neurons in the basal ganglia of the brain (see Figure 4 below).

For simplicity's sake, the two different pathways are shown separate on different sides of the brain in this picture - but in reality, they are both happening simultaneously on both sides of the brain.

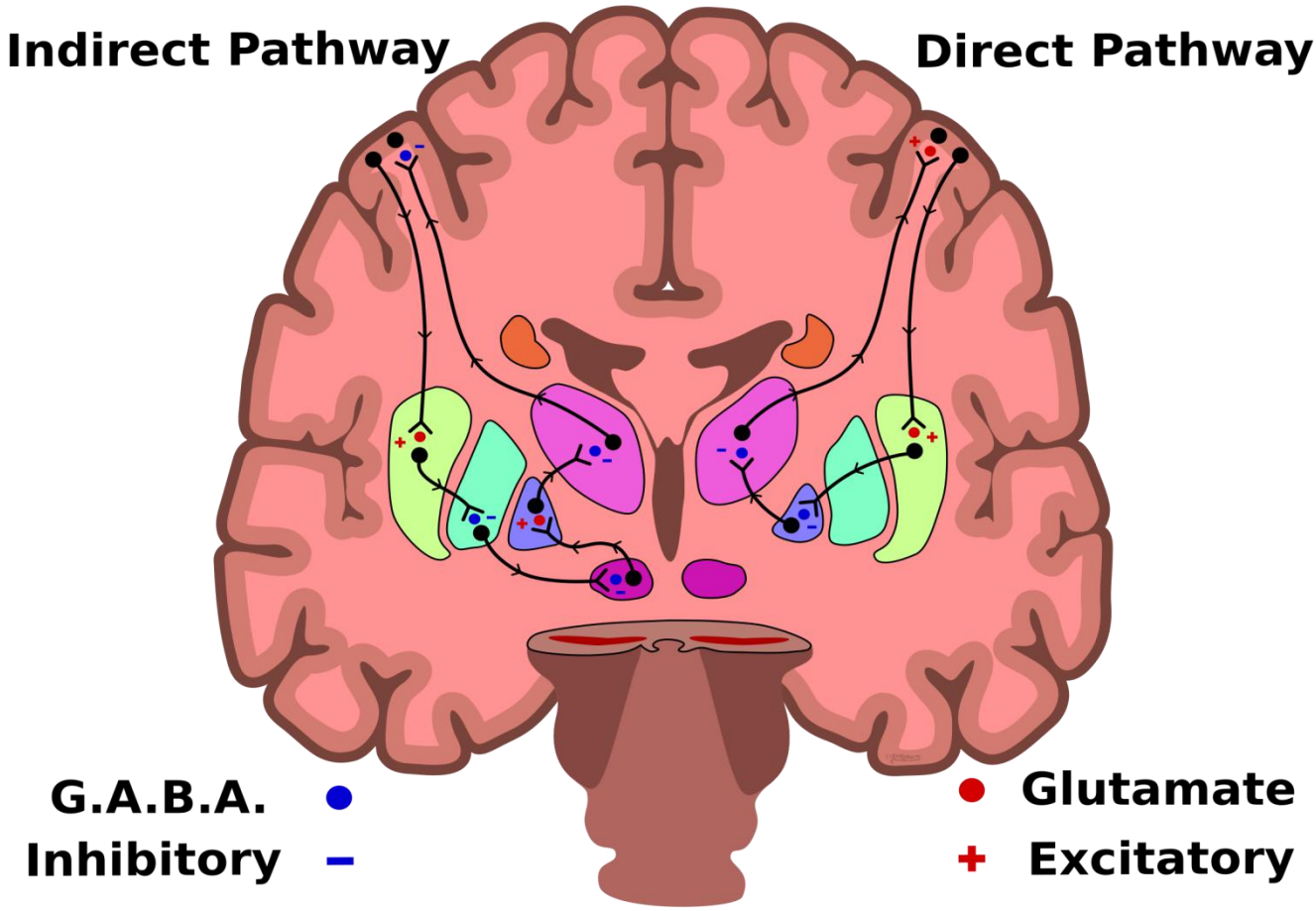


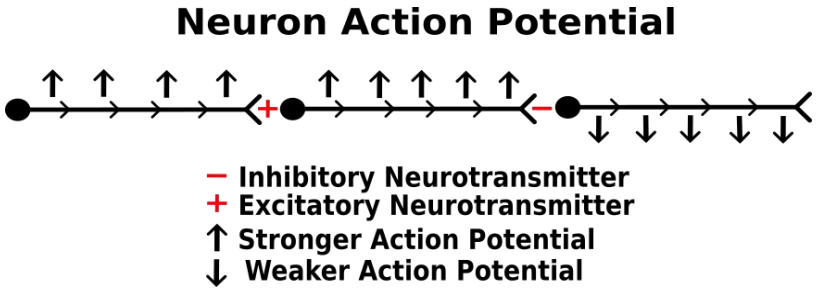
Figure 4

The cluster of neurons that get the signal from the motor cortex is called the striatum or the striate nucleus. The striatum is a critical component of the motor system, coordinating multiple aspects, including both motor and action planning, and it serves as the primary input to the basal ganglia. The striatum itself is made up of both the caudate nucleus and the lentiform nucleus, and the lentiform nucleus is made up of the putamen, the external globus pallidus, and the internal globus pallidus (see Figure 3 again).

The signals from the motor cortex arrive at the putamen of the lentiform nucleus, and here is where the two signals take different pathways (see Figure 4).

The neurons from the motor cortex release the neurotransmitter Glutamate onto the Gabergic neurons in the putamen (the name *"**Gabergic**" simply means the neuron releases the neurotransmitter G.A.B.A.*). Glutamate is a excitatory neurotransmitter, so it stimulates these gabergic neurons to send a stronger action potential on to it's destination. But one of these neurons goes to the external globus pallidus and one goes to the internal globus pallidus.

The one that travels to the internal globus pallidus is the "Direct" pathway, the one that travels to the external globus pallidus is the "Indirect" pathway. Here is a picture to illustrate how the action potential changes from stronger to weaker or vice-versa, depending on the neurotransmitter released.



When the strong action potential on the direct pathway reaches the internal globus pallidus, that excited Gabergic neuron releases a lot of the neurotransmitter G.A.B.A onto the Gabergic neuron which connects from the internal globus pallidus to the Thalamus. But G.A.B.A. is usually an inhibitory neurotransmitter - so because a lot of it has been released, it inhibits the action potential (signal strength) of the neuron traveling to the Thalamus, so that when the signal arrives at the Thalamus, the inhibited neuron releases only a very little G.A.B.A. onto the neuron in the Thalamus, in effect, releasing the Thalamus neuron from inhibition (Figure 5).

In other words, a small action potential that results in low amounts of G.A.B.A. being released, tells the Thalamus to send a stimulated (or stronger action potential) signal back to the motor cortex stating in essence, "Yes, that is good, go ahead and move your hand!"

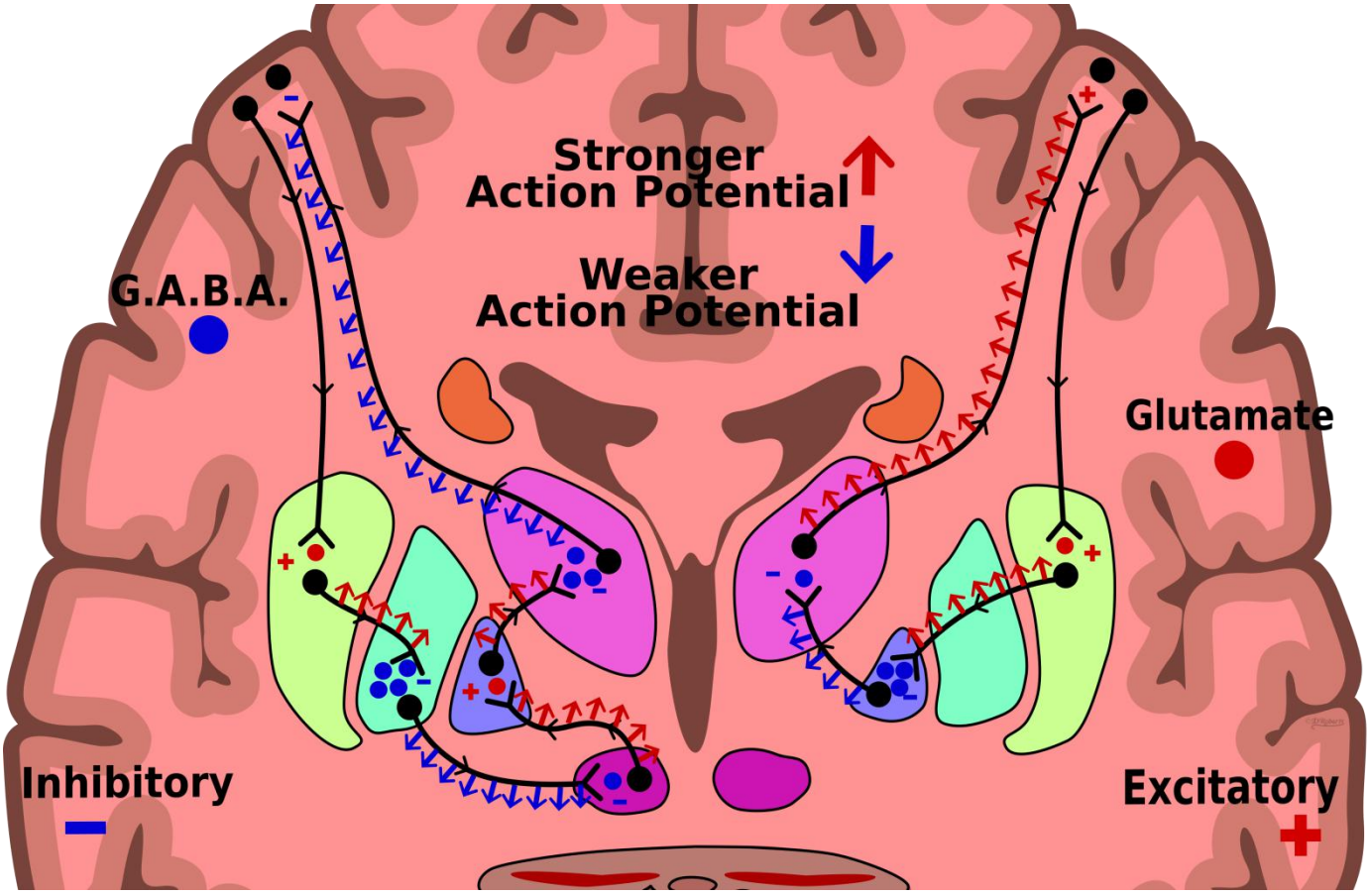


Figure 5

When the signal on the Indirect pathway reaches the external globus pallidus, that stimulated Gabergic neuron releases a lot of G.A.B.A. which inhibits the action potential which travels to the sub-thalamus. When that Gabergic neuron releases only a small amount of G.A.B.A. to the sub-thalamus neuron, that triggers it to send a strong action potential to the internal globus pallidus where it releases Glutamate. The excitatory effect of Glutamate on that Gabergic neuron causes a strong action potential to be then sent to the Thalamus, which then in turn causes the Thalamus to send a weaker action potential to the motor cortex stating in essence, "No, that is not OK, don't move your hand!"

SUMMARY: So with each thought of moving your hand, there are two signals being given by the Thalamus,

1) Yes, move your hand (a strong signal) and,
2) No, don't move your hand (a weaker signal).

The final resulting "decision" of the Thalamus on whether to move the hand or not, is all dependent upon the strength, the frequency, and the number of the various signals it is receiving.

These two signal pathways are important for several reasons, among which is the fact that both signals are cluing in other processes that must work together to make the movement work. For example, if you want to move a finger, the muscles on one side must "contract" while the muscles on the other side must "relax." If you want to flex your bicep muscle, it must "contract" while the tricep muscle on the underside of your arm must "relax." These various opposing signals make all these different things happen.

But how does the brain determine which signal is the main signal? This is where dopamine comes in.

Dopamine works as a hormone in many parts of the body with various other processes. Dopamine plays a role in the "fight or flight" stress response mechanism. Dopamine, in low amounts, works as a vasodilator, causing blood vessels to relax. In high amounts, it works as a vasoconstrictor, causing blood vessels to constrict. Dopamine increases sodium (salt) and urine removal from your body, as well as slows down gastrointestinal (GI) "gut" content movement and it also protects your GI lining. Dopamine also reduces insulin production in the pancreas when needed, as well as reducing lymphocyte activity in your immune system when needed.

In the brain however, Dopamine functions as a neurotransmitter for the purpose of regulating motor movement, memory, pleasurable reward & motivation, behavior & cognition, attention, sleep & arousal, mood, learning, and lactation.

However, Dopamine itself cannot cross the Blood Brain Barrier (BBB) - so this means that any Dopamine used as a neurotransmitter inside the brain, must be manufactured for the brain inside the brain itself.

Dopaminergic neurons (shown in red with green ends in Figure 6) form the pars compacta portion of the substantia nigra and they produce neurotransmitter dopamine which they then carry to the Gabergic neurons in the putamen.

The purpose of the Dopamine is to enhance the motor movement by doing the following.

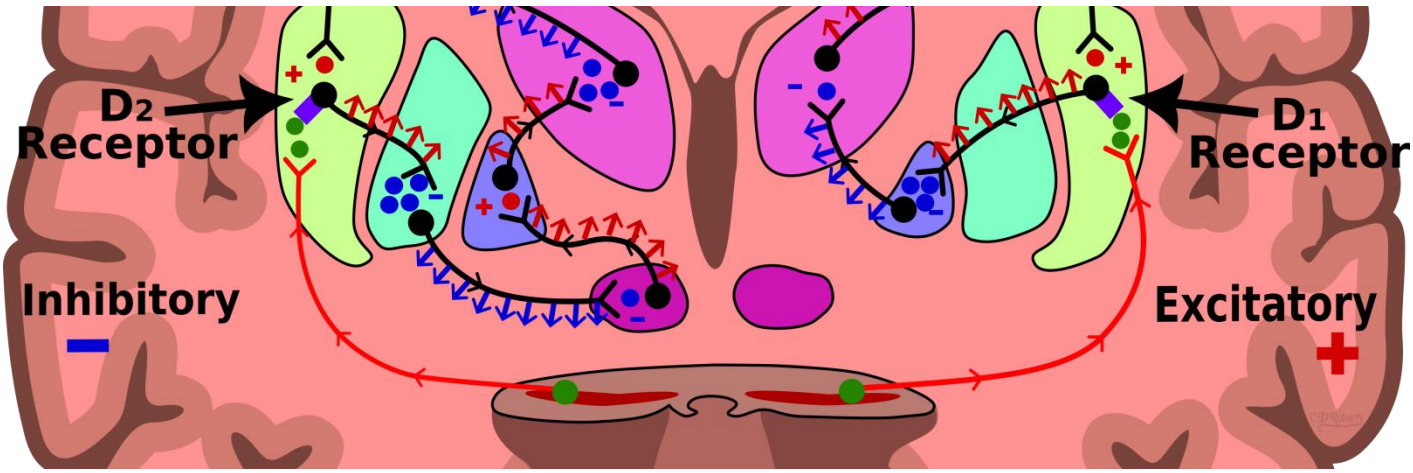


Figure 6

The Gabergic neuron that operates the “direct pathway” has a specific dopamine receptor called a D1 receptor. When dopamine binds to a D1 receptor, it activates a stimulatory pathway causing the direct pathway to have a much stronger signal (action potential). (see Figure 7)

The Gabergic neuron that operates the “indirect pathway” has a specific dopamine receptor called a D2 receptor. When dopamine binds to a D2 receptor, it activates a inhibitory pathway causing the indirect pathway to have a more inhibited signal.

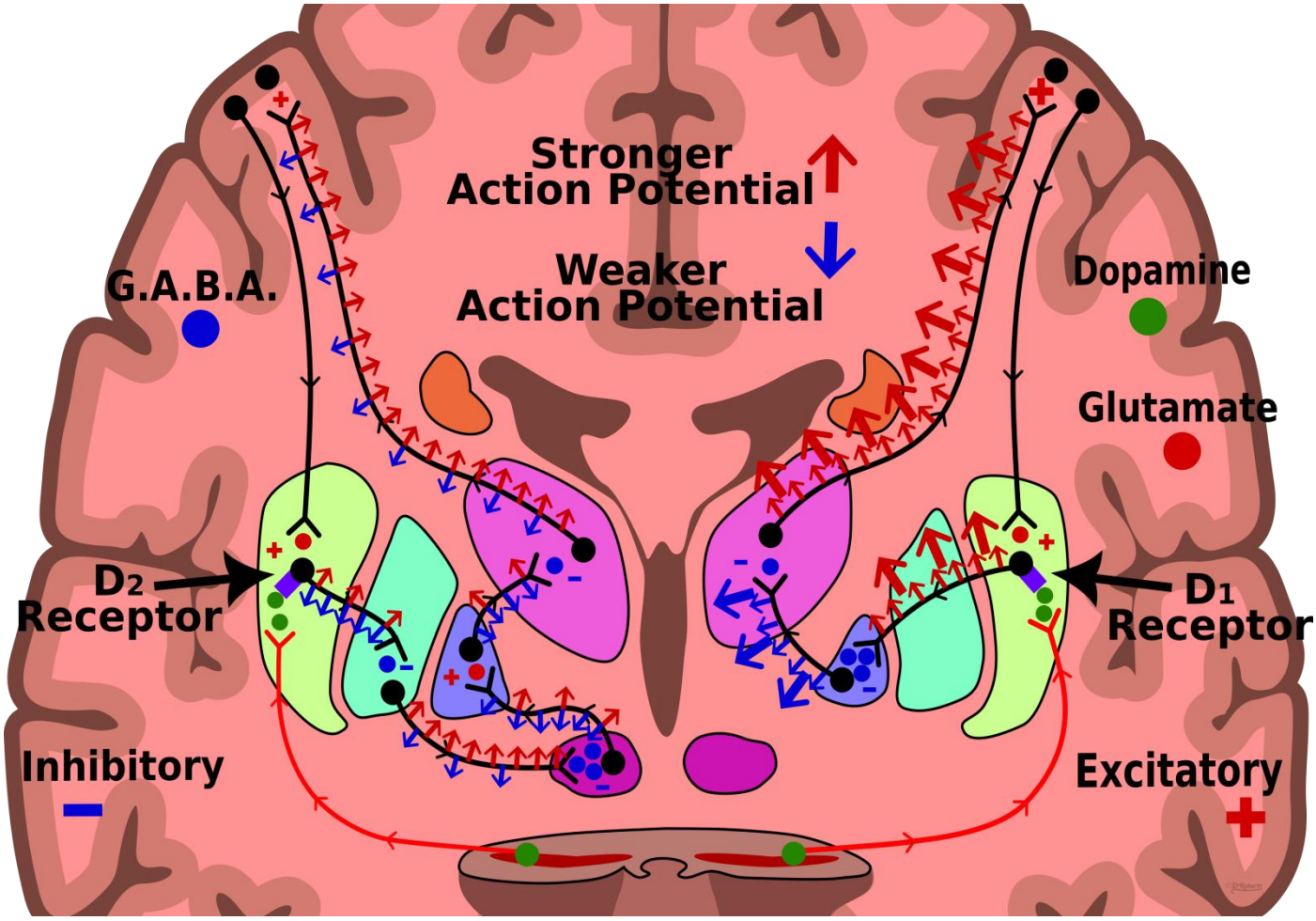


Figure 7

This means that dopamine will “strongly enhance” the direct pathway’s final signal and, by inhibiting the indirect pathway’s inhibited signal, it will “partially enhance” the indirect pathway’s final signal - to produce a strong firm smooth motor movement of the muscle.

In other words, Dopamine triggers the direct pathway to signal a very strong movement signal (**YES**!), and changes the indirect pathway to signal a weaker, but still slightly positive signal (*yes*.).

But, there are also, Cholinergic neurons (shown in gray in Figure 8) in the various parts of the lentiform nucleus, that can release Acetylcholine (shown in light green).

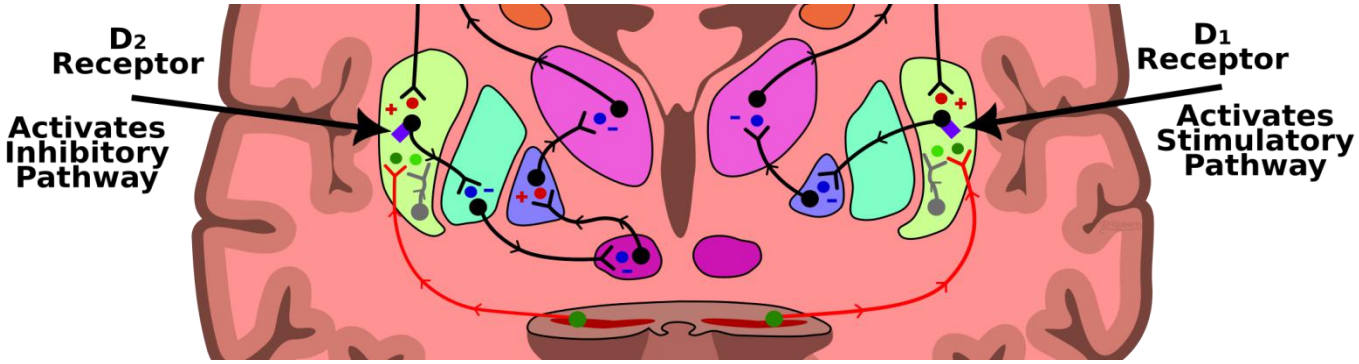
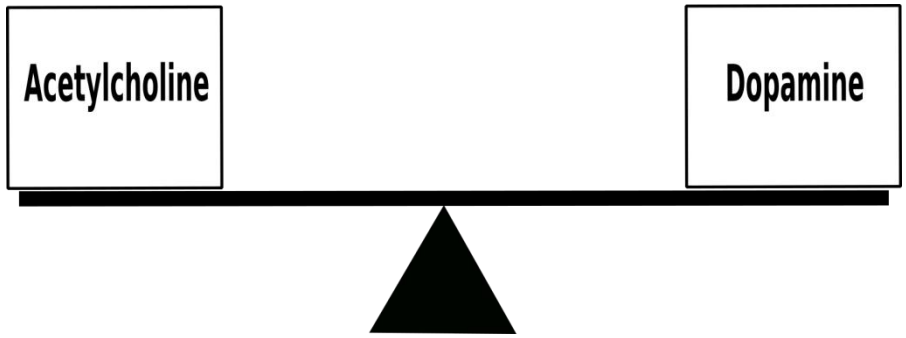


Figure 8

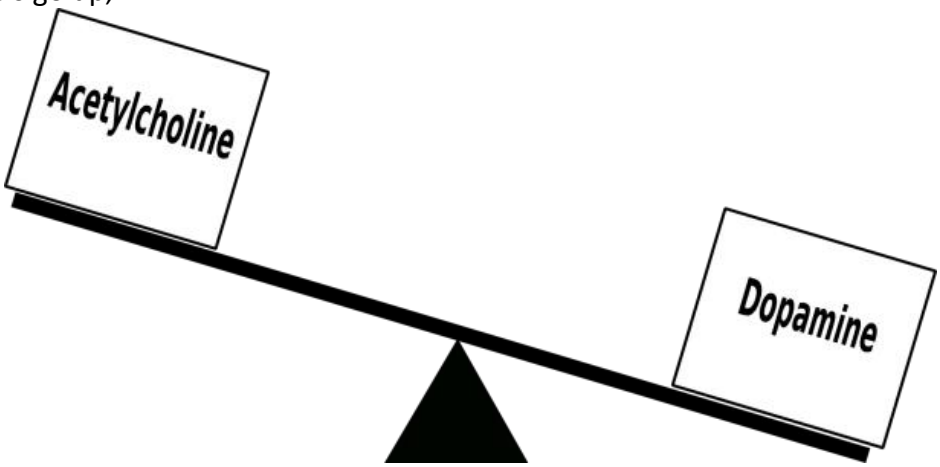
Acetylcholine loves to oppose Dopamine, so since Dopamine is stimulating the already stimulated direct pathway, acetylcholine attempts to inhibit the direct pathway. And since Dopamine is inhibiting the already inhibited indirect pathway, acetylcholine attempts to stimulate the indirect pathway.

