

# Neurospiritual



National Institute  
on Drug Abuse

*"Addiction is defined as a chronic, relapsing disorder characterized by compulsive drug seeking and use despite adverse consequences. It is considered a brain disorder, because it involves functional changes to brain circuits involved in reward, stress, and self-control. Those changes may last a long time after a person has stopped taking drugs."*

## Dopamine Pathway Hijack

**So, while the reward pathway is important for motivation and for deciding what things in the environment we like, it can also easily be hijacked, creating excessive motivation for behaviors, like eating, drugs, alcohol, winning, earning money, pornography, sex, etc. Dr. Tiffany Rogers**



**You can have a spike of dopamine just by ordering dessert. Even though you haven't finished what's on your plate, dessert is something new.**



1. How does the National Institute of Drug Abuse define addiction?

"Addiction is defined as a \_\_\_\_\_, relapsing disorder characterized by \_\_\_\_\_ drug seeking and use despite adverse \_\_\_\_\_. It is considered a brain disorder, because it involves functional changes to brain circuits involved in reward, stress, and \_\_\_\_\_. Those changes may last a long time after a person has stopped taking drugs."

chronic compulsive consequences self-control

2. So, while the reward pathway is important for \_\_\_\_\_ and for deciding what things in the environment we \_\_\_\_\_, it can also easily be \_\_\_\_\_, creating \_\_\_\_\_ motivation for behaviors, like eating, drugs, alcohol, winning, earning money, pornography, sex, etc Dr. Tiffany Rogers

motivation like excessive

3. You can have a spike of \_\_\_\_\_ just by ordering dessert. Even though you haven't finished what's on your plate, dessert is something \_\_\_\_\_.

dopamine new



**Dopamine surging in your reward circuitry can override your feelings of what's called satiety or fullness. This is when you stop liking something but still want it.**

Free Medical Education (adapted)

Drugs of abuse can cause the reward pathway to produce too much dopamine. Motivations driven by this pathway can become overtaken by the pursuit of these drugs. Drugs of abuse actually do release much more dopamine than any of our natural or learned rewards.

Remember that the neurons and the reward pathway are talking via chemicals. Drugs of abuse have chemical structures that allow them to get in on this conversation directly.

For example, imagine that you've just eaten a slice of pizza, signals from your mouth have to be sent up to your brain to tell the brain that you've just eaten something tasty.



However, when you consume a drug, it can reach the brain much more quickly, by not having to wait on these internal signals. **Dr. Tiffany Rogers**



1. Dopamine \_\_\_\_\_ in your reward \_\_\_\_\_ can \_\_\_\_\_ your feelings of what's called \_\_\_\_\_ or fullness. This is when you stop liking something but still \_\_\_\_\_ it.

surging    circuitry    override    want

2. Drugs of abuse can cause the reward pathway to produce too much \_\_\_\_\_. Motivations driven by this pathway can become \_\_\_\_\_ by the \_\_\_\_\_ of these drugs. Drugs of abuse actually do release much \_\_\_\_\_ dopamine than any of our natural or \_\_\_\_\_ rewards.

dopamine    overtaken    more    learned

3. Remember that the neurons and the reward pathway are talking via \_\_\_\_\_. Drugs of abuse have chemical structures that allow them to get in on this conversation \_\_\_\_\_.

chemicals    directly.

4. For example, imagine that you've just eaten a slice of pizza, signals from your mouth have to be \_\_\_\_\_ up to your brain to \_\_\_\_\_ the brain that you've just eaten something tasty.

sent    tell

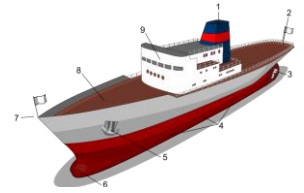
5. However, when you consume a \_\_\_\_\_, it can reach the brain much more \_\_\_\_\_, by not having to \_\_\_\_\_ on these internal signals. Dr. Tiffany Rogers