This countering of dopamine by acetylcholine also helps regulate the signals when necessary and keep the person's "motor movements" smooth and firm.

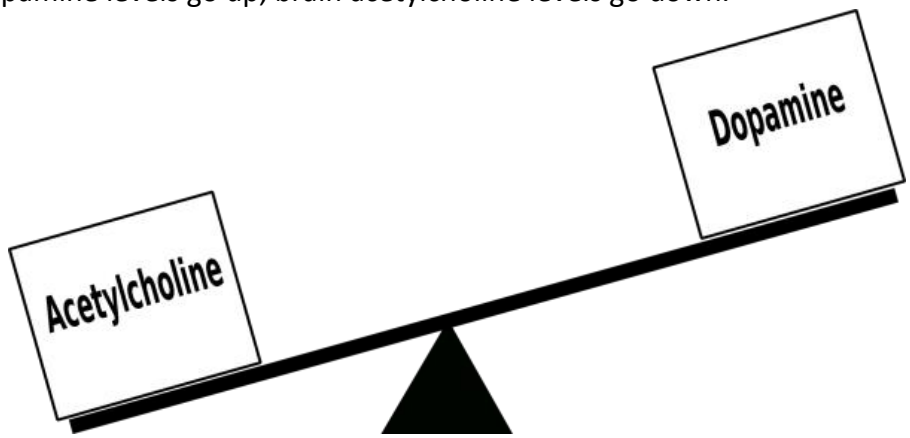
Cholinergic neurons (that release Acetylcholine) and **Dopaminergic** neurons (that release Dopamine) are supposed to be balanced with each other. In other words, they function in the brain on a sort of seesaw principle - with each one balancing the weight of the other one.



But this balancing act shows us, that if the balance is off and the brain dopamine levels go down, brain acetylcholine levels go up,



or if brain dopamine levels go up, brain acetylcholine levels go down.



The importance of this fact will become clear as we proceed.

It is also important to understand how the Dopaminergic neurons make Dopamine in the first place.

Since Dopamine cannot cross the BBB, the Dopaminergic neurons must make Dopamine from components that can come across the BBB. These precursor components to dopamine are the amino acids L-phenylalanine and L-tyrosine. (see Figure 9)

L-DOPA/DOPAMINE PATHWAY

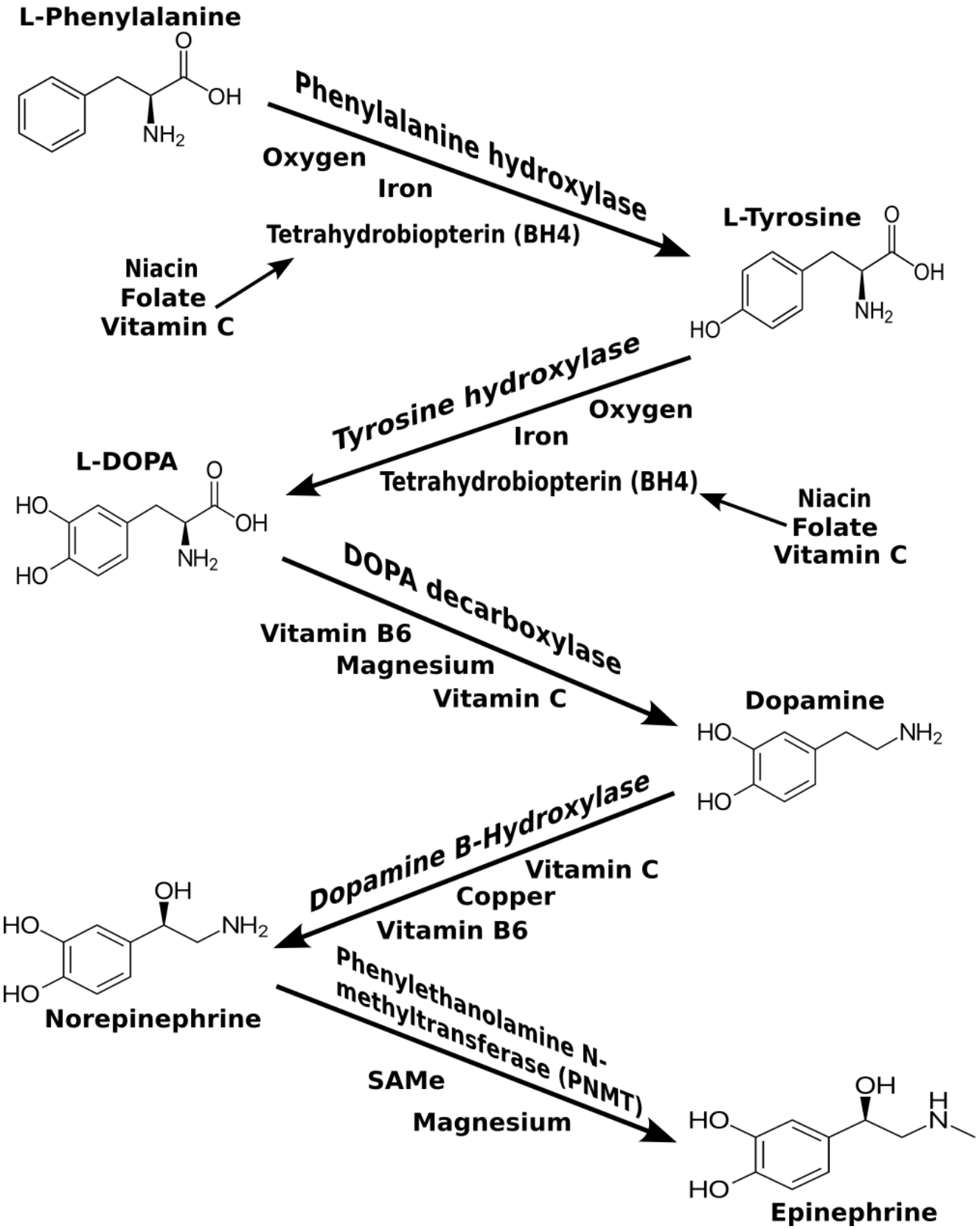


Figure 9

As you can see by Figure 9, the pathway the body uses to make Dopamine in the brain requires several vitally important neurotransmitters and other components in order for it to function properly.

It is much like an assembly line, which builds or adds to a product as it moves down the line. This means that any “shortage” of supply in this line, will stall out the whole process and the functions and “products” will come to a screeching halt.

Phenylalanine is an “essential” amino acid.

That means that the body cannot make it and it must be obtained from the diet - in other words, it is “essential” that you get it from the foods you eat.

Tyrosine is a non-essential amino acid.

That means that, even though tyrosine is also found in foods, if it happens to be lacking in the diet, tyrosine can actually be produced in your body from the phenylalanine that you ate. In other words, it is “non-essential” for you to get it in the foods you eat because the body can make it.

In order for tyrosine to be synthesized (made) from phenylalanine, the liver and the kidneys produce an enzyme with an iron ion at the heart of it. This enzyme is phenylalanine hydroxylase (see Figure 9).

It is therefore necessary to have enough phenylalanine in the system in order to produce tyrosine in the body, and thus, as long as this phenylalanine hydroxylase enzyme is functional and there is a reasonable supply of phenylalanine in the system, tyrosine can be synthesized in your body and does not have to be included in the food that you eat.

Phenylalanine hydroxylase then uses free oxygen (oxygen that is not being utilized by other processes) and a helper molecule (a cofactor) called tetrahydrobiopterin (BH4), along with iron, to convert the amino acid phenylalanine into the amino acid tyrosine.

(Note: Tetrahydrobiopterin (BH4) is made from one of the building blocks of RNA. It is also recycled, meaning that after it has been used, it is then converted back to BH4 by Folate, Niacin, and Vitamin C. This means that the nutrients Folate, Niacin, and Vitamin C are important for the body to keep supplied, because they work to keep the supply of BH4 built up.)

Tyrosine can then cross over the Blood-Brain Barrier via certain amino acid transporters, and then be taken into the dopaminergic neurons. Once inside the neurons, tyrosine is then converted into the amino acid L-DOPA by the action of the enzyme tyrosine hydroxylase, which uses free oxygen along with iron and BH4 as cofactors for this process.

L-DOPA then has a carbon removed off of it by the enzyme DOPA decarboxylase to produce Dopamine.

This Dopa decarboxylase process requires vitamin B6, Magnesium, and Vitamin C.

The dopamine produced by this whole process, is then taken into and stored in a synaptic vesicle (a little membrane pocket or bubble) inside the neuron for future use. (Figure 10)

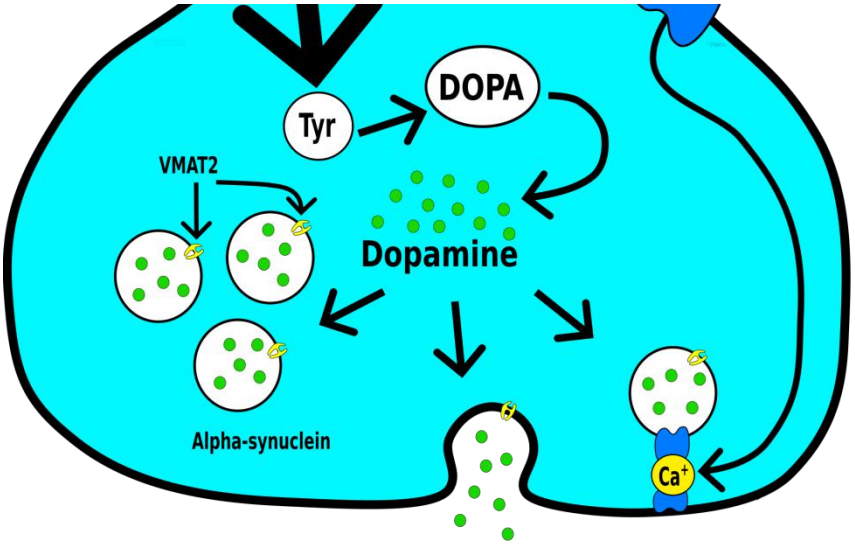


Figure 10

The reason why it is stored in the synaptic vesicle, is not just for its own protection, to prevent the dopamine from becoming oxidized before it can be used, but also to protect the neuron cell itself, because loose dopamine floating around inside the cell can cause the various processes that end up killing the cell.

The dopamine is taken into this protective synaptic vesicle by a protein called vesicular monoamine transporter 2 (VMAT2). The function of VMAT2 itself is affected by the protein Alpha-synuclein. A-synuclein regulates the movement of the vesicles and how they release their cargo into the synaptic cleft. Any failure on the part of one or more of these various proteins and enzymes, or any unbalance in available supplies will derail the entire process and lead to cell death.

On this dopamine pathway, Dr. William Ferril states,

"It should be emphasized that for each neurotransmitter molecule made: one to two Vitamin C molecules are used, one tetrahydrbiopterin unloads, and one SAMe degrades. For these reasons, unless a highly functional molecular re-supply system operates, these cofactors rapidly deplete."

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In other words, in order to get a single molecule of dopamine, the body used up or exhausted among other things at least one or two molecules of BH4, at least one or more molecules of Vitamin C, at least one or more molecules of oxygen, one of magnesium, one of Vitamine B6, and some of iron.

If these nutrients are not kept re-supplied, then the assembly line crashes and cannot produce any more neurotransmitters until the supply is re-established.

Notice also back in Figure 9, that the neurotransmitters norepinephrine (US name) [*noradrenaline* - British name] and epinephrine (US name) [*adrenaline* - British name] are both made from the neurotransmitter dopamine. This means that dopamine is the building block which is necessary for the production of adrenaline which, as we will see later on, has some major significance as far as the Parkinson's condition is concerned.

In this next picture (Figure 11) you can get a very basic visual idea of this phenylalanine to dopamine pathway.

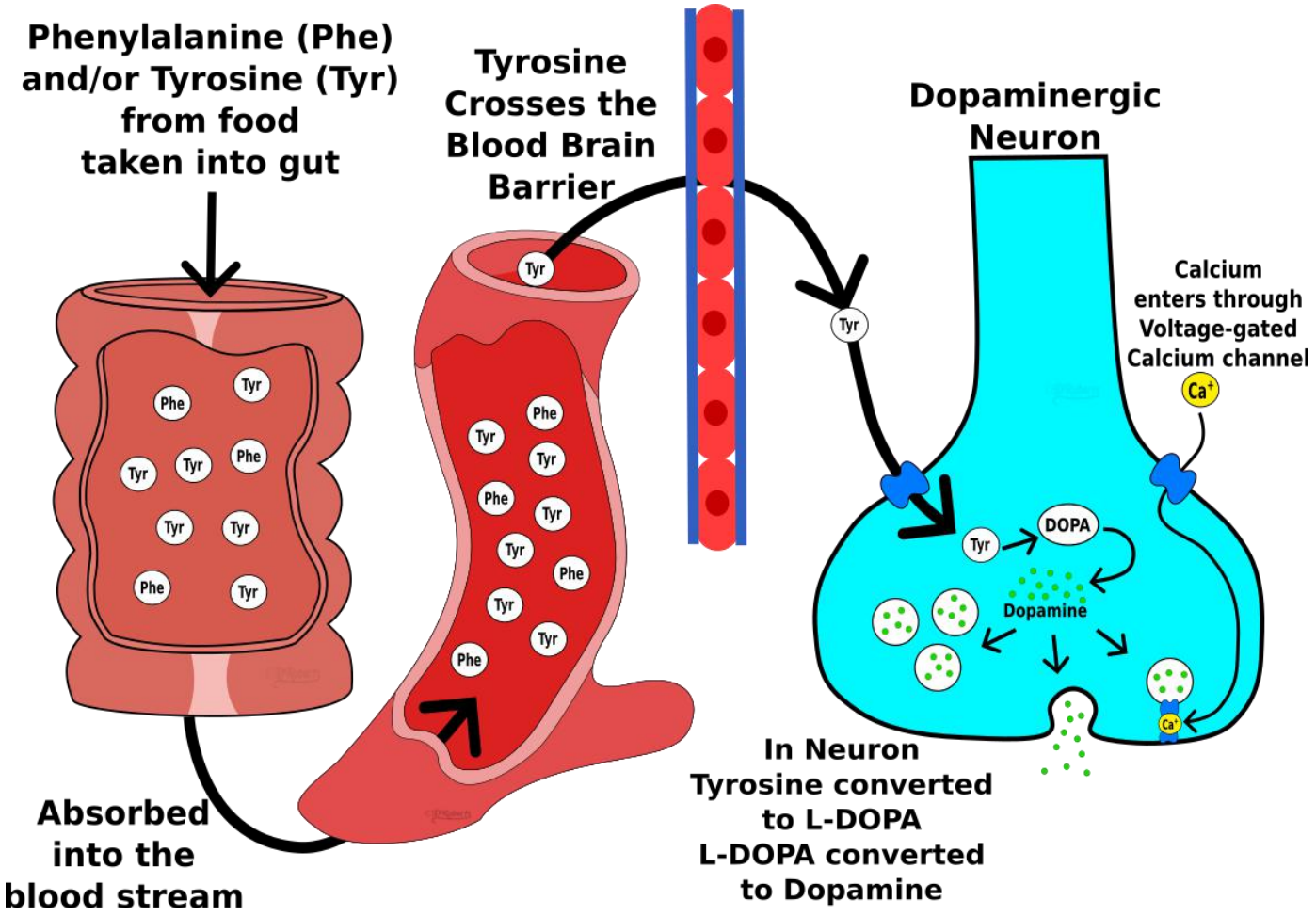


Figure 11

Calcium (Ca^+) also plays a major role in this process, specifically in the release process of the dopamine.

When there is a "call" that requires the release of dopamine, the neuron sends an "action potential" signal down the length of the neuron. This action potential activates specific voltage-gated calcium channels and they open up. This allows Calcium outside the dopaminergic neuron to come rushing into the neuron (see Figure 12 below).

Researchers in Cambridge found that a-synuclein works as a calcium sensor, and when it senses the presence of calcium, it changes its structure and causes the vesicles to come together. The calcium binds to the synaptic protein on the synaptic vesicle that is filled with dopamine and it binds to the synaptic protein on the presynaptic membrane of the neuron.

The calcium then acts as the cross-linking structure to pull the vesicle to the membrane, where the vesicle bilayer (its 'skin' so to speak) merges together with the presynaptic membrane bilayer ('skin') causing the vesicle to release its cargo of dopamine into the synaptic cleft (small space between neurons).

A 2017 article in Nature Neuroscience, *α-Synuclein promotes dilation of the exocytotic fusion pore*, points out that,

"...both overexpressed and endogenous synuclein accelerate the kinetics of individual exocytotic events, promoting cargo discharge and reducing pore closure ('kiss-and-run'). Thus, synuclein exerts dose-dependent effects on dilation of the exocytotic fusion pore."

In other words, a-synuclein controls the speed and rate of the vesicles dopamine discharges into the synaptic cleft, as well as controlling the size of the opening produced when the bilayers merge.

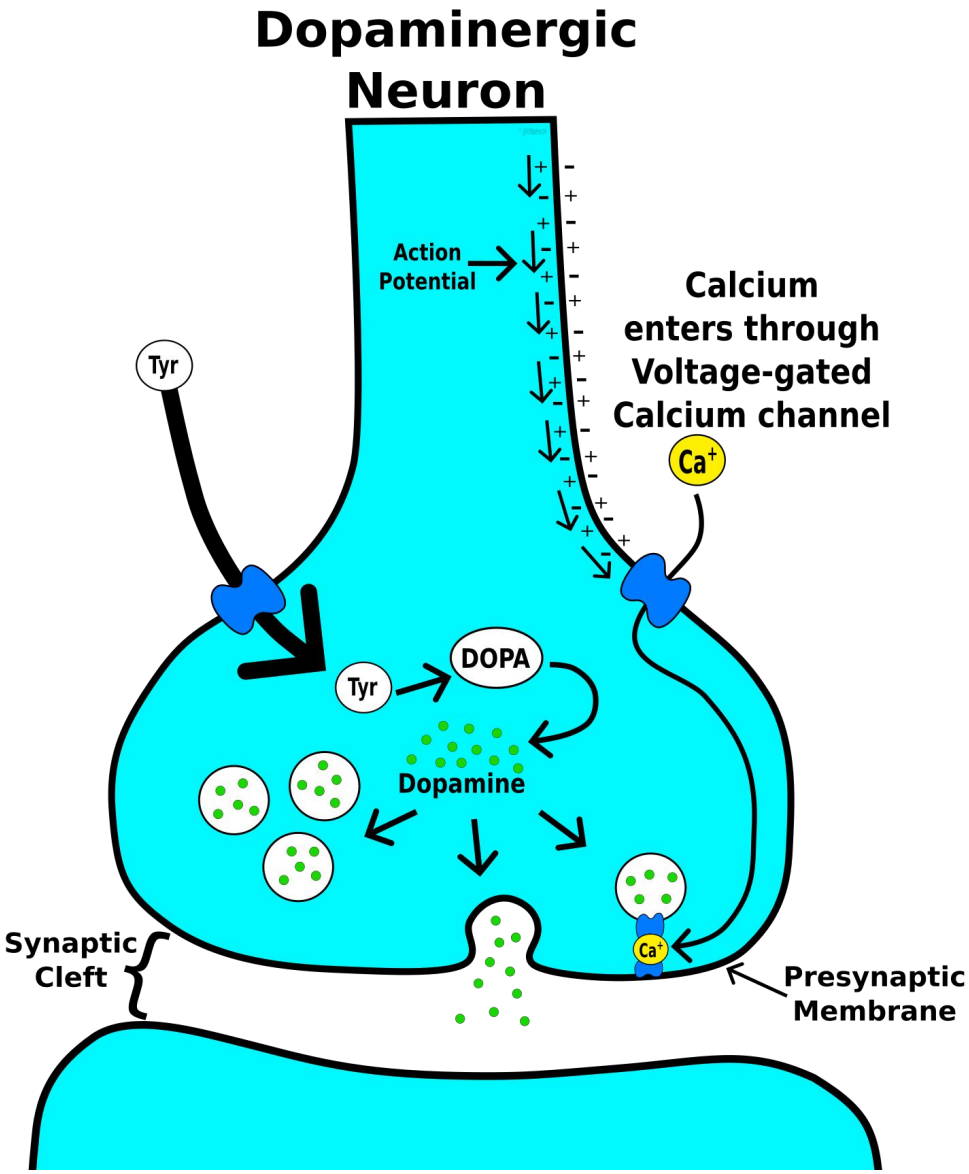


Figure 12

When the dopamine is released into the synaptic cleft, it can bind onto the dopaminergic receptor on the Gabergic neuron. (see Figure 13) The dopaminergic receptor can be either a D1 or a D2 receptor, just depending on which Gabergic neuron it is at. (For illustration's sake, both receptors are drawn on one neuron, but in reality, it would be two different neurons in the brain). Once it binds to the receptor, that triggers the Gabergic neuron action potential signal to continue on down the pathway.

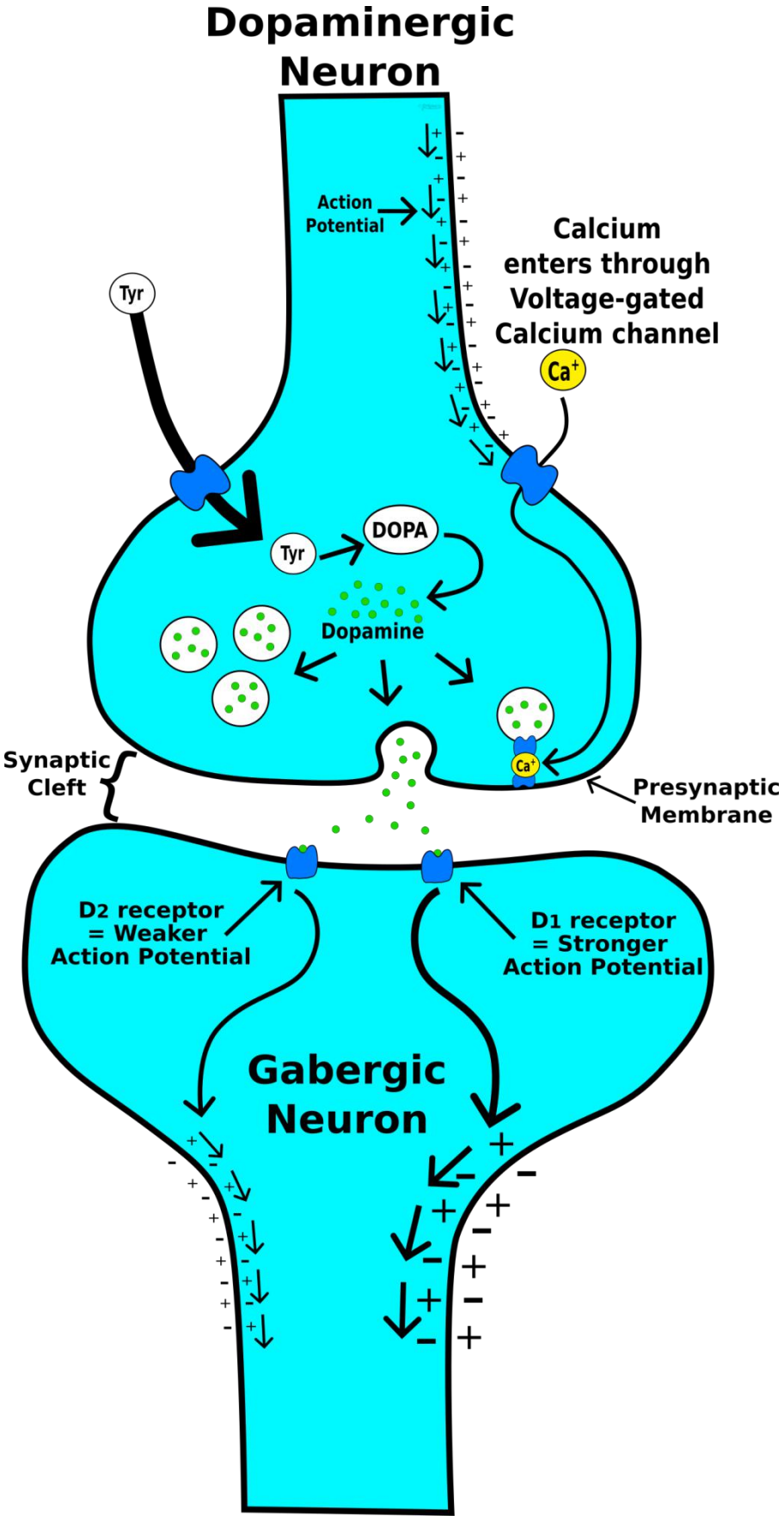


Figure 13

Once the dopamine is done with it's job in the dopaminergic receptor, then it has to go somewhere as it can't stay in the synaptic cleft forever - and there are two mechanisms to remove the dopamine from the synaptic cleft (see Figure 14).

One mechanism is that it can be taken back into the synaptic bulb of the dopaminergic neuron.

If it is taken back into the neuron, some of it can be recycled by putting it back into a synaptic vesicle for reuse, and the rest that isn't needed to be recycled can be broken down by an enzyme called monoamine oxidase B (MAO-B) and then later removed from the body in the urine.

The other mechanism is the enzyme catechol-O-methyltransferase (COMT) which inactivates the dopamine and prepares it for degradation by turning it into 3-O-methyldopamine (3-O-MD).

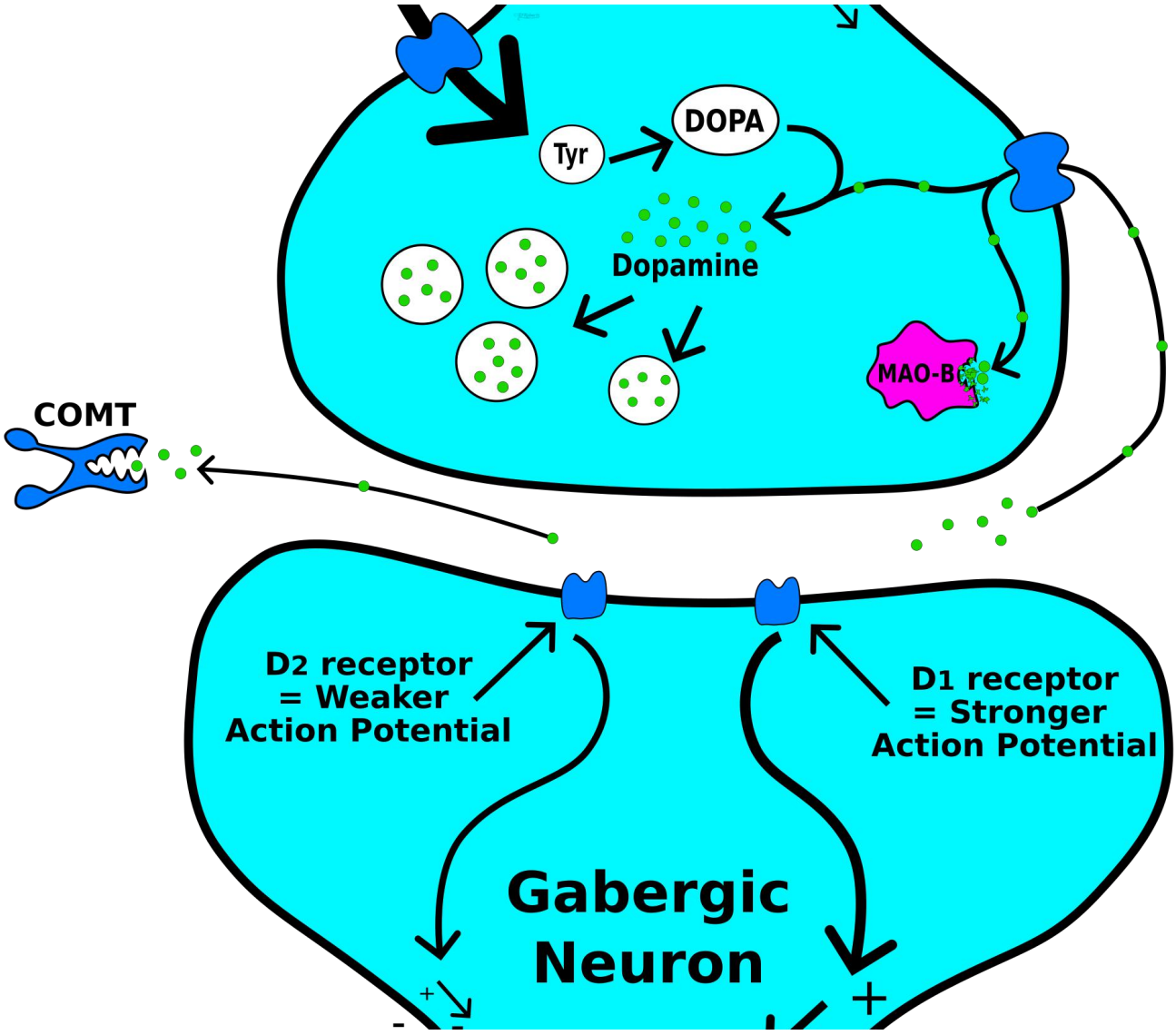


Figure 14

Parkinson's Disease

OK, now that we've seen how all of this various signaling process works in a person who does not have Parkinson's symptoms, it is important to understand that in a person affected by Parkinson's, all this various circuitry becomes partially scrambled.

Many studies have shown that Parkinson's patients do not have the proper amount of dopamine. This means that either the dopaminergic neurons are becoming damaged or destroyed and are therefore not supplying the necessary amounts of dopamine, or there is some problem with the dopamine pathways or with the various receptors, which is either preventing the production of brain dopamine in general or preventing available dopamine from being able to bind to the receptors and perform its function (as shown

back in Figure 7). This causes the Akinesia (the "freezing" or paralysis of muscles) and the Bradykinesia (slow shuffling movements) associated with Parkinson's.

Also, since there is a lot less dopamine in the brain to balance out the acetylcholine, the amount of Acetylcholine goes way up (remember the seesaw principle).

While the proper amounts of acetylcholine are very important and necessary for proper function of various processes, an excess (too much) of acetylcholine in the brain can cause increased salivation, excess secretion of tears, blurry vision, muscular weakness, muscular twitching and jerking, depression, anxiety, and can even lead to liver damage and paralysis.

It is this lack of dopamine and consequential over supply of acetylcholine in the brain signaling process that causes the tremors associated with Parkinson's disease.

Think of it like this.

In a Parkinson's patient, instead of getting a strong signal to move their hand in a smooth steady fashion, the brain is pumping out mixed signals, tons of weak mixed signals per second saying, "***yes move, no don't move, yes move, no don't move, yes move, no don't move***" - this is why Parkinson's sufferers have the shaking hands, the stooped shoulders, and the shuffling walk - their brain signals are at war with themselves so their muscles and bodies don't know what to do or how to react.

Now there are many theories of various different mechanisms for the development of Parkinson's, but the scientific community have not actually "proven" many of these theories, nor have they been able to narrow the theories down to a single cause or real issue.

I believe the reason for this is simple - I believe Parkinson's is not a single-cause disease!

In other words, I believe that there are many imbalances, many "broken" processes, that can display the symptoms the medical community refers to as Parkinson's.

But I also believe that enough has been learned of the mechanisms behind the common symptoms for us to use some good old common sense and reasoning that will help us make some very beneficial observations and gain an understanding of what steps to take in each case to correct the problem.

In a study published in the September 7, 2017 edition of the journal *Science*, skin cell samples from both Parkinson's patients and healthy people were taken, and the cells were reprogrammed in the lab to turn into stem cells, from which the researchers then grew brain neuron cells. The lab-grown neurons from the healthy people's skin showed no symptoms of Parkinson's, but the skin cell derived neurons from the Parkinson's patients developed the symptoms of Parkinson's. The fact that these same symptoms developed from a skin cell instead of a natural occurring neuron, implies that whatever factors are producing Parkinson's disease in a Parkinson's patient - are present everywhere in the body. In other words, Parkinson's is not necessarily just a brain disease - it is a whole body disease - with something causing an imbalance throughout the entire body, which in turn, can show up even in skin cells.

This tells us that, like I mentioned, Parkinson's disease, is not a single-cause disease. I believe there are many different factors that can lead to Parkinson's - therefore, each Parkinson's patient must be dealt with on an individual, one on one, basis. In any single case, there may only be a single "cause" of the disease, or there may be many different factors that when added together produce the disease. This 2017 study also tells me that if we correct the whole body problems that are involved with this Parkinson's condition, the body will be able to heal itself and the disease symptoms will go away.

Now since Parkinson's takes years to develop and worsen, nobody should think that they are going to completely reverse the condition in a couple days. Natural remedies take time and patience to re-balance the system and get things working correctly again. But though it may take a long while to completely heal it, any improvement done to the health of the body will be a step in the right direction - that of true healing!

Treatment

Now the modern medical system's "False Method" of dealing with the disease, true to their standard practice, does not remove the cause - it just uses poisonous drugs to try to kill the symptoms; but to give medicine without first removing the cause of the disease - is nothing but quackery!

"Unless the original cause of any given disease be removed, there is no successful way of obtaining a **permanent cure**; and by the removal of the original cause, perhaps in more than nine cases out of ten, Nature will remove the difficulty without the aid of any kind of medicine. **It is the most consummate quackery to prescribe medicine to cure disease, while the cause that produced it is not abandoned**."

Health, How To Live p.146-147

There are many drugs they use to attempt to alleviate Parkinson's symptoms, but they generally work on many of the same principles, so I'll just mention some of the most common ones. The first of which is actually a combination of two drugs, a drug called Carbidopa, and a psychoactive drug called Levodopa. As is usually the case with man-made drugs, resorting to one drug usually results in having to add others to deal with the problems caused by the first one.

Levodopa is a synthetic (man-made) version of L-DOPA. It is given to the Parkinson's patient with the hopes that it will travel the same path as tyrosine (back in Figure 11) and absorb into the bloodstream, cross the blood brain barrier, get into the neurons, and then be converted into dopamine to be used in the signaling pathway (Figure 15).

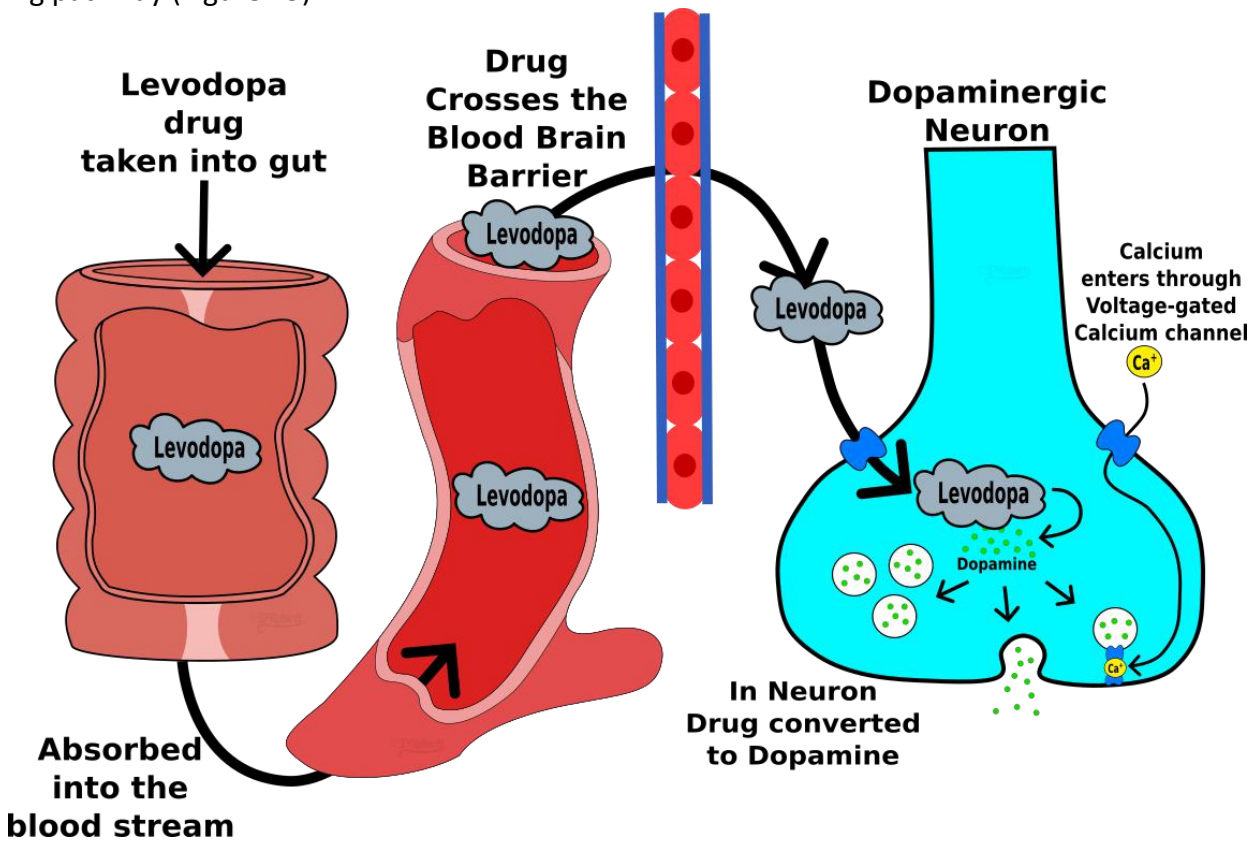


Figure 15

Problem is, none of the man-made drugs fix the initial problem, they only attempt to counteract the symptoms. Since the initial problem isn't fixed, over time, the man-made drugs become less and less effective as the disease progresses more and more. Not to mention the fact that ALL drugs include many known and some not-so-commonly-known effects.

It is important to understand, that the commonly used term "side effects" carries an incorrect connotation. Many mistakenly think that a "side-effect" is just something that was "accidental" or something that won't happen under normal circumstances. But nothing could be further from the truth. What the modern medical community likes to hide behind the deceptive term "side-effects" are in reality very "real effects" that are specifically known to happen in consequence of taking that drug.

The Levodopa/Carbidopa drug for example has been proven to cause many real effects, including but not limited to,

dizziness	*stuffy nose*	*mood changes*	*chest pain*
drowsiness	*common cold*	*confusion*	*cardiac irregularities*
fatigue	*cough*	*depression*	*hypertension*
blurred vision	*muscle pain/weakness*	*suicidal tendencies*	*myocardial infarction*
vomiting	*hallucinations*	*mental*	*hypotension*
nausea	*numbness or tingling*	*delusions/psychosis*	*duodenal ulcers*
dry mouth	*sleep disturbances*	*involuntary movements*	*GI bleeding/pain*
low appetite	*skin rash/itching*	*spasms*	*anemia*
heartburn	*headache*	*dementia*	*leukopenia*
diarrhea/constipation	*blinking/eye twitching*	*convulsions*	*thrombocytopenia*
frequent sneezing	*fainting*	*abdominal pain*	*malignant melanoma*

as well as many other real effects.

Some of these known effects are due to the fact that this drug is not just one drug, it is two, and both of these drugs cause lots of real effects for each one. The reason why there are two drugs given together is because the bloodstream also contains the enzyme DOPA decarboxylase (DDC).

Remember, DOPA decarboxylase (DDC) is the enzyme in the dopaminergic neurons that converts L-DOPA into dopamine (back in Figure 9).

Since DDC is also in the bloodstream, it can act on the Levodopa drug just as soon as the drug gets into the bloodstream and turn it into Dopamine in the bloodstream - and remember, Dopamine cannot cross the blood brain barrier (Figure 16).

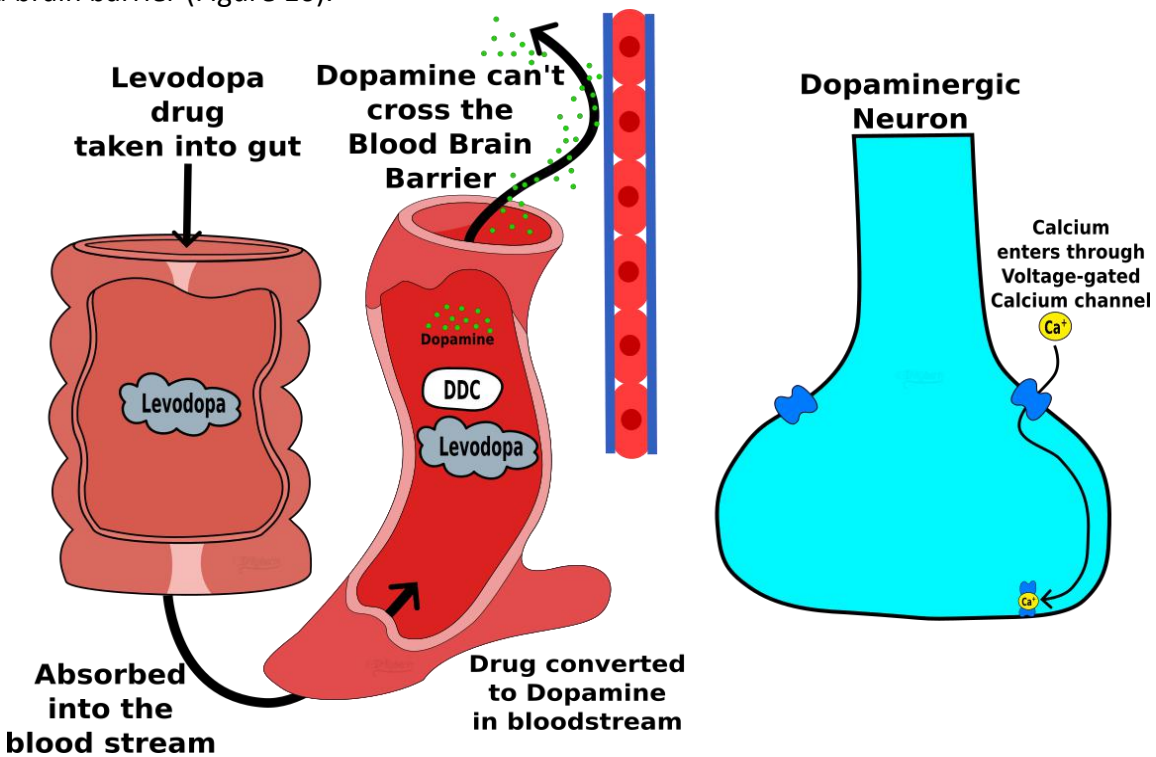


Figure 16

This means that if they only give the Levodopa drug by itself, then it gets converted to Dopamine in the blood, and never makes it into the brain. If the drug doesn't get into the brain, then it can't counteract the Parkinson's symptoms, but that is not the only problem it has. If the drug is turning to dopamine in the bloodstream, this will greatly increase excess dopamine levels in the bloodstream. Excess dopamine in the blood can cause many cardiovascular complications, such as increased heart rate, and it can also cause gut problems and vomiting.

This is why they then decided to add another drug called Carbidopa to the drug potion.

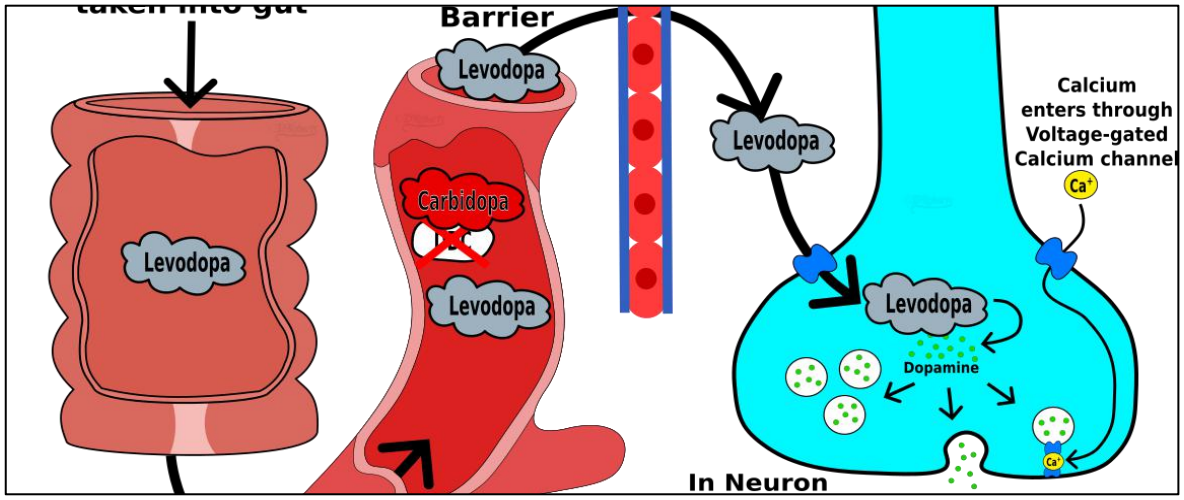


Figure 17

They developed Carbidopa specifically to block the DOPA decarboxylase in the bloodstream and keep it from binding to the Levodopa before it can get across the blood brain barrier (Figure 17).

They believe that Carbidopa in it's prescribed dosage, cannot cross the BBB and therefore can't block the DOPA decarboxylase in the dopaminergic neurons, but if it was to somehow get across the BBB, the potential real effects of Carbidopa could cause the same Parkinson's symptoms it was supposed to control - because it would block the DOPA decarboxylase in the brain and prevent the manufacture of dopamine. *(Remember this concept - because shortly we will discover that there is a very common way this drug and any other toxin in the blood, can easily cross the blood brain barrier.)* Ironically, some studies are also now finding evidence that suggests that levodopa itself produces neurotoxic *"side effects"* (real effects) - causing oxidative stress that subtly speeds up the degenerative process of Parkinson's.