drug    quickly    wait

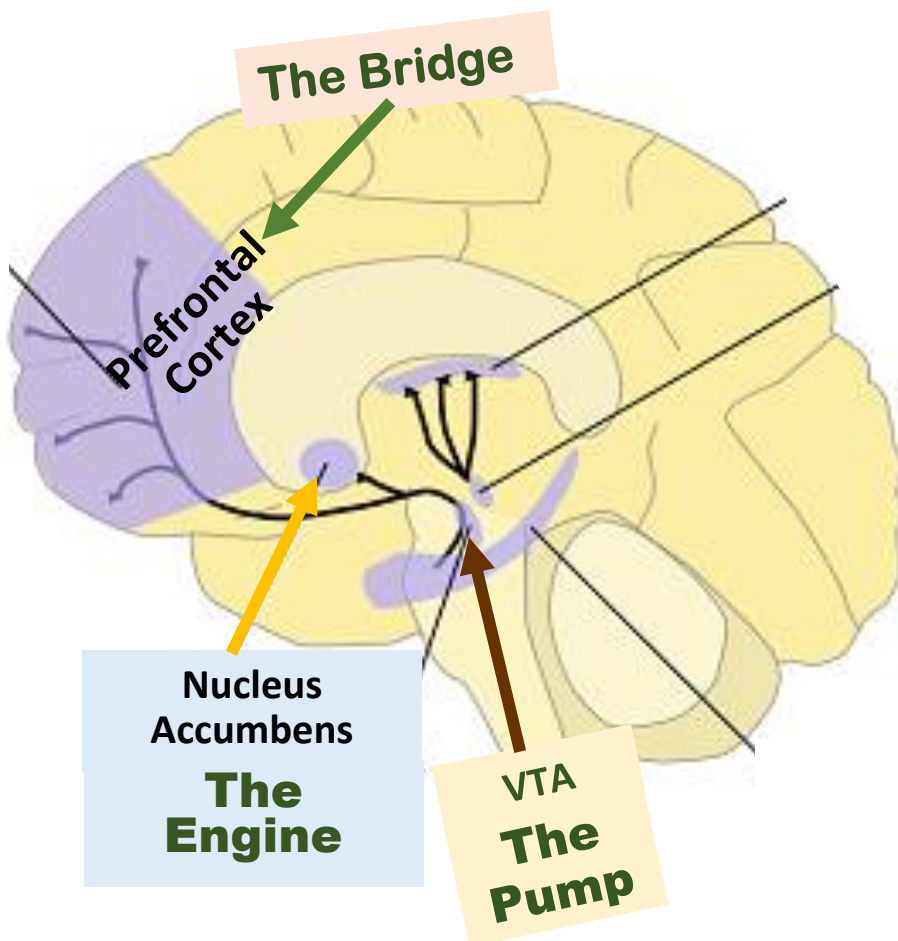
# The Dopamine Pathway



Think of your reward (dopamine) pathway as a ship having a fuel pump, engine and bridge (main deck):



Your reward pathway begins at the ventral tegmental area (VTA). It functions like a ship's fuel pump. When you see something you would like to have, do or accomplish, it manufactures the dopamine and sends the dopamine signal to the nucleus accumbens (the engine).



The nucleus accumbens functions like a ship's engine. When it receives the dopamine signal, it generates motivation and attention to help you accomplish the goals you choose.

Then, there is the prefrontal cortex, which is responsible for judgment, decision-making, perspective-taking, and self-regulation. The prefrontal cortex, like the bridge of a ship, steers your behavior.

Neuroscientist Dr. Marc Lewis (adapted)



1. Your reward pathway begins at the \_\_\_\_\_  
\_\_\_\_\_ (VTA). It functions like a ship's fuel pump. When you see something you would like to have, do or accomplish, it \_\_\_\_\_ the dopamine and sends the \_\_\_\_\_ signal to the nucleus accumbens (the engine).

**ventral tegmental area      manufactures      dopamine**

2. The \_\_\_\_\_ functions like a ship's engine. When it receives the dopamine signal, it \_\_\_\_\_ and attention to help you accomplish the goals you choose.

**nucleus accumbens      generates      motivation**

3. Then, there is the \_\_\_\_\_, which is responsible for \_\_\_\_\_, decision-making, perspective-taking, and self-regulation. The prefrontal cortex, like the bridge of a ship, \_\_\_\_\_ your \_\_\_\_\_.

Neuroscientist Dr. Marc Lewis (adapted)

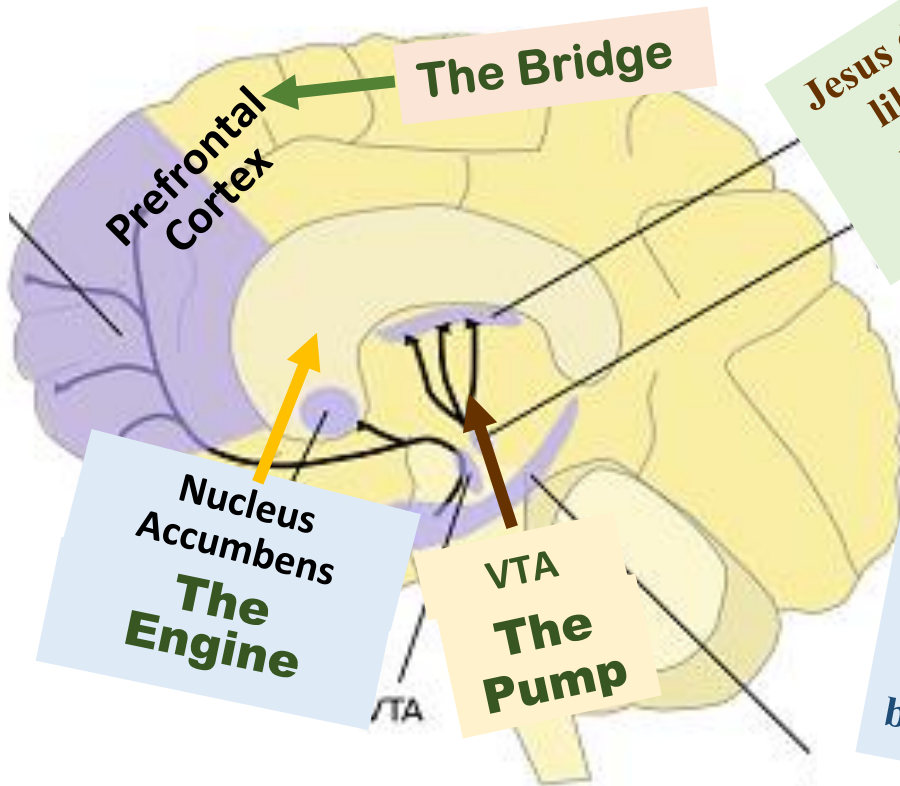
**prefrontal cortex      judgment      steers      behavior**



# The dopamine pathway's spiritual role:

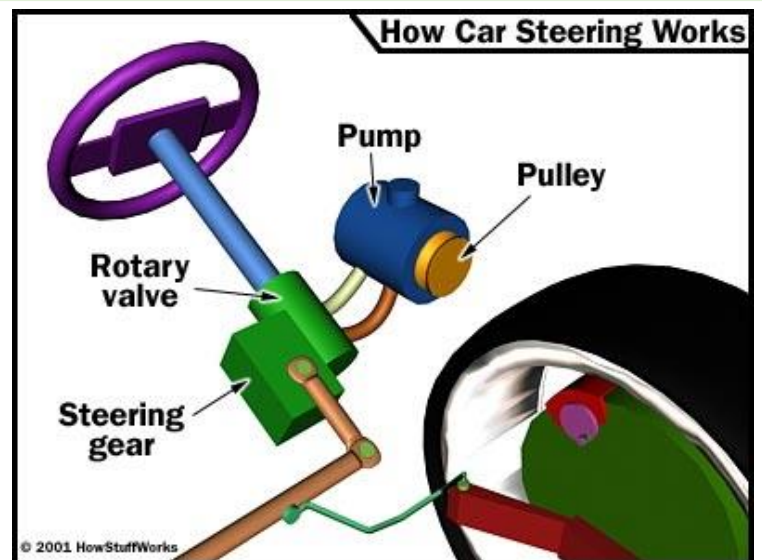
Jesus invented this smart device called the human brain, and He knows we must desire God's blessings to receive them.

Jesus designed into the brain a function like a car's power steering system, which is activated the moment the steering wheel is touched and turned.



Likewise, asking, seeking and knocking activates our VTA to manufacture dopamine and send it up to the nucleus accumbens (NA). Then the NA generates a strong force in our mind that sharpens our focus and pushes our body toward the desired goal!

The power steering system of your car is activated in the same way your dopamine pathway is activated. At your command, a pump is activated to help you move in the direction of your desire.





1. Jesus invented this smart device called the human brain, and He knows we must \_\_\_\_\_ God's blessings to \_\_\_\_\_ them.

desire receive

2. Likewise, asking, seeking and knocking \_\_\_\_\_ our VTA to \_\_\_\_\_ dopamine and send it up to the nucleus accumbens (NA). Then the NA \_\_\_\_\_ a strong force in our \_\_\_\_\_ that sharpens our \_\_\_\_\_ and pushes our body toward the desired goal!

activates manufacture generates mind focus

3. The power steering system of your car is \_\_\_\_\_ in the same way your \_\_\_\_\_ pathway is activated. At your command, a \_\_\_\_\_ is activated to help you move in the direction of your \_\_\_\_\_.