Another problem they have with the drugs - remember the enzyme COMT (back in Figure 14)? COMT is also in the bloodstream, and just like it acts on dopamine, it also acts on the Levodopa drug, to break it down and turn it into 3-O-MD. This causes a problem because 3-O-MD competes with the remaining Levodopa for entrance through the BBB - thereby preventing the Levodopa from getting across the BBB and into the brain. (Figure 18)

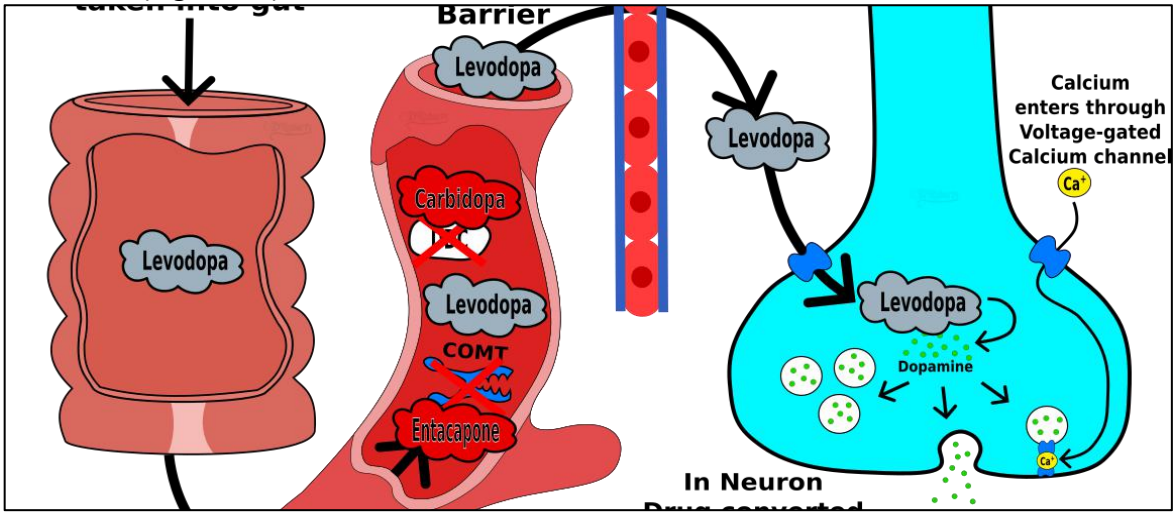


Figure 18

So they have another drug, which is called Entacapone which they can give to inhibit the COMT enzyme so that more Levodopa will get into the brain.

Of course, Entacapone can also cause, among other things,

hives	stiff (rigid) muscles	restless muscle movements in eyes, tongue, jaw, or neck
difficult breathing	high fever	increasing Parkinson symptoms
swelling face/lips/tongue/throat	sweating	muscle pain
agitation	fast or uneven heartbeats	tenderness/weakness
confusion	tremors	unusual tiredness
unusual thoughts or behavior	feeling like you might pass out	dark colored urine
hallucinations	severe diarrhea	

as well as many other real effects.

There is also the drug Tolcapone which is used for the same purpose as Entacapone, however, they usually don't use Tolcapone as frequently because it was proven to destroy the liver much faster than Entacapone.

Drugs that destroy the liver - that is no surprise. Any time someone uses a man-made product to "block" or "hinder" the natural processes of the body - there will be serious consequences that develop - either in the immediate treatment or at a future time.

Notice how resorting to one drug makes it necessary to add more drugs. This is the way the pharmaceutical companies make their money.

And after all the drugs and drug effects have been suffered - the problem still isn't fixed!

We are specifically warned,

*"**Drugs never cure disease**; they only change its form and location. . . . When drugs are introduced into the system, for a time they seem to have a beneficial effect. A change may take place, but the disease is not cured. It will manifest itself in some other form. . . . The disease which the drug was given to cure may disappear, but only to reappear in a new form, such as skin diseases, ulcers, painful, diseased joints, and sometimes in a more dangerous and deadly form. . . . Nature keeps struggling, and the patient suffers with different ailments, until there is a sudden breaking down in her efforts, and death follows...**Medicines have no power to cure**, but will most generally hinder nature in her efforts. Medicine deranges nature's fine machinery, and breaks down the constitution. **It kills, but never cures**." Healthful Living p.243-244*

*"**To practice the use of drug medication does not harmonize with faith**. Appealing to worldly physicians is dishonoring to God. Those who come to God in faith must co-operate with Him in accepting and using His **heaven-sent remedies,--water, sunlight, and plenty of air**." Paulson Collection p.48*

Contrary to what the medical establishment implies to their patients, Parkinson's disease never originated from a shortage of the man-made drug Levodopa in the body.

Parkinson's symptoms originated before the drug, so therefore, the symptoms come from some sort of imbalance, toxic exposure, or nutritional deficiency in the natural processes of the body. It is foolish for the medical profession to introduce man-made drugs into the "body temple" to supposedly correct a problem that never originated with the "accidental absence" of drugs in the first place.

The medical system likes to use excuses for disease, and make claims like "Well, it is the result of genetics." When they do this, they give the patient the mindset that there is nothing really that they can do, since it must just be "in their genetics." This is foolishness.

A "problem with genetics" simply means there is a flaw in the genetic code - which can just as easily be the result of a bad diet, an environmental toxic exposure, or some other "CORRECTABLE" problem.

It is more than coincidental that "genetic problems" tend to run in families who eat the same flawed diets that their parents ate and practice the same unhealthy habits that their parents did.

Don't fall prey to the "It's Genetic" lie. It makes much more sense to use God's natural remedies to right the system, so that nature itself can correct the problem.

Cure!

God's True Remedy for Healing

First I will share God's 8 prescriptions for healing Parkinson's, and then we'll examine each one. Here is a good acronym to remember. It is GOD'S PLAN for healing!

GOD'S PLAN

Natural Remedies		Scripture Texts	Prescription
G	**G**odly Trust	Gen. 2:16-17; Pro. 3:5-8	Constant = 24hrs/day
O	**O**pen Air (fresh)	Gen. 1:6-7; Ezek. 37:5	continual, as much as possible
D	**D**aily Exercise	Gen. 2:15; Ex. 20:9	at least 30min./day
S	**S**unshine	Gen. 1:16; Eccl. 11:7;	at least 20min./day at rest & facing several hours/day if moving around
P	**P**roper Rest	Gen. 2:3; Ps. 127:2;	at least 7-8 hours of sleep/night some will need more
L	**L**ots of Water	Gen. 2:10; Ex. 23:25;	**Body Weight (lbs) X 0.5 = Y** drink **Y** ozs of water/day *(more if sweating)* **Body Weight (kg) ÷ 7 = Z** drink **Z** 250ml glasses of water/day *(more if sweating)*
A	**A**lways Temperate	Gen. 2:16-17; Dan. 1:8; 1 Cor. 9:25; Php. 4:5	total elimination of all that is harmful (tobacco, alcohol, caffeine, EMF, etc.) & moderation of that which is good
N	**N**utrition	Gen. 1:29; 2:16-17; 3:17-19	well-balanced & plentiful variety of plant-based foods: Fruits, Grains, Nuts, Seeds, Vegetables

There is no disease known to mankind that these eight remedies cannot mend, with the blessing of God!

(Although, in some cases, God may decide to not heal a person immediately or until the resurrection, if He sees that their illness may better glorify God - John 11:1-44, John 9:1-7)

In fact, the Bible tells us a story about a man who was in the later stages of Parkinson's, whom the Great Physician healed in combination with some of these remedies. This story, gives us some important insight into the Parkinson's condition.

*Matthew 9:2-7 And, behold, they brought to him a man sick of the **palsy**, lying on a bed: and Jesus seeing their **faith** said unto the sick of the palsy; **Son, be of good cheer; thy sins be forgiven thee**. And, behold, certain of the scribes said within themselves, This man blasphemeth. And Jesus knowing their thoughts said, Wherefore think ye evil in your hearts? For whether is easier, to say, Thy sins be forgiven thee; or to say, **Arise, and walk**? But that ye may know that the Son of man hath power on earth to forgive sins, (then saith he to the sick of the **palsy**,) **Arise, take up thy bed, and go unto thine house**. And he arose, and departed to his house.*

Notice that this paralytic man was sick with "palsy."

Parkinson's disease is also known by the names, "***shaking palsy***," or "***paralysis agitans***."

Now compare this Bible story with what else we are told about this story.

*"There was a man in the vicinity who was reduced to utter helplessness by **the incurable disease of palsy**. He had **given up all hope** of recovery. But his friends and relatives had heard the gracious instruction of Jesus; they had witnessed his wonderful miracles; they saw that he turned none away, that even the loathsome lepers found access to his presence, and were healed, and they began to hope that the paralytic might be relieved if he could be brought under the notice of Jesus.*

*They **tried to encourage** the sufferer, telling him of the miraculous power of Jesus to cure every malady, of the words of mercy he had spoken to the despairing, and of those who are set free from the power of Satan by a word of his sublime authority. As the palsied man listened to the good tidings, **hope revived** in his heart that he might be relieved of his terrible infirmity. He longed to see Jesus and place himself in his hands. But when he reflected that dissipation had been the main cause of his affliction, **hope sank** for he feared that he would not be tolerated in the presence of the pure Physician. He had loved the pleasures of sin, his life had been a **transgression of the law of God, and his bodily affliction was the penalty** of his crime.*

*He had long before placed his case in the hands of the Pharisees and doctors, entreating their interest and sympathy, hoping that they would do something to relieve his **tortured mind and physical sufferings**. But they had looked coldly upon him and **pronounced him incurable**. They had added to **his woe** by telling him that he was only suffering the righteous retribution of God for his misdemeanors. ...The palsied man had **sunk into despair** seeing no help from any quarter, till news of the miracles of mercy performed by Jesus had **aroused hope** again in his breast. Yet he feared that he might not be allowed in his presence; he felt that if Jesus would only see him and give him **relief of mind** by pardoning his sins, he would be content to live or die according to his righteous will. His friends assured him that Jesus had healed others who were in every respect as sinful and helpless as himself, and this **encouraged him to believe** that his own petition would be granted.*

*...The roof is opened, and the sick man is let down at the very feet of Christ. The discourse is interrupted; the Saviour looks upon that mournful countenance, and sees the pleading eyes fixed upon him with a silent entreaty. ...Jesus acknowledges the **faith** that is evidenced by the sick man's efforts, under such perplexing difficulties, to reach the presence of his Lord, and lifting up his voice in melodious tones, addressed him: "**Son, be of good cheer, thy sins are forgiven thee**." **The burden of darkness and despair rolls from the sick man's soul**; the peace of perfect love and forgiveness rests upon his spirit and shines out upon his countenance. **His physical pain is gone**, and his **whole being is transformed** before the eyes of the astonished multitude. **The helpless paralytic is healed**, **the guilty sinner is pardoned**! He has now received the evidence he so much desired. Yet not here, but at home, when he had repented of his sins and believed in the power of Jesus to make him whole, had the life-giving mercies of the Saviour first blessed his longing heart. The simple faith of the paralytic accepted the words of the Master as the boon of new life. He preferred no further request, he made no noisy demonstration, but remained in blissful silence **too happy for words**.*

*...But Jesus read their thoughts, and, fixing his reproving glance upon them, beneath which they cowered and drew back, addressed them thus: "Why reason ye these things in your hearts? Whether is it easier to say to the sick of the palsy, Thy sins be forgiven thee; or to say, **Arise, and take up thy bed, and walk**? But that ye may know that the Son of Man hath power on earth to forgive sins (he saith to the sick of the palsy), I say unto thee, **Arise, and take up thy bed, and go thy way** into thine house." 2SP 292-297*

*"It required **nothing less than creative power to restore health** to that decaying body. The same voice that spoke life to man created from the dust of the earth had spoken life to the dying paralytic. And the same power that gave life to the body had renewed the heart. He who at the creation "spake, and it was," who "commanded, and it stood fast," (Psalm 33:9), had spoken life to the soul dead in trespasses and sins. The healing of the body was an evidence of the power that had renewed the heart. Christ bade the paralytic arise and walk, "that ye may know," He said, "that the Son of man hath power on earth to forgive sins."*

*The paralytic found in Christ healing for both the soul and the body. The **spiritual healing was followed by physical restoration**. This lesson should not be overlooked. There are today thousands suffering from physical disease, who, like the paralytic, are longing for the message, "Thy sins are forgiven." **The burden of sin, with its unrest and unsatisfied desires, is the foundation of their maladies**. They can find no relief until they come to the Healer of the soul. **The peace which He alone can give, would impart vigor to the mind, and health to the body**.*

Jesus came to "destroy the works of the devil." "In Him was life," and He says, "I am come that they might have life, and that they might have it more abundantly." He is "a quickening spirit." 1 John 3:8; John 1:4; 10:10; 1 Corinthians 15:45. And He still has the same life-giving power as when on earth He healed the sick, and spoke forgiveness to the sinner. He "forgiveth all thine iniquities," He "healeth all thy diseases." Psalm 103:3. Desire of Ages p.269-270

Notice that it was "***transgression of the law of God***" was what had led to this man's condition. We are also told,

*"**Transgression of physical law is transgression of the moral law**; for God is as truly the author of physical laws as He is the author of the moral law. His law is written with His own finger **upon every nerve, every muscle, every faculty**, which has been entrusted to man. And **every misuse of any part of our organism is a violation of that law**." COL 347-348*

That means that any habit or practice which violates the physical laws which govern the human body, anything that damages or works contrary to the processes of the human body, no matter whether we do them knowingly or in ignorance - are all included in that phrase "transgression of the law of God."

In other words, we must ascertain the cause of disease and remove/cease any practice or habit in our lives that is a violation of the physical laws of our bodies.

Now notice that the first step in the healing process that Christ took to heal the man in this story, was to give him forgiveness. What just took place? The man was burdened with guilt - and Jesus removed it.

Christ's next move, was to say "Arise and Walk."

Now obviously, the act of Jesus in healing the palsied man, took place in an instant and it is a direct miracle of God. But even though it was a divine miracle done by God's creative power, when you stop and think about it - all true healing, including the use of natural remedies to remove the cause so that the body can heal itself - is only done by God. Our Creator alone is the true healer, whether He chooses to use a direct miracle or the natural remedies He made.

Because I believe the Bible is the Master Medical Book, I believe that Jesus hid some vitally important health aspects of healing for this disease in this story for us to study out and put into practice.

What was the first thing the sick man did? He came to Jesus. That is confession and repentance of sin.

The next thing that took place, was that the roof was removed to let in the sick man - and along with that would obviously come "sunshine" & "fresh air." Sunshine & Fresh Air are both very important to Parkinson's patients, as we will see in a moment.

Then what did Jesus do? He forgave the man - thereby removing his feelings of guilt.

What is guilt? It is a form of "stress." So the first thing the Master Physician "prescribed" for "palsy" was to remove "stress" - And we will see shortly that "stress" plays a major role in Parkinson's disease.

The Master Physician next "prescribes" an exercise plan (Arise and Walk)- and we will see that exercise is also very important to Parkinson's patients.

Notice - all these steps in this healing process that the man and Christ took (trust in God, sunshine, fresh air, removal of stress, exercise) - fall into the 8 natural remedies that God has given for healing!

Mental/Emotional Stress - remedy "Trust in God"

A 2010 study, *Conditioned fear is modulated by D_2 receptor pathway connecting the ventral tegmental area and basolateral amygdala,* published in Elsevier's Neurobiology of Learning and Memory, specifically stated,

"**Acute and chronic stressful stimuli have been found to activate dopaminergic systems**"

According to a study published in the *Official Journal of the Korean Society for Biochemistry and Molecular Biology* in December of 2020, science has found that momentary or short episodes of experienced stress, actually cause the neurons to produce more dopamine for a short period, a process which immediately returns to normal function as soon as the stress response is finished. But they also found that chronic stress, stress over long periods of time, actually has the opposite effect on the brain neurons. Chronic stress inhibits the brain neurons so that they don't produce or release the dopamine enough.

Let that thought sink in. Chronic Stress decreases brain dopamine transmission. In other words,

Chronic, Long-term Stress, can, over time, literally cause the exact same physiological response in the body as the lack of dopamine symptoms claimed to be from Parkinson's.

A 2018 study, *Chronic stress-induced gut dysfunction exacerbates Parkinson's disease phenotype and pathology in a rotenone-induced mouse model of Parkinson's disease*, published in Elsevier's Neurobiology of Disease, found that,

"...chronic stress-induced, gut-derived, pro-inflammatory milieu exacerbates the PD phenotype via a dysfunctional microbiota-gut-brain axis."

In simple language, their study proved that ***chronic stress*** damaged the gastrointestinal system (the gut), and that a damaged gut led to Parkinson's symptoms in the brain - because the brain is intimately connected with the gut.

Remember the Bible's palsied man - Christ first removed his "stress" (guilt) in the first step of the process of healing him. In other words, stress is intimately linked with the development of Parkinson's - and before Christ could physically heal the man of the palsy (Parkinson's) - He had to remove his stress (his guilt). This is important to understand.

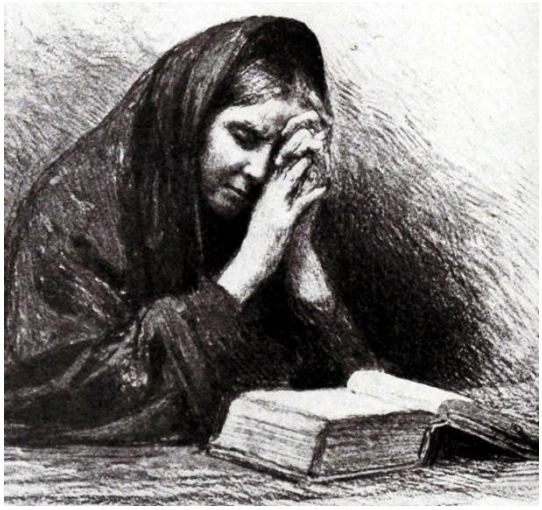
This means that if a person lives a very stressful life and has the bad habit of "stressing out" over everything - they themselves have started the physiological domino effect that will eventually develop into Parkinson's (and/or other diseases).

It is also important to recognize that while most people usually equate the word "stress" with some sort of mental/emotional strain - that is not the only type of stress. There are many other major types of stress as well, and no matter which of these types of stress are present, the body's physiological response to that stress is always going to be the same. Various examples of things that can cause "stress" on the physiology of the body and brain include but are not limited to:

Early childhood abuse - mental/emotional
Abandonment - mental/emotional
Separation or Divorce - mental/emotional
Fear, anxiety, anger, or depression - mental/emotional
Domestic violence or rape - physical and mental/emotional
Bodily abuse (drugs, body piercing, tattoos, masturbation, etc.) - physical - can lead to mental [guilt]
Exposures to environmental toxins (pesticides, insecticides, herbicides, air pollution, etc.) - physical
Exposure to toxic chemicals (cleaners, soaps, shampoos, deodorants, hair dyes, cosmetics) - physical
Exposure to wireless radiation (cell phones, WIFI, Bluetooth, cordless phones, etc.) - physical
Body tissue inflammations or injuries - physical
Fluctuation in blood sugar levels - physical
Deficiencies in nutrition - physical
Chronic body dehydration - physical
Heavy metal poisoning - physical

As you can see, there are many things that can "stress" the body and lead to conditions of disease.

Stress has also been proven to make the body's pH acidic. Acidic pH in the body leads to all kinds of disease, even including cancers. In order for the Parkinson's condition (or any disease condition for that matter) to be reversed, we must do everything in our power to remove any and all sources of stress.



Of course, mental/emotional stress such as being abused as a child or being raped or experiencing a divorce - are not situations that a person can just ignore or pretend never happened. But this is where God's natural remedy - "**Trust in God**" - comes in. Victims of such traumas must learn to lean on Jesus Christ - turn their traumas and their damaged emotions over to Him - release those stresses onto the Saviour who died to set all of us free. If they will give their troubles to God, He will then mend those battered emotions and relieve those stresses, just as He did for the palsied man in the Bible story.

Stress from the sense of guilt must also be released. The best way to relieve guilt is by turning to God in repentance and turning away from sin - and then, trusting in His promise of forgiveness. If you have already confessed and repented of sin - Jesus has already forgiven you - because He promised that He would!

1 John 1:9 ***If we confess our sins, he is faithful and just to forgive us our sins, and to cleanse us from all unrighteousness****.*

"But few realize ***the power the mind has over the body****. The sympathy which exists between the mind and the body is very great; when one is affected, the other responds. The burden of sin, with its unrest and unsatisfied desires, lies at the very foundation of a large share of the maladies which the sinner suffers.* ***Sickness of the mind*** *prevails everywhere.* ***Nine tenths of the diseases from which men suffer have their foundation here****. Perhaps some living home trouble is, like a canker, eating to the very soul and weakening the life forces. Remorse for sin sometimes undermines the constitution and unbalances the mind."*

Healthful Living p.230

Fear, anxiety, anger & depression are very common stressors to the body. A lot of people have developed the "spirit of fear" and they allow it to control them, living in "fear" every day.

We have seen this well illustrated recently during the supposed Coronavirus pandemic. Overnight, almost the entire world's population, motivated by irrational fear that had been promoted by authority figures, allowed themselves to be brainwashed into willingly surrendering their God-given freedoms and even surrendering the sanctity of their body temples, all in the vain hope of the promised "protection" against a mysterious and supposedly unknown virus.

The body responds to anxiety & fear in much the same way as it does to any other stressful signal. God made our bodies with the amazing ability to react to a fearful circumstance (such as being chased by a lion) with the release of certain hormones and chemicals (such as adrenaline) in the body to deal with the immediate threat. But after it is past, then the body can normalize again and rebuild the resources that were used up in that crisis.

However, if a person is chronically fearful, afraid of circumstances, afraid of problems, afraid of health issues, worrying about all kinds of things, etc. - then these chemical "fear responses" in the body **never stop** and this causes the body to overload or burnout. This can end in all kinds of disease conditions, such as adrenal fatigue (adrenal glands stop functioning), maladaptation (body not able to adapt to circumstances), dysfunction (body not functioning properly), and even in death.

Remember what we saw earlier, dopamine is the building block for adrenaline (epinephrine). This means that chronic fear or chronic stress, as it keeps the body systems demanding adrenaline, will take all the available dopamine and convert it into noradrenaline (norepinephrine) and then on into adrenaline. In other words, chronic stress, by its demand for adrenaline, will deplete the body and brain of dopamine - which will lead to Parkinson's symptoms.

Studies have shown numerous connections between body and brain dopamine levels and the fear response - with "chronic fear" having a very damaging effect on dopamine neurons.

In other words, if someone is chronically fearful, chronically anxious, chronically stressed, they are themselves starting the physiological domino effect that will

eventually develop into Parkinson's (and/or many other diseases). And people with Parkinson's have a tendency to get more and more depressed and anxious - it is a vicious downhill spiral.

This could also explain one reason why, as mentioned on page 1, symptoms of Parkinson's such as the typical "tremors" can disappear during the patient's sleep. When they go to sleep, they are unconscious, so they cease to have all the "mental stress, anxiety, or fear," that they might have while they are awake and conscious.

Here again, God's natural remedy of **"Trust in God"** cures this "anxiety and fear" problem. If a person will come to the realization that as long as they follow God's way and allow God to be in control - they have nothing to fear or worry about - then that simple faith, trust, and confidence in God will banish all "fear" - and they will cease to be fearful.

*1 John 4:16-18 And we have known and believed the love that God hath to us. **God is love**; and he that dwelleth in love dwelleth in God, and God in him. Herein is our love made perfect, that we may have **boldness** in the day of judgment: because as he is, so are we in this world. **There is no fear in love; but perfect love casteth out fear: because fear hath torment**. He that feareth is not made perfect in love.*

*Psalm 118:6 The LORD is on my side; **I will not fear**: what can man do unto me?*

Focus your attention on being happy and satisfied - refuse to give in to stress, worry, and depression. Studies have shown that having a **happy, cheerful attitude and a positive outlook on life** - causes the brain to release dopamine and this proves very beneficial for Parkinson's symptoms.

Proverbs 15:13, 15 A **merry heart** maketh a **cheerful countenance**: but by **sorrow of the heart** the **spirit is broken**...All the days of the afflicted are evil: but he that is of a merry heart hath a continual feast.

Proverbs 17:22 A **merry heart doeth good like a medicine**: but **a broken spirit drieth the bones**.

Physical Stresses

With the physical type of stresses, those can be removed by God's 8 natural remedies as well.

Stay away from known areas of toxic pollution (natural remedy **"Fresh Air"**).

A 2018 study, *Estimated Residential Exposure to Agricultural Chemicals and Premature Mortality by Parkinson's Disease in Washington State*, found that exposure to the active ingredient in the common herbicide Roundup was directly linked with Parkinson's Disease (PD).

"Individuals exposed to land-use associated with glyphosate had **33% higher odds of premature mortality** than those that were not exposed."

"The strong relationship between **Glyphosate exposure** and **premature mortality attributed to (PD)** in our study aligns with the results found in multiple studies. Toxicological studies have found **glyphosate and glyphosate-based herbicides to negatively affect neural cells**, resulting in oxidative damage. A study conducted on immature rats using Roundup®, in which glyphosate is the

active ingredient, found that **exposure to glyphosate resulted in signaling and enzymatic changes**, that may lead to affected uptake of hippocampal cells. The cell damage upon exposure was suggestive of a relationship between **glyphosate and neurotoxicity**."

That is just one common herbicide, but there have been multiple studies that have found many links between exposures to various herbicides, pesticides, and insecticides (like Paraquat & Rotenone) and other toxic poisons and Parkinson's disease.

A 2018 study, *Trichloroethylene and Parkinson's Disease: Risk Assessment*, found that when mice were exposed over a several month period to trichloroethylene, it resulted in,

"...a progressive and selective loss of 50% of the dopaminergic neurons in mouse substantia nigra (SN) and about 50% loss of dopamine..."

Trichloroethylene is a chemical commonly used in some household products, like cleaning wipes, aerosol cleaning products, tool cleaners and degreasers, paint removers, spray adhesives, shoe polishes, and carpet cleaners and spot removers. Commercial dry cleaners also use trichloroethylene as a spot remover. And as you can guess from all this use of this toxic chemical, it can now also be found as a contaminant in many public water supplies.

Dr. Walter Crinnion tells us that the powerful antioxidant glutathione, which the liver produces from nutrients obtained from the diet, helps to remove these types of toxic poisons from the system.

"Glutathione can help remove harmful toxins other than heavy metals, such as pesticides and dry-cleaning solvents, transforming them in such a way that the body can excrete them more easily. This becomes very important for people who suffer with neurological disorders, such as multiple sclerosis or Parkinson's, sometimes thought to be connected to heavy metal toxicity or solvent poisoning from childhood." Drug Muggers p.142-143

In other words, any deficiency of the nutrients needed for the liver to produce glutathione (cysteine, glutamic acid, glycine), will result in a glutathione deficiency - which will cause buildup of toxins in the body.

*"**A deficiency of glutathione** first affects the nervous system, causing such symptoms as **lack of coordination, mental disorders, tremors, and difficulty maintaining balance**." Prescription for Nutritional Healing, 2nd Ed., p.39*

An excellent natural remedy that helps with detoxing poisons from the system is Milk Thistle. America's most trusted pharmacist, Suzy Cohen, states in her book *Drug Muggers* that,

"The widely available herb milk thistle works hand in hand with glutathione...Milk thistle (or its active ingredient, silymarin) is known for its ability to protect the liver and enhance detoxification. It can also raise levels of glutathione in the liver...helping you rid yourself of unwanted chemicals, poisons, used-up drugs, and heavy metals." Drug Muggers p.150-151

But "toxic poisons" would also include toxins that people don't usually think about, toxins that they like to put on themselves (perfumes, hairsprays, makeup, shampoos, deodorants, hair dyes and permanents, soaps, sunscreens, lotions, etc.). Many of these products contain toxic chemicals that have been linked to Parkinson's.

The skin is the largest organ of the body. It absorbs whatever is put on it. By this method alone, the vast majority of the population are filling their bodies with toxic chemicals that will later cause disease (including Parkinson's). Only use natural non-toxic substances on your skin.

A good "general rule of thumb" is **don't put any chemicals or substances on the skin of your body, that you would not be willing to put in your mouth**.

Many toxic buildups can occur from our different work environments. Construction workers can get doses of formaldehyde, arsenic, lead, and others from the various fumes circulating in a newly constructed house. Those who work in a medical facility will be constantly exposed to toxic drugs, chemo exposure, and countless other poisons. Those who work in something like a dentist office will be getting exposed to stray x-ray radiation bouncing around (*radiation is cumulative and builds up over the years*) as well as fumes of mercury and other chemicals from dental fillings and composites, and the various anesthetic gases such as nitrous oxide. Those that work in retail stores will be constantly exposed to toxic cleaners and various chemicals. Shop personnel get exposed to gasoline fumes, oil, and many other toxic substances. Almost every profession out there involves being exposed to some form of toxic poisons.

Heavy metal poisoning would also fall into this category. Some heavy metals can build up in the body from breathing their dust in various work environments (here again, God's remedy is **Fresh Air**).

Those that in the past got amalgam fillings in their teeth, are constantly exposed to the mercury in the fillings. Mercury off-gasses when exposed to hot, cold, saliva, or any other kind of agitation such as chewing. These mercury gases are then inhaled and swallowed and the mercury builds up in the body and causes a lot of bodily stress and innumerable health problems.

A study published in 2022, *Mercury is present in neurons and oligodendrocytes in regions of the brain affected by Parkinson's disease and co-localises with Lewy bodies*, found mercury in the brain neurons and the areas of the brain associated with Parkinson's. It also found that,

"Mercury in the motor cortex, thalamus and striatum could result in bradykinesia and rigidity, and mercury in the cerebellum could cause tremor."

A 2016 study, *Association between History of Dental Amalgam Fillings and Risk of Parkinson's Disease: A Population-Based Retrospective Cohort Study in Taiwan*, found that,

"The patients exposed to dental amalgam fillings were 1.583 times more likely to have PD afterward compared to their non-exposed counterparts..."

If you have amalgam fillings, chances are that your body is already toxed out from mercury. Mercury (and other heavy metals) can be somewhat removed from the body by a simple method - eat cilantro. Eating cilantro along with consuming charcoal/clay water will remove a lot of the heavy metals from your system. Cilantro causes the body to dump the heavy metals that it has been storing, into the bloodstream circulation. The charcoal or clay water will bind to the heavy metals and carry them out of the body in the stool.

Dr. David Williams suggests,

*"...consuming **at least 1/4 cup of tightly-packed fresh cilantro stems and leaves per day** during a detox. Since cilantro may release more heavy metals than the body can efficiently remove, and to prevent any metals from being deposited in the colon, I also recommend using a form of calcium bentonite clay called Pascalite. While using the cilantro for a detox period of two weeks, take **1 to 2 teaspoons of Pascalite mixed with water three times a day between meals**."*

https://www.healthydirections.com/articles/general-health/cilantro-clay-for-detoxification?closebox=true

Warning: If you suspect your body is full of lots of heavy metals, don't eat a full dose of cilantro at first. Build up to the full amount gradually over a few days - in other words, you would want the body to start

dumping the toxic metals gradually and not all at once. Also - ***Don't forget to take the charcoal or clay.*** *Just eating the cilantro will not remove the metals from the body, but will only dump it into the bloodstream and the newly circulating metals in the blood will make you very sick if there is not charcoal or clay present to carry them out of the system.*

Remember the proteins VMAT2 and alpha-synuclein in Figure 10. Alpha-Synuclein can play a key role in Parkinson's disease. The VMAT2 was what took in the dopamine and housed it in the vesicle to keep it safe and to prevent it from damaging the neuron. VMAT2 is affected by a-synuclein. If a-synuclein proteins happen to get folded the wrong way (something causing problems with the genetic code) or their levels rise in the cell, then VMAT2 doesn't put the dopamine in the vesicle and the dopamine levels build up in the neuron and end up killing the cell.

A 2007 study, *Inhibition of vesicular monoamine transporter-2 activity in alpha-synuclein stably transfected SH-SY5Y cells*, found that,

"...**Up-regulated alpha-synuclein expression inhibits the activity of vesicular monoamine transporter-2**, thereby interrupting dopamine homeostasis and **resulting in dopaminergic neuron injury in Parkinson's disease**."

In other words, they found that an increase in a-synuclein prevented VMAT2 from doing its job properly and the resulting increase in loose dopamine in the neurons damaged the neuron.

Each protein used in the body has a very specific shape. If a protein gets "misfolded" and doesn't have its correct shape, the body can't use them or break them down. Then those proteins pile up in various places or sometimes in certain cells. These piles (tangles/clumps) are called Lewy bodies. The buildup of Lewy bodies can cause toxic effects and cell damage. They have found lots of mutated a-synuclein Lewy bodies in Parkinson's patients.

This means that some sort of interference is taking place, which causes there to be a mistake made in gene translation process of making the proteins.

A 2005 study, *Alpha-synuclein and dopamine metabolism*, specified that,

"Formation of alpha-Syn protofibrils **triggered by factors such as gene mutations and environmental toxins** can make the molecule lose its normal functions, leading to **disrupted homeostasis of dopamine metabolism, increased cytoplasmic dopamine levels, and enhanced oxidative stress in dopaminergic neurons**. The enhanced oxidative stress will, in turn, **exacerbate the formation of alpha-Syn protofibrils and drive the neurons into a vicious cycle**, which will finally result in the selective **degeneration of the dopaminergic neurons associated with Parkinson's disease**."

A 2009 study, *Interplay Between Cytosolic Dopamine, Calcium and α-Synuclein Causes Selective Death of Substantia Nigra Neurons*, stated,

"...we confirm that elevated DAcyt [cytosolic dopamine] and its metabolites are neurotoxic..."

They also found that,

"...**VMAT2 overexpression**, which as we show here **decreased DAcyt and abolished L-DOPA-induced neuronal death**, has also been demonstrated to **inhibit neuromelanin synthesis** (Sulzer et al., 2000). Together, these data support the idea that **neuromelanin synthesis is a stress response** and that the presence of neuromelanin in human SN and its **accumulation over time are indicative of an ongoing DAcyt damage even in normal non-PD human brain**. Conversely, dopaminergic neurons in the VTA, which are spared in PD, produce minimal neuromelanin over a lifetime..."

In other words, when there was an increase in VMAT2 to balance out the amount of a-synuclein, more dopamine was put in the vesicles and released into the synaptic cleft which protected the neuron from damage. That means the system was more balanced and working correctly. It also showed that when this correct balance is made, there is less neuromelanin accumulated, because neuromelanin is made as a response to some form of stress. It's purpose is to bond to metals, radiation, and other toxins to help get them out of the system. In other words, neuromelanin is something the body uses to try to protect the cells from toxins and heavy metals. But if there is a large accumulation of neuromelanin, that implies that there is a lot of toxin or heavy metal it is trying to deal with, and the end result is usually cell death.

A 2012 study, *Dysregulated dopamine storage increases the vulnerability to α-synuclein in nigral neurons*, noted that,

"...under normal circumstances, **in healthy dopamine neurons, cytoplasmic dopamine is tightly controlled** such that it does not contribute significantly to α-synuclein mediated toxicity."

but their study discovered something important.

"We found that **overexpression of α-synuclein** in nigral dopamine neurons in mice with deficient vesicular storage of dopamine led to a **significant increase in dopaminergic neurodegeneration**."

In other words, they found that in healthy neurons, the levels of dopamine floating around loose in the cytoplasm of the cell are very carefully controlled (taken and put in vesicles), but when something causes there to be an imbalance (too few vesicles/too much a-synuclein) in the neuron the dopamine regulation failed and levels built up and killed the neuron.

A 2018 study, *C-terminal calcium binding of α-synuclein modulates synaptic vesicle interaction*, found that there is an important balance between alpha-synuclein and calcium inside cells, and if something happens to tip this balance (too much calcium or too much alpha-synuclein) it can cause the damage that ultimately leads to brain cell death.

A 2012 study, *Upregulation of α-synuclein during localized radiation therapy signals the association of cancer-related fatigue with the activation of inflammatory and neuroprotective pathways*, observed that,

"As part of a **physiologic response to intrinsic or external stressors**, α-synuclein is expressed to serve as a **neuroprotective mechanism against subsequent insults**..."

In a January 2022 article in Cell Reports, titled *Alpha synuclein, the culprit in Parkinson disease, is required for normal immune function*, it stated,

"...aS [a-synuclein] **accumulates** within the nervous system of PD individuals because of **an inflammatory/immune response**."

A 2010 study, *Neuroprotective upregulation of endogenous α-synuclein precedes ubiquitination in cultured dopaminergic neurons*, concluded,

"...**mild stress causes a protective upregulation of α-synuclein**. However, such increased levels of α-synuclein may drive **its accumulation, following additional toxic insult**."

A 2014 article published in CNS Neuroscience & Therapeutics, titled *Chronic Stress and Parkinson's Disease*, explored a study that proved that,

"...chronic stress exacerbates the loss of dopamine neurons..."

it further observed,

"Interestingly, the chronic stress alone did not induce loss of dopamine neurons, and the stress had to occur simultaneously with toxin exposure, suggesting that the stress might act adjuvantly with the toxin or increase the vulnerability of the neurons."

In other words, in this particular study, they proved that when chronic stress is accompanied by some sort of toxic exposure, it destroyed the dopaminergic neurons and led to Parkinson's symptoms.

Why are all of these facts important? I included them specifically so people could see that science shows these connections and the problems that result from imbalances in the body temple.

You don't need to feel like you have to remember all these scientific names and complicated details. All you need to remember is that every process in the body and the brain are intimately connected together, and each one is carefully balanced and regulated with the others. The healthy body works like a well-oiled and intricate machine. Anything that causes interference with any one or all of these body processes, will cause an imbalance in the system and start a domino effect cascade of

reactions, as the body attempts to correct the initial problem. It is these cascading effects that people term "symptoms" - and these "symptoms" are what the body is using to try to tell us what the initial problem is.

What all these studies reveal, is that something that causes a toxic exposure to the brain, can begin this cascade of symptoms, which will result in the Parkinson's condition.

The reason I bring this out is because, besides all the various toxic chemical exposures already mentioned, there is another very important bodily stressor - important in the sense that almost everyone is being exposed to it, and few realize it's effects.

That stressor is Wireless Radiation exposure, also known as electromagnetic frequency (EMF) exposure. It is extremely important to remove this toxic stressor from your environment. Get rid of all wireless devices that you can, and shield yourself from any EMF sources you cannot remove (such as a neighborhood cell tower).

Wireless radiation (from things like cell phones, cordless phones, WIFI, Bluetooth, etc.), also known as

Non-ionizing Radiation, was once mistakenly thought to be harmless. But with the increasing amount of cancers, brain tumors next to the ears, neurological diseases, and countless other health problems, some scientists and medical personnel have begun to take another look at wireless radiation. What they've found so far is shocking and it is causing a huge shift in the thinking of the medical community - although many "paid-off" doctors and "bribed" officials are still in denial, and big tech companies are scrambling in the vain attempt to try to discredit the science so they won't loose their businesses.

It has been proven that contrary to previous thought, wireless radiation exposure causes the same types of damage to the human body as ionizing radiation (x-rays) does - the damage is just being caused by a different mechanism. Ionizing radiation (x-rays) break the molecular bonds and destroys the DNA and cells in the body immediately. Non-ionizing radiation does not break the molecular bonds, but by a different mechanism and over a longer period of exposure time, it still breaks and destroys the DNA and the cells.

The Bioinitiative Report (https://bioinitiative.org/table-of-contents/) literally contains several thousand scientific studies showing the health damaging and disease causing effects of wireless radiation.

Wireless radiation not only breaks down the human DNA, it also damages brain neurons and scrambles many of the body's other processes as well.

For example, remember when I referred to how they thought their drug Carbidopa could not cross the blood brain barrier? They were wrong. Anything can cross the BBB if it is opened.

A 2008 study, *Increased blood–brain barrier permeability in mammalian brain 7 days after exposure to the radiation from a GSM-900 mobile phone*, found that exposing rats to microwave radiation (MV) from a mobile phone caused immediate opening of the BBB and the effect lasted for days.

"...MW effects upon the **BBB permeability have been observed. Increased permeability can be seen both immediately after exposure**, but also 7 days after the exposure, as reported in this primary report, and after 14 days. It seems that the effects of the MW radiation might result in persistent changes, such as those seen in our own studies with **neuronal damage both 28 and 50 days after 2h of mobile phone exposure**."

In other words, the wireless signal from a cell phone opens the BBB and damages the brain neurons - and the effects continue for days after the initial exposure.

Many scientific studies have shown that when a person is exposed to wireless radiation (such as from a cell phone or cordless phone) the wireless signal interacts with the blood brain barrier and "opens" it - which allows any and all toxins in the bloodstream to enter into the brain. This means that if a person takes the drug Carbidopa, and then, while it is in the bloodstream, they are exposed to cell phones, cordless phones, WIFI signals, Bluetooth, or any other sources of wireless radiation - their BBB is opened and the drug will travel into the brain, and block the brain's ability to make dopamine.

And not just Carbidopa either. That means that toxic chemicals from perfumes, shampoos, deodorants, mercury from teeth fillings, toxic pesticides that may have come into the body from past exposures, any and all of it will have free, unobstructed access to the brain, while the EMFs have the blood brain barrier open.

A 2021 study, *Oxidative damage in the liver and brain of the rats exposed to frequency-dependent radiofrequency electromagnetic exposure: biochemical and histopathological evidence*, found that brain neurons degenerated after being exposed to wireless radiation signals.

We also noted (back in Figure 12) how calcium for the dopamine release process is brought into the brain neuron through a voltage-gated calcium channel - ***when it is needed***. But it should be noted that if the cell is not in need of calcium, too much calcium in the cell causes the reaction process that leads to cell apoptosis (death). In other words, flooding any cell or neuron with lots of extra calcium when it doesn't need any more calcium will cause the cell to eventually kill itself.

A 2018 article in *Frontiers in Neuroscience*, titled *Can Interactions Between α-Synuclein, Dopamine and Calcium Explain Selective Neurodegeneration in Parkinson's Disease?*, pointed out,

"At the center of PD pathology is aSyn, which tends to form soluble oligomers and insoluble fibrils. Oligomerization is increased with increased Ca2+ or DA levels, while aSyn oligomers are able to increase internal Ca2+ and DA concentrations, forming a potential positive feedback cycle. ...**if one aspect of the homeostatic processes goes awry, the feedback loops activate and neurotoxicity ensues**."

In other words, a-synuclein interacts with both dopamine and calcium, and if any one of these components get out of balance, it causes a domino effect that leads to neurotoxicity and cell death.

A 2014 study, *Calcium currents regulate dopamine autoreceptors*, points out,

"Studies by James Surmeier and collaborators demonstrate that the **high intracellular calcium** load in substantia nigra dopamine neurons **causes mitochondrial and oxidative stress**, and others have provided evidence that **high calcium can exacerbate neurodegeneration** through the accumulation of neurotoxic levels of cytosolic catecholamines (Mosharov et al., 2009)."

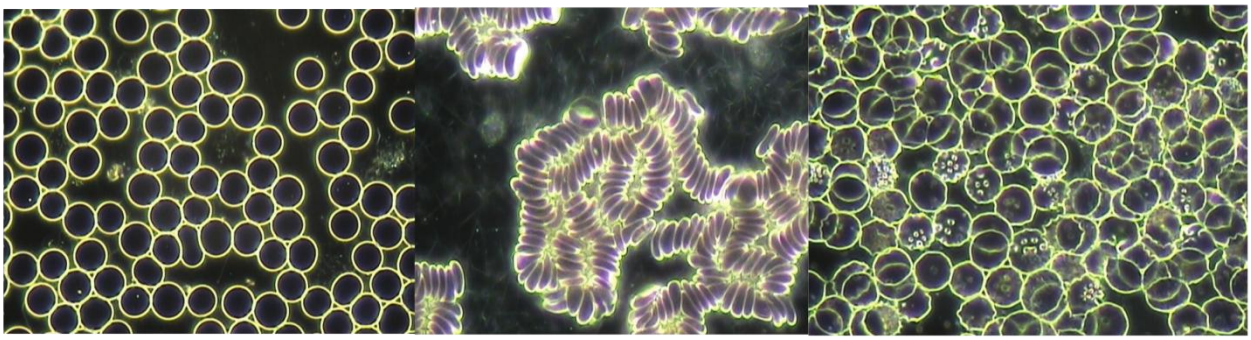
A 2015 paper published by a scientist from the University of California, Berkeley, titled *Human short-term exposure to cell phone radiation causes changes in blood cell morphology*, referring to wireless radiation health issues, specified,

"Studies show effects on the brain, stem cells, reproductive organs, enzyme activities, and sperm quantity and quality in animals and humans. More specifically, changes in calcium transport from cells, altered enzyme activities, increased cell proliferation of human epithelial cells, increase in breaks in DNA in animal cells, changes in brain blood flow in healthy people, leakage of proteins through the blood brain barrier, and decreased sperm count and motility are some changes that have been documented."

In other words, all of these detrimental effects were caused by being exposed to the wireless radiation from cell phones.

This same study also contains photographs of blood cells under a dark-field microscope. These blood samples were taken from study subjects before and after being exposed to cell phone radiation.

Human short-term exposure to cell phone radiation causes changes in blood cell morphology



Normal Blood Cells with no radiation | **Blood Cells after 45 minute exposure turned on - no calls** | **Blood Cells after 45 minute exposure active phone calls**

You can see that before the radiation exposure, the blood cells are nice and round and there is fairly clean blood plasma. After being exposed to a cell phone in a backpack for 45 minutes (turned on, but not being used), the plasma is turning milky with debris and the cells are "stacking" together - this is called Rouleaux formation and it prevents the cells from circulating freely through the body. After actively making and receiving calls for 45 minutes, the cells are breaking down and beginning to disintegrate, which also causes lots of debris in the plasma.

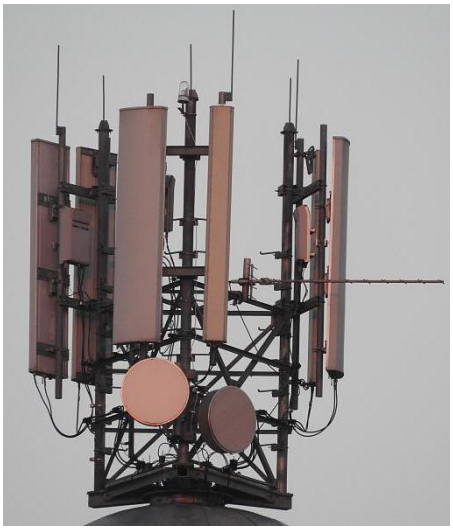
The reason why this is important to understand on the Parkinson's issue, is because, as many studies show, one of the causes of Parkinson's is the destruction of the neuron cells that produce the dopamine. Scientists have always claimed that they didn't know what was causing these neuron cells to die off. But as we saw in Figure 12, these neuron cells have voltage-gated calcium channels (VGCCs) to regulate calcium (Ca2+) levels in the cell. And besides the BBB being opened, science has now proven that when the body gets exposed to wireless radiation, the EMF signals also open cells' voltage-gated calcium channels and keep them open, allowing the calcium in the blood to flood into the cells, which causes oxidative stress and eventually kills the cells. And Parkinson's has also been shown to be caused by oxidative stress.

There have been many studies done on the links between the voltage-gated calcium channels (VGCCs) and wireless radiation. One paper published in 2013, *Electromagnetic fields act via activation of voltage-gated calcium channels to produce beneficial or adverse effects*, specifically showed,

"...EMF activation of VGCCs leads to rapid elevation of intracellular Ca2+..."

Let that thought sink in.

In other words, besides any and all other causes for Parkinson's, just the continual exposure to a cell phone, a cordless house phone, or a WIFI signal - can eventually lead to Parkinson's disease, by killing off the neuron cells!



That means that **those who carry cell phones in their pockets, those that work or live in town or offices where there are large amounts of wireless signals, or those who have WIFI internet or cordless house phones in their homes - they are all starting the physiological domino effect that will eventually develop into Parkinson's (and/or other diseases) in their bodies**.

Problem is, people have a tendency to think that if they can't see immediate "symptoms" from something, that must mean it isn't dangerous. This is an erroneous belief. Science has shown that the wireless radiation is causing the exact same damage in each person's body, but some people have stronger immune systems and more vital force and their bodies can struggle and hold off the symptoms for a

longer period of time while the weaker individuals succumb to the damage more rapidly. Eventually though, even the stronger individuals will succumb to disease.