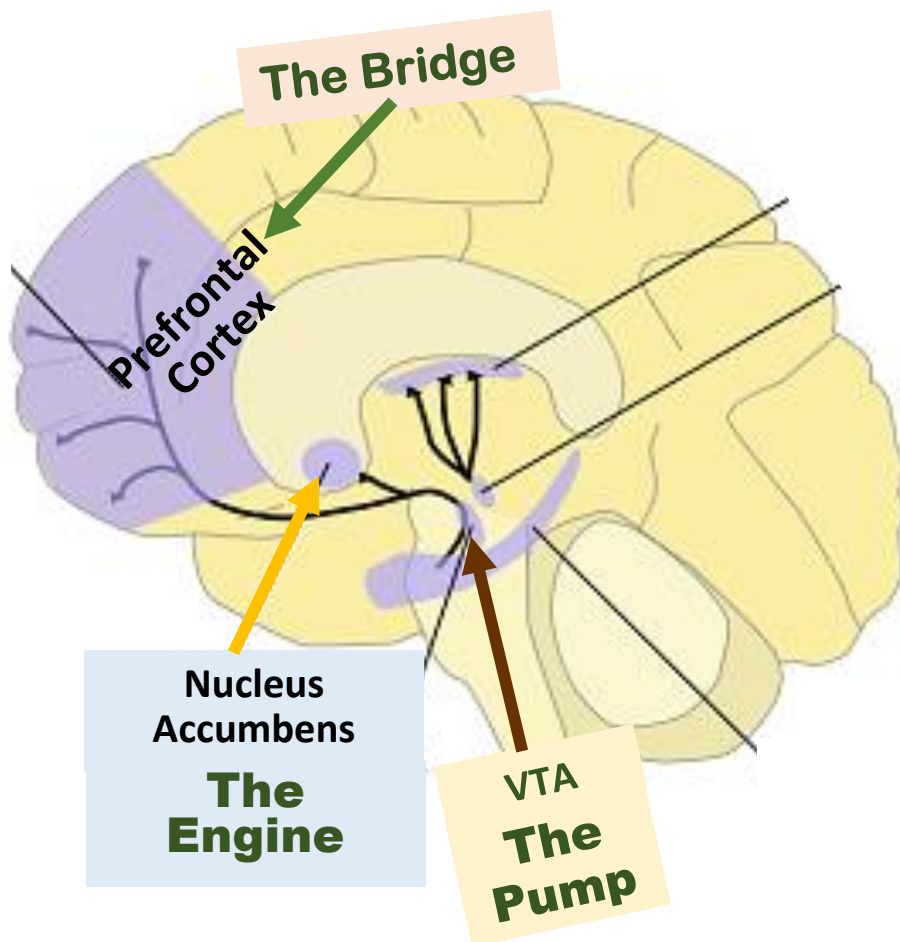
activated dopamine pump desire



# “For I delight in the law of God according to the inward man.” (Romans 7:22)

This chart of our dopamine pathway illustrates the Scriptures about “the law of God according to the inward man”

“Therefore we do not lose heart. Even though our outward man is perishing, yet the inward man is being renewed day by day” (2 Corinthians 4:16).



“That He would grant you . . . to be strengthened with might through His Spirit in the inner man, that Christ may dwell in your hearts through faith . . . that you may be filled with all the fullness of God . . . according to the power that works in us...” (Ephesians 3:16-20).

“For the word of God is living and powerful, and sharper than any two-edged sword, piercing even to the division of soul and spirit, and of joints and marrow, and is a discerner of the thoughts and intents of the heart” (Hebrews 4:12).



1. “For I delight in the \_\_\_\_\_ of God according to the \_\_\_\_\_ man.”  
(Romans 7:22)

law inward

2. “Therefore we do not lose \_\_\_\_\_. Even though our \_\_\_\_\_ man is perishing, yet the \_\_\_\_\_ man is being \_\_\_\_\_ day by day”  
(2 Corinthians 4:16).

heart outward inward renewed

3. “That He would grant you . . . to be \_\_\_\_\_ with might through His \_\_\_\_\_ in the \_\_\_\_\_ man, that Christ may dwell in your \_\_\_\_\_ through faith . . . that you may be \_\_\_\_\_ with all the fullness of God . . . according to the \_\_\_\_\_ that works in us...”  
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strengthened Spirit inner filled power

“For the \_\_\_\_\_ of God is \_\_\_\_\_ and \_\_\_\_\_, and sharper than any two-edged sword, piercing even to the division of soul and spirit, and of joints and marrow, and is a discerner of the thoughts and intents of the \_\_\_\_\_” (Hebrews 4:12).