In this modern society where everything seems to be "going wireless" - just staying alive can be problematic. But there are still steps you can take to limit and lessen the wireless radiation exposure to your body.

Get rid of all unnecessary devices that put off any kind of EMF radiation. Get rid of all cell phones and cordless phones - go back to using the good old corded phones from the "good ole days" - where the "signal" was confined to the wire itself. If it is necessary to have a cell phone "for emergencies" - keep the cell phone turned off when it is not in use, and only use it for real emergencies. Also whenever it is turned on, keep it in "Airplane Mode" (which keeps it's wireless signal much lower). You can also keep it in a closed metal can or wrapped up in aluminum foil (metal blocks EMF radiation).

Analog Meter

Smart Meter

Get rid of all WIFI routers - wire internet directly to your computer with Ethernet cables or fiber optic cables. Wire all electronic and electrical connections in your house so that you have no wireless signals in your home. If your house has a "smart meter" (the newer digital power meter) on the outside, it will also be sending out wireless signals. Power companies are required to allow you to "opt out" of having the new "smart meters" and let you stick with the old mechanical analog meters (the ones with the gears and wheels) - but even if you can't get your power company to listen to you, you can use metal sheeting or aluminum foil to make a barrier/block between the smart meter and your living area. You can watch a documentary and learn more about the EMF health issues on this page of our website ***https://www.swiftrunnerministries.com/electrohypersensitivity.php***

Abundant Fresh Air

One of God's natural remedies for disease is abundant **"Fresh Air"**.

Air has two different types - air with positive ions and air with negative ions. The "positive" and "negative" are exact opposites of what you might think. "Positive ion" air is bad for you, "Negative ion" air is good for you. Indoor, stale, polluted air is full of "positive ions," while outdoor, fresh, invigorating air is full of "negative ions". It is those "negative ions" that give that desire for a deep breath when you stand in front of a waterfall, on the beach next to the crashing waves, or go outside after a good refreshing rain (breaking water produces negative ions). God created mankind to live in a garden and work outdoors in the fresh air (negative ions). But modern society stays indoors much of the time and breath stale or "manufactured" air (positive ions). (Air conditioning, heaters, electric motors, dryers, etc. all produce positive ions).

*"In order to have **good blood, we must breathe well**. The influence of **pure, fresh air** is to cause the blood to circulate healthfully through the system." Healthful Living p.186*

A study published in 2022, *Hyperbaric Oxygen Therapy Improves Parkinson's Disease by Promoting Mitochondrial Biogenesis via the SIRT-1/PGC-1α Pathway*, found that HBOT [Hyperbaric Oxygen Treatment] (breathing oxygen while in a pressurized room) has many beneficial effects on Parkinson's. They,

"...observed that HBOT attenuated the decrease in dopaminergic cells..."

They also found that,

"... HBOT has the anti-apoptotic effect to counter the apoptosis of DA neurons in PD."

Hyperbaric oxygen is simply breathing a greater percentage of oxygen while resting in a pressurized room or tank that is under 2-4 atmospheres of pressure. The higher pressure and the higher oxygen content allows the blood oxygen level to rise more rapidly and oxygenate the body better.

Apoptosis is when cells die or kill themselves.

In other words, in this study, they found that a greater supply of oxygen to the body and brain, lowered the loss of dopaminergic neurons and it actually had an anti-apoptotic effect - it prevented the dopaminergic neurons from killing themselves.

In an article dealing with deficiency or lack of oxygen reaching body tissues and the subsequent damage the lack of oxygen to the brain caused, it was observed that,

"Damage to the cerebral cortex, the cerebellum and **the basal ganglia** may lead to **limb weakness** and **disturbances of movement**, **balance** and **co-ordination**. ... Anoxic injury to **the basal ganglia** may lead to abnormal movements, including **tremor**, **involuntary writhing movements** (athetosis) and **brief, jerky movements** (chorea)."

https://www.headway.org.uk/about-brain-injury/individuals/types-of-brain-injury/hypoxic-and-anoxic-brain-injury/

Notice that was Parkinson's symptoms resulting from a lack of oxygen to the basal ganglia of the brain.

(Athetosis = hands and feet cannot be maintained in any position in which they are placed, but continually perform involuntary, slow, irregular movements.

Chorea = various disorders of the nervous system marked by involuntary, jerky movements, especially of the arms, legs, and face, and by incoordination.)

Doctors working on various patients in Puerto Rico described symptoms they were seeing from Chronic hypoxia. (Hypoxia is a deficiency in the amount of oxygen reaching body tissues and blood, in other words, an inadequate supply of oxygen.) They found that,

"Chronic hypoxia was found to produce Symptomatic neurological syndromes such as Parkinson's disease (SPD), Chorea, Ballism and Athetosis...When chronic hypoxia affects the basal ganglia in the putamen, there is a decrease in dopamine production causing the symptoms of Parkinson Symptomatic. When hypoxia affects ...the lenticular nucleus, athetosis occur." E. F. Noda, MD

Ballism = A rare movement disorder with involuntary flinging motions of the extremities

In other words, anything that causes a lack of oxygen to the body and brain, can cause the gradual breakdown of the system and can lead to Parkinson's.

Remember the Rouleaux picture of how the blood cells stack up in piles when exposed to wireless radiation - Rouleaux formation prevents red blood cells from traveling throughout the small capillaries and other blood vessels. This prevents them from transporting oxygen to the various tissues of the body - thereby depriving many parts of the body of a fresh supply of oxygen. This causes disease conditions to set in. Many cancer patients standardly have problems with Rouleaux formation in their blood.

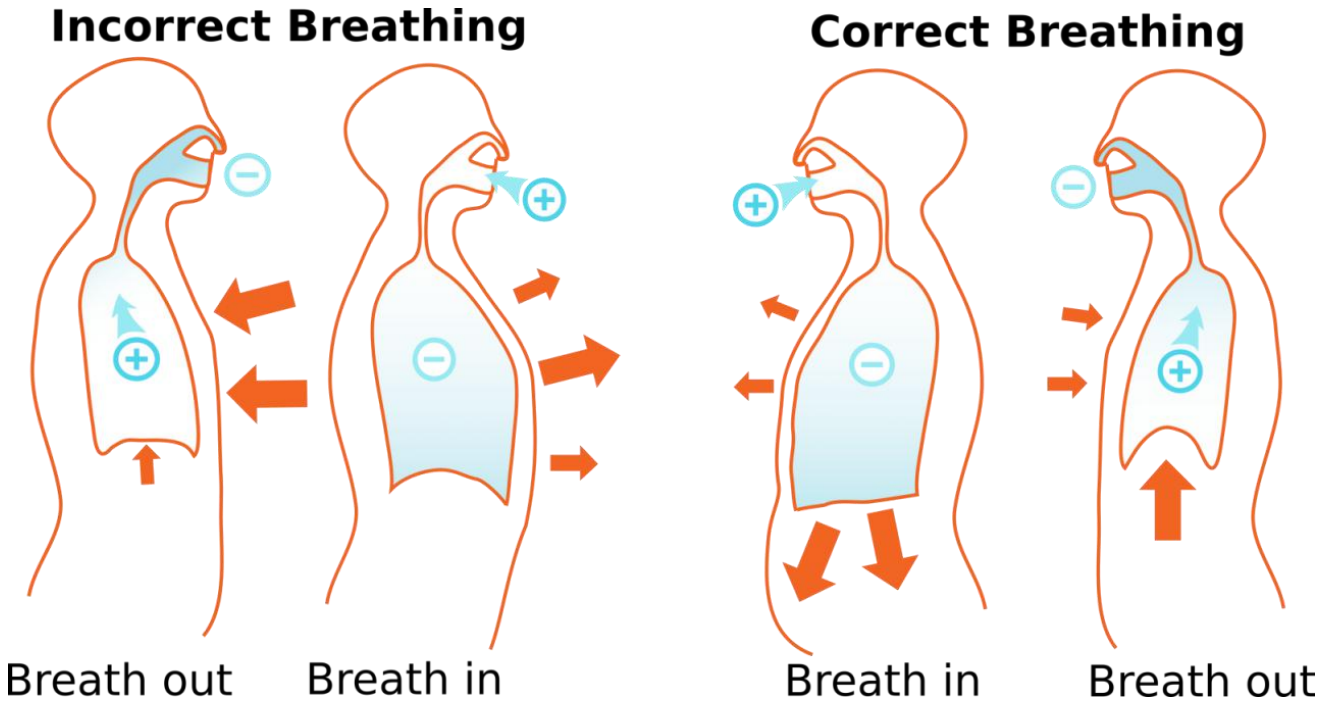
This link of oxygen deprivation with Parkinson's is all the more reason why following the lies of the covid fear mongers is such a foolish idea. Wearing a mask over the mouth and nose decreases the oxygen saturation in the blood and raises the levels of CO_2 in the blood. I have personally confirmed this by talking with a medical professional. Lower blood oxygen levels and higher CO_2 levels puts the body into the stress response, because your tissues are not getting enough oxygen but rather toxic CO_2. In other words, wearing a face mask all the time will eventually lead to things like cancers and Parkinson's.

A 2009 study, *The Amygdala is a Chemosensor that Detects Carbon Dioxide and Acidosis to Elicit Fear Behavior*, found that breathing CO_2 causes the amygdala in your brain to initiate the fear response in your body.

"...that **the amygdala does more than mediate the fear response**, it also has an important chemosensory role. ASIC1a channels in the amygdala **detect a reduced pH arising from an increased CO_2** ...That **CO_2 initiates a fear response** is particularly intriguing because **rising CO_2 forewarns suffocation**, a terrifying situation that demands sensitive detection and action to ensure survival. ...**the amygdala both senses a threat, posed by CO_2 , and initiates a response**."

So wearing a mask all the time, which cuts down on your oxygen levels and raises the CO_2 levels in your blood, actually causes the body to initiate the "fear response" mode. What is "Fear?" It is "stress" - which we've already seen, can cause Parkinson's.

And it isn't just masks either. Anything that cuts down on the oxygen level and raises the CO_2 level will have the same results in the body - even though the person may not be mentally aware that their physiological body response is in the "fear" mode. Even among those who don't wear masks, the vast majority of people stay indoors most of the time (office jobs, etc.) and breath shallow breaths of stale CO_2 saturated air. Many people have developed the bad habit of shallow breathing by only slightly inflating the lungs/chest.



To increase oxygen in the body, outdoor fresh air must be inhaled, and the inhalations should be **deep** and **strong**. Shallow breathing deprives the brain of much needed oxygen and is not efficient in removing enough of the exhaust CO_2 from the body. Breathing should be accomplished by using the diaphragm.

In other words, when you inhale, the chest should expand some as well, but the main expansion should be in the abdomen/stomach area - showing that your inflating lungs are pushing down the diaphragm and moving your abdomen organs downward and outward. (see previous picture)

Correct breathing of fresh air helps to saturate your blood and cells with fresh oxygen, which greatly benefits the whole body but especially both the brain and the neurons.

*"The strength of the system is, in a great degree, **dependent upon the amount of pure, fresh air breathed**. If the lungs are restricted, the quantity of oxygen received into them is also limited, **the blood becomes vitiated, and disease follows**." Healthful Living p.171*

It is also very beneficial to keep house windows open as much as possible, so that the outside fresh air can circulate through the house and revitalize the air indoors. Even during the cold winter months, a few windows can be kept open just a small crack, to still allow the invigorating fresh air in and the stale air out, while not allowing it to get too cold indoors.

Exercise

Physical **exercise** is vital for all humans. It keeps their bodies in good shape and is important for maintaining many body processes. For example, the Lymph system does not have it's own circulation pump. The lymph fluid is pumped around the body by the movement of the arms and legs interacting with the lymph nodes. Without exercise, the body stagnates, and disease processes set in.

*"There is **no exercise that can take the place of walking**. By it the circulation of the blood is greatly improved. . . . Walking, in all cases where it is possible, is **the best remedy for diseased bodies**, because in*

*this exercise all of the organs of the body are brought into use. When the weather will permit, all who can possibly do so ought to walk in the open air **every day, summer and winter**. . . . A walk, even in winter, would be **more beneficial to the health than all the medicine the doctors may prescribe**." Healthful Living p.129-130*

There are tons of studies showing all the beneficial effects that exercise has on Parkinson's patients.

Even just a 30 minute brisk walk every day can slow the progression of Parkinson's symptoms and improve the gait, balance, tremor, and flexibility of Parkinson's sufferers.

A 2008 study on Parkinson's patients, *The Effect of Exercise Training in Improving Motor Performance and Corticomotor Excitability in Persons With Early Parkinson's Disease*, found that,

"All subjects showed improvement in gait velocity during both self-selected and **fast-paced walking**,...the subjects in the high-intensity exercise group demonstrated improved gait performance manifest as changes in gait strategy. Thus, the high-intensity subjects walked within the range of normal gait speed, but did so by taking longer steps and moving forward over their limbs through a larger ROM..."

In other words, Parkinson's patients that did fast-paced walking exercise, improved in their ability to walk with normal strides and move their arms properly.

A 2016 study, The role of medial prefrontal corticosterone and dopamine in the antidepressant-like effect of exercise, not only did they find what we already looked at, that,

"...**various chronic stress, such as chronic mild stress...and chronic restraint..., decrease DA** [dopamine] in the mPFC [medial prefrontal cortex],..."

they also found that, "...exercise achieves antidepressant-like effect..."

In other words, like we mentioned before, chronic stress depletes the body's dopamine levels, and this can cause depression. But exercise, boosts dopamine levels and works like an antidepressant.

Brain-derived neurotrophic factor (BDNF), is an abundant protein in the human brain that helps support existing neurons, and it is also one of the most active promoters of growth and differentiation of new neurons and synapses.

A 2018 study, *Plasma levels of brain-derived neurotrophic factor in patients with Parkinson disease: A systematic review and meta-analysis*, found that those with Parkinson's had a reduced level of BDNF in their brain compared with the brains in healthy people. This would imply that whatever is unbalanced in the person with Parkinson's, is having a detrimental effect on that person's brain-derived neurotrophic factor. This in turn would cause a detrimental effect on the brain neurons that control motor movement.

A 2014 study, *A meta-analytic review of the effects of exercise on brain-derived neurotrophic factor*, found that,

"...both acute and regular exercise have a significant impact on BDNF levels. ...a single session of **exercise increases BDNF levels**, reflecting a moderate effect size. Moreover, **regular exercise intensifies the magnitude of these effects with increased BDNF responsivity**,..."

"... the available evidence indicates that **exercise should be considered as a successful strategy for enhancing BDNF activity**. Accordingly, use of exercise to enhance cognitive abilities and living skills has recently been successful in dementia patients according to meta-analytic review (Forbes et al., 2013), with **preliminary promising evidence in Parkinson's disease** (Ahlskog, 2011),..."

In other words, exercise increases BDNF in the brain, which protects and supports existing neurons and helps to grow new ones.

Sunshine

Sunshine is a very important part of God's prescription for healing from disease. The human body gets its supply of vitamin D from exposure to sunshine.

If you want to know the technical process - the 7-Dehydrocholesterol that is present in human skin is converted to cholecalciferol by the photosynthetic reaction triggered by exposure to UVB *[Medium-wave Ultraviolet]* radiation (sunlight radiation). Cholecalciferol is the inactive form of Vitamin D. Cholecalciferol is then transported through the bloodstream to the liver, where enzyme 25-hydroxylase turns it into 25-hydroxycholecalciferol. The 25-hydroxycholecalciferol is then transported to the kidneys and to macrophage cells where the enzyme 1-Alpha-Hydroxylase converts the 25-hydroxycholecalciferol into the biologically active form of vitamin D (1,25-Dihydroxycholecalciferol).

You don't need to know all those big names, just simply understand that sunshine on the human body produces the vitamin D that the human body needs from the cholesterol that is in the skin. This also helps explain why, in modern society today where many people work or stay indoors much of the time and don't get their daily requirements of sunshine, they usually have problems with high cholesterol. In other words, when the the body needs vitamin D, it produces cholesterol for the purpose of having the sunshine on the skin convert it into vitamin D - but if the person isn't getting sunshine to convert it to vitamin D, the cholesterol is just "piling up" in their body and not being used.

Vitamin D is also necessary for the body because it helps in the absorption of many of the body's essential minerals, including magnesium, calcium, iron, and zinc.

But back to Parkinson's.

A 2010 study, *Serum vitamin D and the risk of Parkinson's disease*, found that

"...**chronic inadequacy of vitamin D is a risk factor of Parkinson's disease**."

They also stated,

"The **vitamin D receptors** and an **enzyme** responsible for the formation of **the active form 1,25(OH) 2 D** have been found in high levels **in the substantia nigra**, the region of the brain affected most by Parkinson's disease. This raises the possibility that **chronic inadequacy of vitamin D leads to the loss of dopaminergic neurons in the substantia nigra region and further Parkinson's disease**."

In other words, they suspect that not having enough vitamin D is one of the causes that leads to the loss of the brain neurons that produce dopamine.

A 2016 French study, *Association of UV radiation with Parkinson disease incidence: A nationwide French ecologic study*, found that,

"...**reasonable UV-B** [ultraviolet radiation] **exposure is associated with lower PD risk** in younger persons..."

In other words, exposure to sunshine lowers the risk of Parkinson's.

A 2018 study, *The Association Between Vitamin D Status, Vitamin D Supplementation, Sunlight Exposure, and Parkinson's Disease: A Systematic Review and Meta-Analysis*, found that,

"Insufficiency and deficiency of 25-hydroxyvitamin D and **reduced exposure to sunlight were significantly associated with an increased risk of Parkinson's disease**."

In other words, not getting enough sunshine exposure (and thereby not enough vitamin D) increased the risk of getting Parkinson's.

Many people think they can just stay indoors and just take vitamin supplements. They think they can get their needed vitamin D just by taking vitamin D pills - but remember, the Creator of the human body didn't make "pills." God designed your body to get it's vitamin D from "sunshine exposure" - one of His natural remedies. Man-made pills do not react the same way in the body as the natural vitamin D that your body makes from the sun.

A 1992 study, *Human Plasma Transport of Vitamin D after Its Endogenous Synthesis*, and also a 1983 study, *The Physiological Economy of Vitamin D*, revealed that one of the key differences between vitamin D supplements and the vitamin D your body makes from sunlight is that they are carried on different proteins. Vitamin D from supplements (and fortified foods) gets carried rapidly through the system on chylomicrons and lipoproteins (sort of like little "fat taxis"). The vitamin D you get from the sunshine travels through the system on a special "carrier protein" known as vitamin D binding protein (DBP), which travels much more slowly.

The studies show that the supplemental vitamin D taken by mouth absorbs from the gut into the blood and is taken immediately to the liver and rapidly converted to the active form of vitamin D and dumped into the system - this causes a rapid spike in vitamin D levels - but the supply doesn't last. The vitamin D that is produced from exposure to the sunshine on the other hand, travels much slower, and therefore the majority stays outside the liver for a longer time and is gradually fed into the liver to be converted into the active form.

In other words, vitamin D from pills or from fortified foods, is used up rapidly, and then the body doesn't have it anymore until the next pill or food supply arrives. In contrast, vitamin D obtained by exposing the skin and eyes to sunshine, works more as a gentle "time-released" mechanism, gradually releasing Vitamin D to the body all through the day and night, even during the hours that the body is not exposed to the sunshine.

Another big difference between the vitamin D your body makes from the sun and the vitamin D that comes in supplements and fortified foods - is what it does to the body's cholesterol.

The vitamin D from supplements and fortified foods, is only fat soluble - which means that it requires the liver to make cholesterol and release LDL cholesterol particles into the blood in order to transport the vitamin D through the body.

The vitamin D which is made from sunshine exposure is different. According to Dr. Stephanie Seneff (https://stephanieseneff.net/), the sunlight on the skin stimulates cholesterol sulfate to be made along with the vitamin D, and "...the sulfate is conjugated with both vitamin D and cholesterol, and this makes these otherwise water-insoluble sulfate molecules water-soluble." Because it is then both water-soluble and fat-soluble, it can be transported through the blood without being packaged inside an LDL particle. This means that it can easily be delivered to cells and tissues without the liver having to make LDL cholesterol to carry it. The overall result of this has been demonstrated in several scientific studies.

Vitamin D from sunlight exposure lowers LDL cholesterol and has many other beneficial effects to the body - Vitamin D from supplements and fortified food sources, raises LDL cholesterol and does not have the same beneficial effects that the sunshine generated one does.

Let me stress that again!

Vitamin D from sunlight - lowers LDL cholesterol

Vitamin D from supplements and fortified food sources - raises LDL cholesterol

It is also important to understand, that medical vitamin D tests, do not always test for the active form of vitamin D (1,25-Dihydroxycholecalciferol). Some vitamin D tests only test for the intermediate, non-active form (25-hydroxycholecalciferol). The medical community assumes that if you have the non-active form in your system, you will have the active form as well. But this is a false assumption. If there is a problem with the 1-Alpha-Hydroxylase enzyme or with the pathway in the kidneys, then you could have a sufficient supply of the intermediate inactive form of vitamin D but still be deficient in the biologically active form. On the flip side, if the vitamin D test is testing for the active form, it can also have false results. This is because blood levels of the active vitamin D are regulated by the parathyroid hormone,

which is itself regulated by both calcium and vitamin D. In other words, if there is a vitamin D deficiency, the blood levels of the active form of vitamin D can actually be higher instead of lower.

This is one reason why there have been many news articles referring to the inaccuracies and problems of vitamin D testing. It is much better and much safer to focus on getting all the sunshine exposure that God prescribed, than to place any confidence in man-made tests.

Another detail about sunshine exposure that people need to realize is that there is a lot of hype put out on how people are supposed to protect their skin and eyes from sunlight and UV radiation. While it is true that you do not want to look directly at the sun with your eyes open, most of the hype about protecting your skin and eyes from the sunlight is all based in falsehoods and dis-proven theories, and it does not match the testimony of the Word of God.

Eccl. 11:7 Truly the light is sweet, and ***a pleasant thing it is for the eyes to behold the sun***:

The truth of the matter is, with the invention of sunglasses to supposedly shield a person from UV radiation, there arrived many diseases and various eye and health problems that mankind didn't used to have when they received sunlight through their eyes. God didn't just haphazardly throw your eyes together. He designed them perfectly! Which means that you do not need some piece of man-made plastic to "protect" you from UV radiation.

The melanin in your eyes protects them from UV rays through its antioxidant properties.

A 2007 study, *Role of Ocular Melanin in Ophthalmic Physiology and Pathology*, stated that,

"The protective effects of melanin on the ocular cells and tissues occur by both physical and biochemical mechanisms; **the pigment acts as a photo-screen** and as an antioxidant..."

Melanin is the pigment that not only gives eyes their various iris colors and produces the "browning color" when the body's skin tans, but it is this same pigment that protects both the skin and the eyes from excess UV radiation.

When sunlight/ultraviolet light passes through the eye, the melanin in the iris of the eye absorbs much of the UV rays. What UV rays make it past the iris then pass through a thin layer of cells behind the retina called the choroid. This stimulates the production of the alpha-melanocytes stimulating hormone (Alpha MSH) which in turn stimulates melanocytes which make melanin. These cells contain melanin, which helps to protect your eyes from ultraviolet radiation damage. Exposure to sunshine through our skin and our eyes, stimulates the body to produce more melanocytes, which produce more melanin, which build our natural protection against excess UV radiation. But if you wear sunglasses or sunscreen, then not only are your eyes not producing the vitamin D they need, but they don't produce more melanocytes or enough melanin either.

In a 2020 paper published in the Romanian Journal of Ophthalmology, titled *Photoprotection role of melanin in the human retinal pigment epithelium. Imaging techniques for retinal melanin*, it was clearly stated that,

"**Melanin is an effective absorbent** of infrared light, visible light and **ultraviolet radiation**. The **melanin pigment can annihilate over 99.9% of the absorbed UV radiation**. In the anterior pole of the eyeball, the melanocytes block visible and infrared light and ultraviolet radiation. In the posterior pole (RPE), melanosomes decrease the photo oxidative stress and act like a shield against the scattered light. ...**Melanin has the ability to absorb** infrared light, visible light and **ultraviolet radiation**."

Now the reason for bringing up the subject of melanin is that there are quite a few studies showing connections between a decrease in melanin in the body and the development of Parkinson's symptoms.

A 2014 study, *Parkinson's disease may be due to failure of melanin in the Substantia Nigra to produce molecular hydrogen from dissociation of water, to protect the brain from oxidative stress*, stated that,

"Melanin, located in the Substantia Nigra, **deteriorates in Parkinson's disease**..."

A 2005 study, *Alpha-synuclein redistributes to neuromelanin lipid in the substantia nigra early in Parkinson's disease*, found that,

"Pigmented A9 neurons in later stages of degeneration with obvious Lewy body formation had a **significant reduction in intracellular pigment**..."

What all this means is that sunlight exposure is necessary for not only the health and function of both the eyes and the body - sunlight exposure is necessary for the correct functioning of the brain neurons.

In fact, a 2012 study titled *Bright light exposure reduces TH-positive dopamine neurons: implications of light pollution in Parkinson's disease epidemiology*, found that artificial light pollution and exposure played a role in the development of Parkinson's.

Then a 2014 study titled *Eyes as Gateways for Environmental Light to the Substantia Nigra: Relevance in Parkinson's Disease*, found that when light passed through the eyes, some wavelengths of light, specifically the red - infrared wavelengths, could penetrate all the way to the substantia nigra part of the brain.

A 2020 study, *Red-Light (670 nm) Therapy Reduces Mechanical Sensitivity and Neuronal Cell Death, and Alters Glial Responses after Spinal Cord Injury in Rats*, found that exposure to red wavelengths of light,

"...significantly reduced neuronal cell death..."

A 2019 study, *Parkinson's disease and light: The bright and the Dark sides*, stated,

"...local application of near **infrared light to the substantia nigra exerts neuroprotective properties** in models of Parkinson's disease. However, light also has a darker side. In general, as regards the growing problem to human health - and the natural world - of **excess exposure to artificial light**: both urban glow and ubiquitous screens. Moreover, over-exposure to light, in particular **fluorescent light**, disrupts circadian rhythms and sleep, and may **damage dopaminergic neurons**."

In other words, God designed our eyes to be exposed to the sunlight (the full spectrum light) and to filter and block certain wavelengths and to allow others to pass through to accomplish different health benefits - and man's foolish habit of avoiding sunshine and living under constant artificial lighting exposure is fouling up the body's design and leading to diseases such as Parkinson's.

Getting at least 20-30 minutes of good sunshine exposure every day will greatly benefit the health and well-being of the human body. Sit or stand directly facing the sun with as much of your skin as is modestly possible exposed, and have your eyelids closed to protect your vision from the brightness (the red wavelength which is so beneficial to health passes through the eyelids to benefit the eyes). Working and exercise in the sunshine is also very beneficial, but usually when working, your head is turned downward where your eyes don't get the benefits of sunshine exposure, so it is still good to spend some time just facing the sun and let your eyes rest in its warmth.

*"**Exercise, and a free and abundant use of the air and sunlight**, . . . would give **life and strength to the emaciated**. The feeble one should press out into the sunshine as earnestly and naturally as do the shaded plants and vines. The pale and sickly grain blade that has struggled up out of the cold of early spring, puts out the natural and healthy deep green after enjoying for a few days the health-and-life-giving rays of the sun. **Go out into the light and warmth of the glorious sun, you pale and sickly ones, and share with vegetation its life-giving, health-dealing power**." Healthful Living p.230*

Rest

Getting good **rest** is almost self-explanatory. It is when the body is asleep at night that the body and brain both repair and heal from the day's activities. For people with Parkinson's, it is even more important. Both the symptoms of Parkinson's as well as the various medications the medical system gives for Parkinson's can cause poor sleep quality which will make the Parkinson's condition worse.

Various studies have shown that there are connections between dopamine release, brain neurons, and sleep deprivation.

A 2019 study paper published in *Springer Nature's Neuropsychopharmacology Reviews* titled *Sleep in Parkinson's disease*, references over 100 studies that have been done showing all kinds of various connections between Parkinson's and sleep. In other words, the lack of good restful sleep is very much connected to Parkinson's. The article points out that,

"**Sleep and wakefulness regulation** rely on a highly complex and integrated function of multiple brain areas and neurotransmitters, many of which have also been shown to be **affected in patients with Parkinson disease (PD)**."

It also states,

"Beyond the PD-related impairments of brain and neurotransmitter function there are other major contributing factors to **disturbances of sleep and wakefulness in patients with PD**, these include **dopaminergic drugs, which are known to influence regulation of sleep and wakefulness**,..."

It also tells that,"...patients with PD frequently experience insomnia,..."

In a 2018-2019 study, *Sleep and risk of parkinsonism and Parkinson's disease: a population-based study*, they found that,

"...**poor sleep quality and short sleep duration increased the risk of parkinsonism and Parkinson's disease**..."

A 2017 study, *Sleep fragmentation and Parkinson's disease pathology in older adults without Parkinson's disease*, showed that getting fragmented/poor sleep increased oxidative stress, which raised the amount of production of Lewy bodies and the amount of substantia nigra neuron loss - which increased the risk of developing Parkinson's.

A study published in the *Journal of Clinical Sleep Medicine* in 2015 titled *A 5-Year Follow-up Study on the Relationship between Obstructive Sleep Apnea and Parkinson Disease*, found that Obstructive Sleep Apnea (OSA) was connected to Parkinson's (PD).

"...the adjusted **risk of subsequent PD for patients with OSA was 2.26 times greater** than for patients without OSA."

It also stated,

"There is increasing evidence that OSA, characterized by repetitive intermittent hypoxia during apnea and reoxygenation following apnea, activates intense local and systemic inflammatory and immune responses. Proinflammatory cytokines produced by peripheral inflammation can cross the **disrupted blood-brain barrier and ignite deleterious effects on the nigrostriatal dopaminergic system**. In addition, peripheral inflammatory signals can also be transmitted to the brain via the vagus nerve, consistent with the enteric autonomic nervous system route of the dual-hit hypothesis that initiates the development of PD. Consequently, we postulated that **OSA may trigger aberrant inflammatory responses, convey inflammatory signals to the brain through humoral or neural routes, and bring about microglial activation and degeneration of dopaminergic neurons in the substantia nigra**."

So this involves both the sleep and the fresh air remedies. Something that hinders the body from getting its proper breath, thereby disturbing the body's sleep, causes various inflammatory signals which will gradually cause degeneration of the brain neurons and lead to Parkinson's. In other words, it is important for the body to get both good breath and good sleep.

According to Dr. Neil Nedley, "Research suggests that the average person does best on seven to eight hours of sleep per day. This figure was associated with the greatest longevity..." Proof Positive p.501-502

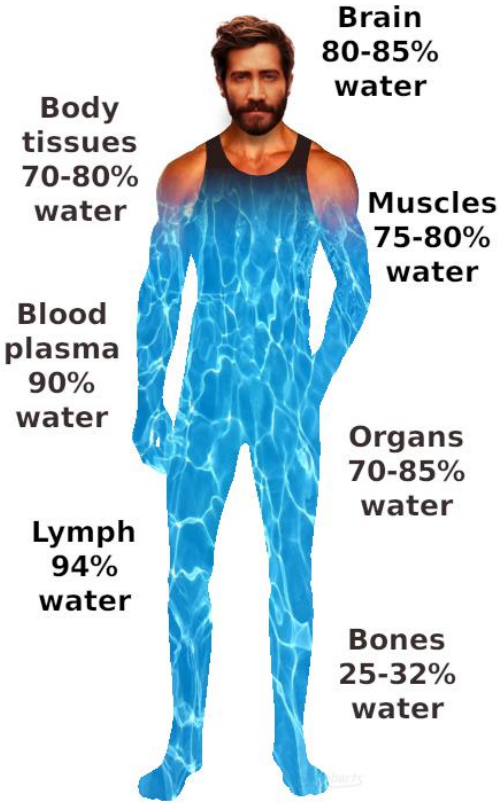
He also points out that some adults can manage with 6 hours while others may need 9 hours or so. So depending on the person, I would say on average, it is best to get at least 7-8 hours of sleep per night.

Lots of Water

Dehydration is another major body stress.

Most people have a tendency to believe that they are not dehydrated and that they drink plenty of water - but this is rarely the case. The vast majority of the world's population is chronically dehydrated. Here God's natural remedy **"Water"** comes into play.

The human body is largely composed of water. Body tissues are about 70-80% water. Blood plasma is over 90% water. Bones are almost 25% water. Even body fat is about 15% water. All the organs of the body are typically around 70-75% water. The brain is approximately 80-85% water. The average adult body contains around 8-9 gallons of water just in its structure and makeup. Needless to say, water is one of the most important elements needed for the human body.



The body is continually recycling and reusing some of its water resources. If it didn't, a person would have to drink many gallons of water per day. Because of all the body's ability to recycle some of its water, we don't need to drink as much. However, we still need much more than is commonly practiced in society.

People with Parkinson's have a tendency to drink a lot less than other people because of their lack of thirst sensation.

According to the Houston Parkinson's Disease Research, Education and Clinical Center,

"Individuals with PD drink 30% less water, on average, than their healthy peers."

This is because the damage to the brain neurons reduces their thirst sensation, so they don't drink as much as they should. The center's PADRECC Pathways Vol 6, No. 2 article, *Dehydration and Parkinson's Disease*, also states,

"The consequences of dehydration in PD patients are more serious than in healthy individuals. **Water deficiency can manifest as worsening disease with increasing stiffness and slowness. It can result in low blood pressure, appearing as weakness and dizziness, especially when standing. Dizziness can cause gait instability and result in falls. Dehydration can worsen memory, leading to confusion, and may trigger hallucinations**."

Parkinson's medications also cause dehydration as well, and dehydration can make Parkinson's neurological symptoms significantly worse.

It is very interesting, and I believe, very revealing that it is very easy for people to misinterpret symptoms of dehydration for symptoms of Parkinson's. That means that since dehydration can cause the exact same symptoms - there is most likely an intimate connection between the lack of water in the body and the development of Parkinson's.

Aquaporin-4 (AQP4) is a water channel protein that facilitates water flow & movement and regulates the body water balance in the brain. Science has found that decreased levels of AQP4 increased the levels of alpha-synuclein and inflammation markers, both of which are characteristics of Parkinson's.

In other words, there is a link between dehydration and Parkinson's. Remember, the brain is about 80% water. All the components of the dopamine pathway involve water in the process. All the cells are not

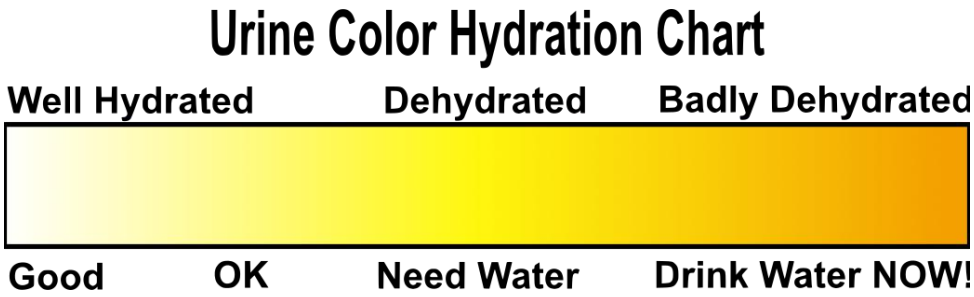
only filled with water, they are also encased in water. The brain neurons themselves require water, for it is the water that surrounds them that transports calcium and nutrients needed for the neurons. It is water that transports the neurotransmitters from one neuron to another.

That means that chronic dehydration can cause not only the individual cells to shrivel up and die, but it can, over time, cause the whole brain to begin shriveling up and it can also cause the brain's electrical signals to be lost or inhibited.

In other words, chronic dehydration can lead to Parkinson's disease as well as other brain degenerative diseases such as Alzheimer's.

Many people mistakenly believe that any liquid they drink will supply their daily water needs - but this is not true. Milk, sugar drinks, alcohol, coffee, tea, sodas - none of those are water! In fact, substances such as coffee, tea, and sodas are all diuretic - they cause the body to expel more water than what they contain. In other words, a person who drinks only coffee, tea, or sodas, is actually dehydrating their body at a cellular level, and will develop many diseases from this problem.

To get the right amount of daily water intake, a person needs to drink half their body weight in ounces *(if they are measuring in pounds - if measuring in kilograms, they need to divide their body weight by 7 and drink that many 250ml glasses of water)* In other words, if a person weighs 150 lbs, they need to drink 75 ounces of water each day. If their weight is 68kg, then they need to drink 2428.6ml (9.7 glasses) of water each day. Those are the standard under normal conditions. If they are working outside in the hot sun or doing any activity that causes them to sweat a lot, then they would need to be drinking even more than that.



Another good way to make sure you are drinking enough water is to check your urine. Urine in a well hydrated person will be mostly clear or just slightly yellow in color and will have no odor. But if the urine is very yellow or dark yellow it is a sign they are dehydrated. If the urine is even darker, like almost an orange color, it means they are dangerously dehydrated. If their urine has odor to it (meaning, you can smell it), then they are dehydrated and disease conditions will begin to set in.

One other important note on the water issue.

It is important to make sure you get proper amounts of salt in your diet. About 27% of the body's salt content is stored as crystals in the bones - this is one of the things that makes bones "hard." A lack of salt in the diet, will cause the body to pull salt from the bones in order to try to maintain the needed vital salt levels in the blood - pulling the salt out of the bones can lead to osteoporosis.

Salt and water are attracted together. Where salt is in the body, it will pull water to it. The salt and water in the body work in equilibrium - meaning there has to be the proper amount of each. If you have too much salt in the body outside of the cells, it will pull water out of the cells which can dehydrate and kill the cells as well as cause edema (swelling). This is what happens when someone is chronically dehydrated, their body begins to "collect" salt - in order to ration and keep the available water in the body and they can develop edema. On the other hand, if you begin drinking your daily needs of water, but you don't get proper amounts of salt to keep the salt/water ratio at the right mixture, you can start to develop cramps. Unexplained cramps (as in cramps in unexercised muscles) generally mean there is a salt shortage in the body. This can happen if someone begins drinking all the water they need, but not taking enough salt for their body's needs. So "salt" is also a vital part of getting enough water.

Dr. Batmanghelidj informs us,

"For every 10 glasses of water (about 2 quarts), one should add to the diet about half of a teaspoon of salt per day." Your Body's Many Cries for Water p.161

In other words, a person needs to make sure they are getting both the proper amount of water and the proper amount of salt - in order for the body to function properly.

Temperance

The word "**temperance**" means "Abstinence from" bad things and "Moderation" in everything else.

In other words, we must stay completely away from and cease from bad health practices, such as drinking alcohol, coffee, tea, or soda, and things such as smoking or chewing tobacco, etc. All these are very detrimental to human health and lead to many diseases.

And even with things that are good, we must be 'moderate'. That means that even though drinking your body's requirement for water each day is very good for you and beneficial to your health - you will want to be "moderate" and not "over-drink" (drink too much water). If a person were to overdo the water consumption and drink something like 6 gallons of water in a day - they would most likely die - basically from 'drowning'.

Exercise is good and healthy for the body - yet if an intemperate person was to do really strenuous exercise and work 24 hours a day/7 days a week with no rest - they would overwork their body and kill themselves.

Practicing 'temperance' means that you don't do things that are bad for the health, you don't eat, drink, or use things that are bad for your health, and the good for your health things you do, you do them within reason and don't overdo it.

Diet/Nutrition

Now as already mentioned with the glutathione deficiency issue, the body must have all the nutrients it needs in order to function properly. The nutrients we obtain from the foods we eat, are the building blocks that the body uses to produce many other necessary chemical components. If we don't eat the proper nutrients, the the building blocks are missing, and the body cannot produce what it needs - which will inevitably result in disease symptoms.

For example, look back at the dopamine pathway again in Figure 9.

Notice the various vitamins & minerals necessary for just this pathway to work. Notice the various amino acids and enzymes needed for just this pathway to work. If the body is missing ANY of these needed nutrients, it can interfere with this pathway and cause issues that lead to "disease!" That means that nutritional deficiencies can lead to Parkinson's.

In other words, God's "diet" remedy is very important. Each person must make sure that they are eating enough varied foods each day in order to get their daily supply of each needed nutrient.

Some nutrients needed for the body would include, but not be limited to,

Vitamins	**Minerals**	**Amino Acids**
Vitamin A	Calcium	Tryptophan
Vitamin D	Copper	Leucine
Vitamin E	Iodine	Isoleucine
Vitamin K	Iron	Threonine
Vitamin B_1 (Thiamine)	Potassium	Lysine
Vitamin B_2 (Riboflavin)	Phosphorus	Methionine
Vitamin B_3 (Niacin)	Magnesium	Cystine
Vitamin B_5 (Pantothenic)	Manganese	Valine
Vitamin B_6 (Pyridoxine)	Sodium	Phenylalanine
Vitamin B_7 (Biotin)	Selenium	Tyrosine
Vitamin B_9 (Folate)	Zinc	Histidine
Vitamin B_{12} (Cobalamin)		
Vitamin C		

And various other components such as calories, carbohydrates & sugars, fiber, healthy fats like Omega-3 and Omega-6, antioxidants, and protein.

Now that looks like a long and complicated list, but in actuality, many of these nutrients can be found in a single food source. For example, just a single cup of Kale is loaded with different amounts of

vitamin C, potassium, antioxidants,
vitamin A, calcium, Omega-3,
vitamin K, iron, Tryptophan,
vitamin E, magnesium, Threonine,
vitamin B_1, copper, Isoleucine,
vitamin B_2, phosphorus, Leucine,
vitamin B_3, manganese, Lysine,
vitamin B_5, zinc, Methionine, Phenylalanine,
vitamin B_6, fiber, Cystine, Tyrosine,
as well as other nutrients.

In other words, if you are making sure you eat a well-balanced nutritious plant-based diet - it is not too difficult to get all your needed nutrients. In the following lists, I will give just a few examples of different foods, but these are just examples - the nutrients discussed can also be found in many other foods as well.

Notice that Vitamin C (VC) was an important nutrient that is used in multiple parts of that dopamine pathway - meaning that if it is missing, the needed dopamine won't be produced.

Vitamin C is absolutely necessary for the growth and the repair of your body. Vitamin C is necessary for increasing iron absorption in the body, and iron, which is also used in that dopamine pathway, is necessary for transporting oxygen and carbon dioxide through the bloodstream as well.

In other words, a vitamin C deficiency in the body can cause an iron deficiency in the body - and either deficiency will prevent the production of dopamine.

A 2015 study, *Vitamin C Facilitates Dopamine Neuron Differentiation in Fetal Midbrain through Tet1- And Jmjd3-Dependent Epigenetic Control Manner*, found that vitamin C was extremely important for the development and formation of brain neurons in developing babies,

"We show that VC supplementation in neural stem cell (NSC) cultures derived from embryonic midbrains greatly enhanced differentiation towards midbrain-type DA (mDA) neurons, the neuronal subtype associated with Parkinson's disease."

"...DA neuron differentiation in vitro is greatly increased by VC supplementation..."

In other words, vitamin C was intimately involved in the body's process of turning stem cells into dopaminergic neurons. If Parkinson's patients are suffering from a lack of dopaminergic neurons - vitamin C is vital for them to get plenty of.

A 2017 study, *Vitamin C-Induced Epigenetic Modifications in Donor NSCs Establish Midbrain Marker Expressions Critical for Cell-Based Therapy in Parkinson's Disease*, found the same thing - that vitamin C helps in the making of dopaminergic neurons.

"Cultured neural stem/precursor cells (NSCs) are regarded as a potential systematic cell source to treat Parkinson's disease (PD). However, the therapeutic potential of these cultured NSCs is lost during culturing. Here, we show that treatment of vitamin C (VC) enhances generation of authentic midbrain-type dopamine (mDA) neurons with improved survival and functions from ventral midbrain (VM)-derived NSCs."

A 2017 study, *Vitamin C Promotes Astrocyte Differentiation Through DNA Hydroxymethylation*, stated,

"The brain is the organ with the highest concentrations of VC in the body as VC is actively transported into the brain and neurons via the sodium-dependent VC transporter."

Because vitamin C promotes astrocyte formation, and astrocytes "...are absolutely required for survival, maintenance and functions of DA neurons in adult midbrain." that is just one more connection between low vitamin C and Parkinson's.

Dr. James Balch states in his book,

"In one study, people with Parkinson's disease were given 3,000 milligrams of vitamin and 3,200 international units of vitamin E daily The results strongly suggested that the progression of the disease can be slowed significantly by the administration of high dosages of antioxidants." Prescription for Nutritional Healing, 2nd Ed., p.422

A Swedish study titled *"Dietary Antioxidants and the Risk of Parkinson Disease: The Swedish National March Cohort"* (published Feb. 2021 by the American Academy of Neurology) found among other things that people with higher intakes of vitamin E and vitamin C, reduced their risk of developing Parkinson's disease by 32%.

"Our findings suggest that dietary **vitamin E and C intake might be inversely associated with the risk of PD**."

In other words, as the vitamin E & vitamin C intake went up, the risk of developing Parkinson's went down. That means that a good supply of those vitamins in the diet is beneficial for Parkinson's sufferers.

Some foods that are good sources of vitamin C (required amount to reach body's **75-100mg/day** daily requirement) would include, but not be limited to, things like,

Acerola powder (1 tablespoon)
Red bell peppers (1 pepper)
Cantaloupe (1 1/4cups)
Parsley (1 1/8 cups)
Kale (1/4 lb. raw)
Kiwi fruit (3/4 cup)
Broccoli (1 1/4cups)
Brussels sprouts (1 cup)
Lemons (1 1/2 large)
Strawberries (1 cup)
Oranges (1 orange)
Grapefruit (1 grapefruit)

So if you were to eat a half cup of strawberries or an orange at breakfast, and a half cup of brussel sprouts at lunch - you would have gotten the needed daily amount of vitamin C.

Some foods that are good sources of vitamin E (required amount to reach body's **15mg/day** daily requirement) would include, but not be limited to, things like,

Wheat germ (7 tablespoons)
Sunflower seeds (1/2 cup)
Almonds (about 51 nuts)
Hazelnuts (about 73 nuts)
Pine nuts (about 1 1/4 cups)
Peanuts (about 2 1/2 cups)

Avocados (3 1/2 avocados)
Olive oil (1/2 cup)
Red peppers (about 7 3/4 peppers)
Brazil nuts (about 57 nuts)
Mangos (about 5 mangos)
Spinach (4 cups)
Kiwi fruit (5 1/2 cups)

So if you were to eat a handful of mixed nuts (almonds, Brazil nuts, hazelnuts, peanuts) and a couple kiwi fruits at breakfast, and some olive oil on your spinach at lunch - you would have gotten the needed daily amount of vitamin E.

Folate was also a necessary nutrient in different places in that dopamine pathway.

A 2002 study, *Dietary folate deficiency and elevated homocysteine levels endanger dopaminergic neurons in models of Parkinson's disease*, found that,

"The ability of a **folate deficient diet to elevate plasma homocysteine levels** and sensitize dopaminergic neurons to MPTP-induced degeneration in mice provides direct evidence that a single dietary nutrient can modify the pathogenic cascade thought to occur in PD."

"Our findings provide the first direct evidence that **homocysteine can sensitize dopaminergic neurons to dysfunction and death in models of PD**, and suggest a mechanism whereby **dietary folate may reduce risk of PD**."

In other words, lack of folate results in elevated homocysteine levels which causes dopaminergic neurons to malfunction and die.

Some foods that are good sources of folate (required amount to reach body's **400mcg/day** daily requirement) would include, but not be limited to, things like

Arrowroot (1 cup, sliced)
Asparagus (1 1/2 cups)
Spinach (1 1/2 cups)
Broccoli (2 1/2 cups)
Avocado (2 1/2 avocados)
Edamame (7/8 cup)
Lentils (1 1/4 cups)
Pinto Beans (1 1/4 cups)
Chickpeas (1 1/3 cups)
Tofu (5 1/2 cups)

So if you were to eat some tofu at breakfast, and some pinto beans and asparagus at lunch - you would have gotten the needed daily amount of folate.

Niacin (vitamin B_3) was also needed for that dopamine pathway.

A 2021 study, *Niacin Enhancement for Parkinson's Disease: An Effectiveness Trial*, reveals some of the bad effects of using the man-made Parkinson's drugs.

" Some symptoms of PD such as fatigue, sleep dysfunction, and mood changes appear to be consistent with the deficiency of vitamin B3... This deficiency may be related to carbidopa interaction, defective tryptophan metabolism, and stresses of night sleep disorder...The **levodopa (L-DOPA) medication that is commonly used to treat PD symptoms depletes niacin levels** by interfering with tryptophan breakdown."

This being the case, it is no surprise that the study also found that,

"...**niacin** enhancement has the potential to maintain or improve quality of life in PD and **slow disease progression**."

A 2014 study, *Upregulation of GPR109A in Parkinson's Disease*, found that,

"**Niacin levels** were **lower in PD** and were **associated with increased frequency of experiencing body pain and decreased duration of deep sleep**."

And a clinical study from 2014, *Low-dose niacin supplementation modulates GPR109A, niacin index and ameliorates Parkinson's disease symptoms without side effects*, found that when someone with Parkinson's was given niacin, it improved their Parkinson's symptoms and caused no bad effects. It also stated,

"...**niacin** (aka vitamin B3 or nicotinic acid), also acts on GPR109A as its agonist in **suppressing inflammation**. The aromatic amino acid decarboxylase inhibitor **carbidopa (typically prescribed as a part of carbidopa/levodopa) was shown to deplete niacin levels in the body in PD patients**."

In other words, niacin is an important nutrient that people need to get in their diet, and it is beneficial in helping improve Parkinson's symptoms, decreasing body pain, and improving deep sleep - while the drug that the medical system gives to Parkinson's patients, not only counteracts the body's natural processes, the drug is also been proven to deplete the body's niacin supply.

Some foods that are good sources of niacin (required amount to reach body's **16mg/day** daily requirement) would include, but not be limited to, things like

Portabella mushrooms (2 1/3 cups sliced)
Brown rice (3 1/4 cups)
Kamut (4 cups)
Peanuts (4 handfuls dry roasted)
Avocados (about 5 avocados)
Green peas (5 cups)
Sweet potatoes (6 1/2 cups)
Yellow passion fruit juice (3 cups)

So if you were to eat some kamut cereal and a handful of peanuts at breakfast, and some brown rice and green peas at lunch - you would have gotten the needed daily amount of niacin.

Vitamin B_6 was also a key player in that dopamine pathway, but it is even more connected than just that. Vitamin B_6 is involved in more of the body's functions than almost any other nutrient. It is vitally necessary for the production of stomach acid and for the body to be able to absorb fats and proteins. Vitamin B_6 helps maintain the sodium/potassium balance in the body, helps with making red blood cells, and is necessary for the production of both RNA and DNA. It is required by the nervous system and is necessary for proper brain function. Not only is it what activates many of the enzymes in the body, it is also necessary for the body to be able to absorb vitamin B_{12}. Vitamin B_6 is also vital for the body's immune system to function and for the production of antibodies.

Interestingly enough, if the body doesn't have the necessary Vitamin C and Potassium, it can't get the vitamin B_6 that it needs - because vitamin C and potassium are required for B_6 absorption.

One reason why I mention this in this article on Parkinson's, is because, as the book *Drug Muggers* points out, the various Parkinson's drugs deplete the body's vitamin B_6.

In fact, Parkinson's drugs not only deplete the body's supply of vitamin B_6, they also deplete the body's supply of Iron and Potassium - and by default, because of their depletion of B_6, they also cause a depletion of vitamin B_{12} as well.

According to Dr. Marty Hinz from NeuroResearch Clinics Inc., Carbidopa completely depletes the body's vitamin B_6. He points out that carbidopa binds with vitamin B_6 "*in a 1:1 ratio*" - meaning that a single milligram of carbidopa will bind to and permanently remove a single milligram of B_6 from the body.

Since the Recommended Daily Allowance (RDI) of vitamin B_6 is about 1.7-2 mg/day, and the average dose of carbidopa is between 70-200 mg/day - Parkinson's patients who are taking carbidopa are having between 35-100 times the RDI of vitamin B_6 completely robbed from their body EVERY DAY!

As would be expected, this draining of the B_6 from the body can rapidly lead to major diseases. Ironically, symptoms of vitamin B_6 deficiency include among other things, tremors, gait problems, depression, confusion, low energy, muscle pains, and nerve problems - in other words, many of the same symptoms as Parkinson's. Stated in another way, by causing nutritional deficencies, the drug Carbidopa causes the exact same symptoms as Parkinson's disease.

Vitamin B_6 deficiency is also known to increase death rates not only from cardiovascular disease, but from almost all other causes as well. This helps explain why the Parkinson's death rates have increased by well over 550% since carbidopa was approved by the FDA in 1975 for use with levodopa.

In a paper titled *The Parkinson's disease death rate: carbidopa and vitamin B_6*, which was published in Clinical Pharmacology in 2014, Dr. Hinz, along with a couple other doctors, attempted to expose the dangers of carbidopa and benserazide (another Parkinson's drug). They pointed out that,

*"Both drugs **irreversibly bind to and permanently deactivate** pyridoxal 5'-phosphate (PLP), the active form of **vitamin B6**..."*

Then in 2016, a very revealing paper was published in *Neuropsychiatric Disease and Treatment* titled *Parkinson's Disease Managing Reversible Neurodegeneration.* In this paper Dr. Hinz, along with four other doctor co-authors, stated,

"If RNDs [relative nutritional deficiencies] *relating to L-dopa precursors, serotonin precursors, thiols, and B6 depletion are induced and/or ignored by standard medical care, then the current standard treatment methodology is facilitating irreversible PN* [progressive neurodegeneration] *and inducing reversible pseudo-neurodegeneration, which causes patient deterioration under the belief that a single etiology model, irreversible PN, is the cause of all clinical deterioration."*

Let me phrase that in simple language. What these doctors are pointing out, is that the standard medical system's method of treating Parkinson's with drugs that cause nutritional deficiencies, is doing two things. The treatments themselves are creating neurodegeneration with their resulting nutritional deficiencies, and they are also causing the patient to believe in their own mind that they are getting worse - which mindset in itself causes even more neurodegeneration - simply by the power of the mind.

Let the ramifications of that thought sink in!

In simple terms, the medical system's treatments are taking someone who originally started with just some slight problems, like from a nutritional deficiency or stress, and they are playing on that person's state of mind to build a whole "Parkinson's disease" case on those symptoms and then making the symptoms worse and worse with their drugs - until the patient eventually dies.

Hmmm - this is very enlightening! But now back to vitamin B_6.

A 2010 study, *Dietary intake of folate, vitamin B6 , vitamin B12 and riboflavin and risk of Parkinson's disease: a case control study in Japan*, found that,

"...**low intake of dietary vitamin B6** was associated with an **increased risk** of PD."

And a 2015 study, *Associations between B Vitamins and Parkinson's Disease,* revealed that vitamin B_6 also reduced the risk of developing Parkinson's disease.

"**Higher dietary intake of vitamin B6** may be associated with a **decreased risk** of PD..."

That means that a sufficient supply of B_6 in the diet will also greatly benefit people who already have Parkinson's symptoms.

Some foods that are good sources of vitamin B_6 (required amount to reach body's **1.7-2mg/day** daily requirement) would include, but not be limited to, things like

- Broccoli (5 1/2 cups)
- Sweet potatoes (3 cups)
- Peas (5 cups)
- Bananas (4 large bananas)
- Potatoes (3 large potatoes)
- Avocados (3 1/2 avocados)
- Pistachio nuts (172 nuts)
- Pinto Beans (4 1/2 cups)

So if you were to eat a banana or two and a handful or two of pistachios at breakfast, and some potatoes or pinto beans at lunch - you would have gotten the needed daily amount of B_6.

Magnesium (Mg), is an essential mineral for the human body to have a good supply of and it is one of the most important minerals in the body. Magnesium is necessary for many cell functions. Every cell in the body must have enough magnesium to function, or it dies. Magnesium is responsible for the transporting of calcium and potassium ions across cell membranes and it controls the amount of calcium inside the cell to prevent cell damage. Magnesium also regulates the transfer of signals, works in the creation of energy, helps make proteins, works in regular muscle and heart muscle contraction, helps regulate blood pressure, makes strong and healthy bones, controls blood sugar levels, helps control the process of cell proliferation (beginning of new cells), and is also necessary for making both RNA and DNA. Magnesium also boosts the

immune system and it protects the cells and the body from heavy metal toxicity by binding with the heavy metals and carrying them out of the body.

Magnesium is also extremely necessary for ensuring that the brain neurons function normally. It is vitally necessary for the conversion process of L-DOPA to dopamine. In other words, it is a building block for dopamine and if it is missing, the brain neurons won't be able to produce the dopamine necessary. Magnesium also helps regulate other neurotransmitters, such as glutamate and GABA, which are both very dependent upon there being the correct levels of magnesium in the brain. Having a low level of magnesium can lead to having excess glutamate released in the brain - which will affect the pathways involved with Parkinson's.

A 1996 study, *Glutamate and Parkinson's disease*, revealed that,

"**Altered glutamatergic neurotransmission and neuronal metabolic dysfunction** appear to be central to the pathophysiology of **Parkinson's disease (PD**). ...As an excitatory neurotransmitter, glutamate plays a pivotal role in normal basal ganglia circuitry. With nigrostriatal **dopaminergic depletion**, the **glutamatergic projections** from subthalamic nucleus to the basal ganglia output nuclei **become overactive** and there are regulatory changes in glutamate receptors in these regions. There is also evidence of increased glutamatergic activity in the striatum. In animal models, **blockade of glutamate receptors ameliorates the motor manifestations of PD**. Therefore, it appears that **abnormal patterns of glutamatergic neurotransmission are important in the symptoms of PD**."

In other words, too much glutamate released in the brain overexcites the nerve cells and causes nerve cell damage and death. This condition is called glutamate excitotoxicity. So while glutamate is a vitally important and necessary neurotransmitter, if dopamine and glutamate are not balanced with each other because of some impairment (such as a magnesium deficiency) and glutamate becomes overactive - too much glutamate in the brain then becomes a "neurotoxin" that overstimulates the neurons, causing damage and cell death.

In a 2012 review titled *Magnesium basics*, we find that in the human body,

"...**magnesium is the fourth most abundant cation and is essential, especially within cells**, being the second most common intracellular cation after potassium, with both these elements being **vital for numerous physiological functions**."

It also states that,

"**Magnesium is a cofactor in >300 enzymatic reactions**. Magnesium critically stabilizes enzymes, including many ATP-generating reactions. ATP is required universally for glucose utilization, synthesis of fat, proteins, nucleic acids and coenzymes, muscle contraction, methyl group transfer and many other processes, and interference with magnesium metabolism also influences these functions. Thus, one should keep in mind that **ATP metabolism, muscle contraction and relaxation, normal neurological function and release of neurotransmitters are all magnesium dependent**."

A 2011 study, *Dietary intake of metals and risk of Parkinson's disease: a case-control study in Japan*, found that a,

"**Higher intake of iron, magnesium, and zinc** was independently associated with **a reduced risk of PD**..."

A study, *Magnesium in Parkinson's disease: an update in clinical and basic aspects*, published in 2011 in a book of studies called *Magnesium in the Central Nervous System*, found that when they restricted the diet of rats and prevented them from getting enough magnesium, it,

"...resulted in **severe loss of dopaminergic neurons** exclusively in the substantia nigra in 1-year-old rats that had been subjected to continuously **low Mg intake**..."

They also found that,

"The results indicated that **Mg might protect dopaminergic neurons** in the substantia nigra from degeneration."

"...a significant and striking effect of Mg for prevention of neurite and neuron pathology, and also amelioration of neurite pathology in a PD model."

In other words, a lack of enough magnesium in the diet, can destroy the dopaminergic neurons and lead to Parkinson's disease.

That means that people need to make sure they are getting enough magnesium.

Some foods that are good sources of magnesium (required amount to reach body's **420mg/day** daily requirement) would include, but not be limited to, things like

Spinach (2 3/4 cups)
Squash or Pumpkin seeds (about 370 seeds)
Flax seeds (3/4cup)
Lima beans (3 1/2 cups)
White beans (3 1/2 cups)
Brown rice (5 cups)
Quinoa (3 1/2 cups)

Almonds (132 nuts)
Brazil nuts (24 nuts)
Cashews (about 85 nuts)
Avocados (about 7 avocados)
Bananas (15 medium-sized bananas)
Dried Figs (4 1/4 cups)
Dates (6 1/4 cups)

So if you were to eat some almonds, Brazil nuts, cashews, figs and dates at breakfast, and some spinach and Lima beans at lunch - you would have gotten the needed daily amount of Magnesium.

Another handy tip to build up the body's magnesium levels is to soak in an Epsom Salt bath and/or spray your body down with pure magnesium oil and massage it into the skin. The skin will absorb the magnesium that your body needs. This is also a very good treatment for good sleep - magnesium absorbed into the skin will help you "sleep like a baby."

Selenium is an important nutrient. It fights inflammation, protects against heart disease, boosts your immune system, and is vitally important for the proper functioning of your thyroid gland. In fact, the thyroid gland contains more selenium than any other organ of the human body.

Lack of selenium is also connected to the Parkinson's conditions as well.

A 2015 study, *Biological functions of selenium and its potential influence on Parkinson's disease*, found that selenium protected against Parkinson's symptoms.

"Our findings indicated that **Se** [selenium] **protected against bradykinesia (locomotor damage) and DNA damage** in lymphocytes of rats in the tested animal model of PD..."

A 2022 study, *Selenium Effects on Oxidative Stress-Induced Calcium Signaling Pathways in Parkinson's Disease*, stated that,

"...calcium as a second messenger regulates the neuron cells' essential activities, but **its overloading leads to cellular oxidative stress and apoptosis**. Therefore, **Se's antioxidant role can affect calcium signaling and alleviate its complications**. There are **signs of Se and Selenoproteins incorporation in protecting stress oxidative in various pathways**. In conclusion, there is convincing proof for the **crucial role of Se and Calcium in PD pathogenesis**."

In other words, calcium as we already pointed out, is vital for the release of dopamine, but if it overloads the cell, it leads to oxidative stress and death of the cell. Selenium helps fight against oxidative stress and therefore helps protect the cell.

A 2019 study, *Prioritized brain selenium retention and selenoprotein expression: Nutritional insights into Parkinson's disease*, found,

"Direct and indirect evidence from mouse models **implicate selenoprotein T**, glutathione peroxidase 1, **selenoprotein P** and glutathione peroxidase 4 in **counteracting Parkinson's disease through Se transportation to the brain and reduced oxidative stress**."

In other words, selenium's ability to protect against oxidative stress counteracts Parkinson's disease.

A 2014 study, Selenium and Selenoprotein Function in Brain Disorders, stated that,

"Selenium may have an **important role in PD by alleviating oxidative stress** via selenoproteins. Plasma selenium levels decrease in subjects with PD."

Here again, selenium protects against oxidative stress, and when testing people with Parkinson's, they found lower levels of selenium in the Parkinson's patients.

In other words, it is a good idea to make sure you have enough selenium.

Some foods that are good sources of selenium (required amount to reach body's **55mcg/day** daily requirement) would include, but not be limited to, things like

Brazil nuts (1 nut)
Sunflower seeds (1/2 cup)
Chia seeds (5/8 cup)
Firm Tofu (1 1/4 cup)
Navy beans (3 1/2 cups)
Pinto beans (5 cups)
Whole wheat pasta (1 1/3 cup)
Kamut (1 cup)
Shiitake mushrooms (1 1/2 cup)
Sesame seeds (1 heaping cup)

So if you were to eat a single Brazil nut at breakfast - you would have gotten the needed daily amount of Selenium.

Lycopene is not considered a "necessary" nutrient - but it is a very beneficial nutrient that is in many foods, where it usually adds a red color. It is highest in **Guavas, Tomatoes, and Watermelon**. It can also be found in good supply in **Pink Grapefruit, Red Bell Peppers, Asparagus, Red Cabbage, and Mangos**.

Lycopene not only fights cancer, it has also been found to reverse Parkinson's problems.

A 2011 study, *Protective effect of lycopene on oxidative stress and cognitive decline in rotenone induced model of Parkinson's disease*, found a

"**neuroprotective potential of lycopene** on oxidative stress and neurobehavioral abnormalities in rotenone induced PD."

"...**lycopene** supplementation along with rotenone for 30 days **prevented rotenone-induced alterations in antioxidants** along with the **prevention of rotenone induced oxidative stress and neurobehavioral deficits**."

In other words, mice were injected with the insecticide Rotenone (which is a known cause of Parkinson's) then they were injected with lycopene, and the lycopene had very beneficial effects, in some cases, totally reversing the Parkinson's effects of the toxin rotenone.

A very similar 2013 study, *Effect of lycopene on oxidative stress and behavioral deficits in rotenone induced model of Parkinson's disease*, found that,

"Along with this, the number of TH decreased, alpha-SYN increased and LC3-B positive neurons increased in rotenone administered animals, which were **reversed on lycopene treatment**."

In other words, this study found the same as the last one, lycopene reversed the Parkinson's problems that the toxic rotenone insecticide had caused.

Interestingly enough, lycopene is enhanced by cooking it with some oil (a 1/2 cup of tomato sauce contains almost 2 1/2 times the lycopene that is in a whole cup of plain cooked tomatoes).

Remember the dopamine pathway started with phenylalanine and then tyrosine.

It would also stand to reason that since phenylalanine and tyrosine are the basic building blocks of dopamine, that it would be a good idea to make sure to get a plentiful daily supply of those nutrients as well - so that the body has those components to start the dopamine making process with.

As already pointed out, phenylalanine has to be obtained by eating it in the diet because the body can't make it, but tyrosine can either be eaten in the diet or made by the body from the phenylalanine that was eaten.

The daily requirement for phenylalanine and tyrosine combined is **11 milligrams per pound of body weight** (or **25 milligrams per kilogram of body weight**).

In other words, if you eat both phenylalanine and tyrosine, you need to eat about 5.5mg/pound of each. But if you only plan on eating the phenylalanine then you would need to eat the whole 11mg/pound of it.

Some foods that are good sources of phenylalanine (required amount to reach body's daily requirement) would include, but not be limited to, things like

Firm Tofu (1/2 cup)
Edamame (2/3 cup)
Soy milk (3 1/4 cups)
Pinto beans (1 cup)

Navy beans (1 cup)
Adzuki beans (1 cup)
Kidney beans (1 cup)
Lentils (1 cup)
Black beans (1 1/4 cup)
Squash & Pumpkin seeds (about 300 seeds)
Peanuts (2 1/2 handfuls)
Almonds (66 nuts)
Whole wheat pasta (2 1/2 cups)
Kamut (1 3/4 cups)

And tyrosine can be found in all the same types of foods as well.

So if you were to eat some tofu or soy milk at breakfast, and some pinto beans or whole wheat pasta at lunch - you would have gotten the needed daily amount of phenylalanine & tyrosine.

Of course, with all these various nutrients, someone already in the Parkinson's condition would most likely need to get a little more of these various nutrients per day than the average daily allowance - until they got their body built back up to where it needs to be.

Conclusion

I could go on and on with all the various dietary nutrients and all their many connections to Parkinson's, but I've listed enough to make my point.

We have looked at how the brain signals work and how they are damaged and defective in the Parkinson's condition. We have examined some of the 'flaws' with the modern medical system's method of treating the "disease." We have also seen that God has given us the remedy for this problem in His eight laws of health. We have also explored some of the published studies showing some of the bearings that these eight laws of health have on Parkinson's.

Again, it is important to understand, Parkinson's is not a single cause disease. I firmly believe that Parkinson's symptoms can arise from many different "causes" ranging from exposures to toxic chemicals, pesticides, or wireless radiation, to something as simple as a nutritional deficiency. Therefore, it is important to examine each person's case on a personal level. One person may have all the nutrients they need, yet be getting daily exposure to an environmental toxin or WIFI. Another person may not have any such exposures, yet be sorely lacking in a nutritious diet, in proper sunshine exposure, or perhaps just they are having a stressed mental outlook. It just all depends on each individual case.

But no matter what the case, each person must search their hearts and their lifestyles and make sure that they are each doing their part to follow God's Way to the best of their ability. If they are willing to follow God's way of healing, then they can safely trust that God will do what is best for them.

*"**Natural means, used in accordance with God's will, bring about supernatural results**. We ask for a miracle, and the Lord directs the mind to some simple remedy. We ask to be kept from the pestilence that walketh in darkness, that is stalking with such power through the world; we are then to cooperate with God, observing the laws of health and life. **Having done all that we possibly can, we are to keep asking in faith for health and strength**. We are to eat that food which will preserve the health of the body. God gives us no encouragement that He will do for us what we can do for ourselves. Natural laws are to be obeyed. We are not to fail of doing our part. God says to us, "Work out your own salvation with fear and trembling. For it is God which worketh in you both to will and to do of his good pleasure" (Philippians 2:12, 13). **We cannot disregard the laws of nature without disregarding the laws of God**. **We cannot expect the Lord to work a miracle for us while we neglect the simple remedies He has provided for our use**, which, aptly and opportunely applied, will bring about a miraculous result. Therefore, pray, believe, and work." 2SM 346-347*

In summary, I believe Parkinson's disease can be healed by abandoning "man's methods" and following God's eight natural remedies.

In other words, Breathing an abundant and unrestricted supply of **Fresh Air** - Getting plenty of good **Exercise** every day - Drinking your body's daily **Water** needs - Making sure you get good **Rest** at night - Staying **Temperate** in what you do (abstaining from harmful habits) - Ensuring that your **Diet** is a well-balanced plant-based diet that contains all the daily nutrient needs - Making it a priority to spend plenty of time outside in the **Sunshine** to get your daily sunlight needs - And above all, placing all your **Trust and Confidence in God**, to ensure a stress-relieved and happy satisfied mentality.

Though some times God sees fit to allow trials and hardship to test His people and to perfect their characters, God does not want His people unnecessarily wasting away in pain and suffering. He knows what is best for us and He promises that if we obey Him and follow His way - He will heal us in His timing.

*Exodus 15:26 And said, If thou wilt diligently hearken to the voice of the LORD thy God, and wilt do that which is right in his sight, and wilt give ear to his commandments, and keep all his statutes, **I will put none of these diseases upon thee, which I have brought upon the Egyptians: for I am the LORD that healeth thee**.*

*James 5:15 And **the prayer of faith shall save the sick**, and the Lord shall raise him up; and if he have committed sins, they shall be forgiven him.*

3 John 1:2

*Beloved, **I wish above all things that thou mayest prosper and be in health**, even as thy soul prospereth.*