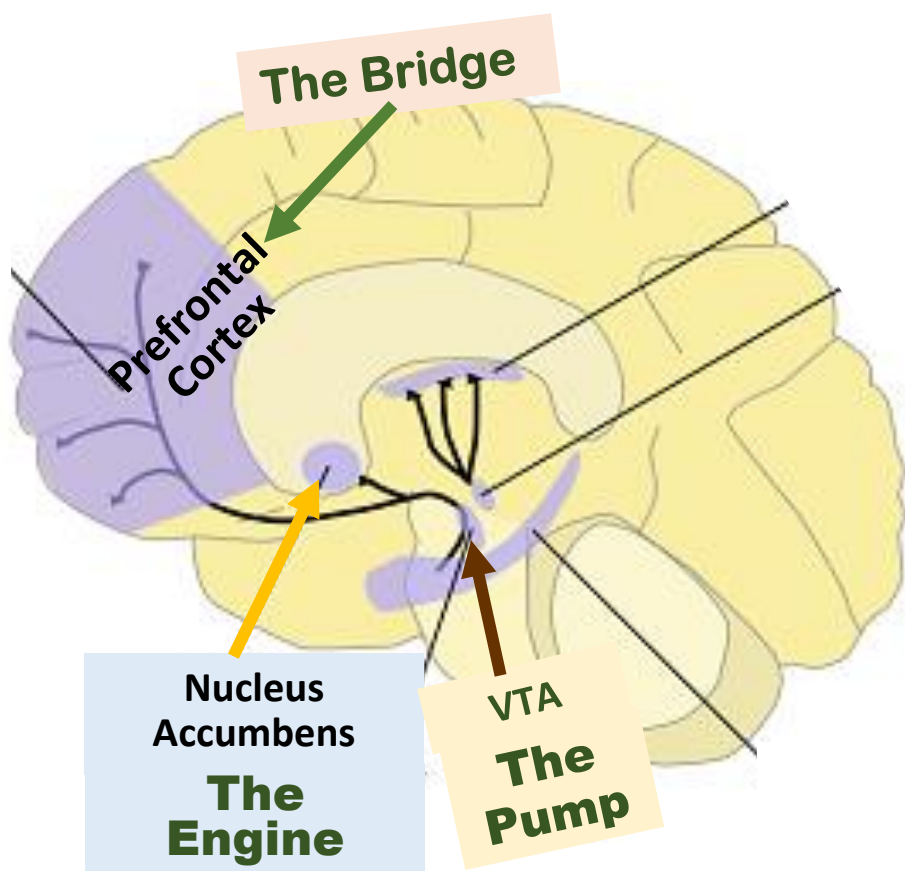
Word living powerful hear

**“But I see another law . . . warring against the law of my mind, and bringing me into captivity to the law of sin...”**

(Romans 7:23).

**The dopamine pathway is where “the law of sin” is “warring against the law of my mind.” The chart illustrates the Scriptures about this war!**

**“But each one is tempted when he is drawn away by his own desires and enticed. Then, when desire has conceived, it gives birth to sin; and sin, when it is full-grown, brings forth death” (James 1:14,15).**



**“Where do wars and fights come from among you? Do they not come from your desires for pleasure that war in your members? You lust and do not have. You murder and covet and cannot obtain. You fight and war. Yet you do not have because you do not ask. You ask and do not receive, because you ask amiss, that you may spend it on your pleasures” (James 4:1-3).**

**“I say then: Walk in the Spirit, and you shall not fulfill the lust of the flesh. For the flesh lusts against the Spirit, and the Spirit against the flesh; and these are contrary to one another...” (Galatians 5:16,17).**



1. “But I see another \_\_\_\_\_ . . . \_\_\_\_\_ against the law of my \_\_\_\_\_, and bringing me into \_\_\_\_\_ to the \_\_\_\_\_ of sin...”  
(Romans 7:23).

law warring mind captivity

2. The dopamine pathway is where “the \_\_\_\_\_ of \_\_\_\_\_” is “\_\_\_\_\_ against the of my \_\_\_\_\_.”

law sin warring law mind

3. “But each one is \_\_\_\_\_ when he is \_\_\_\_\_ away by his own \_\_\_\_\_ and \_\_\_\_\_. Then, when \_\_\_\_\_ has conceived, it gives birth to \_\_\_\_\_ ; and sin, when it is full-grown, brings forth death”  
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tempted drawn desires enticed desire sin

4. “Where do \_\_\_\_\_ and fights come from among you? Do they not come from your \_\_\_\_\_ for \_\_\_\_\_ that war in your members? You \_\_\_\_\_ and do not have. You murder and covet and cannot obtain. You fight and war. Yet you do not have because you do not ask. You ask and do not receive, because you ask amiss, that you may spend it on your \_\_\_\_\_”  
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wars desires pleasure lust pleasures

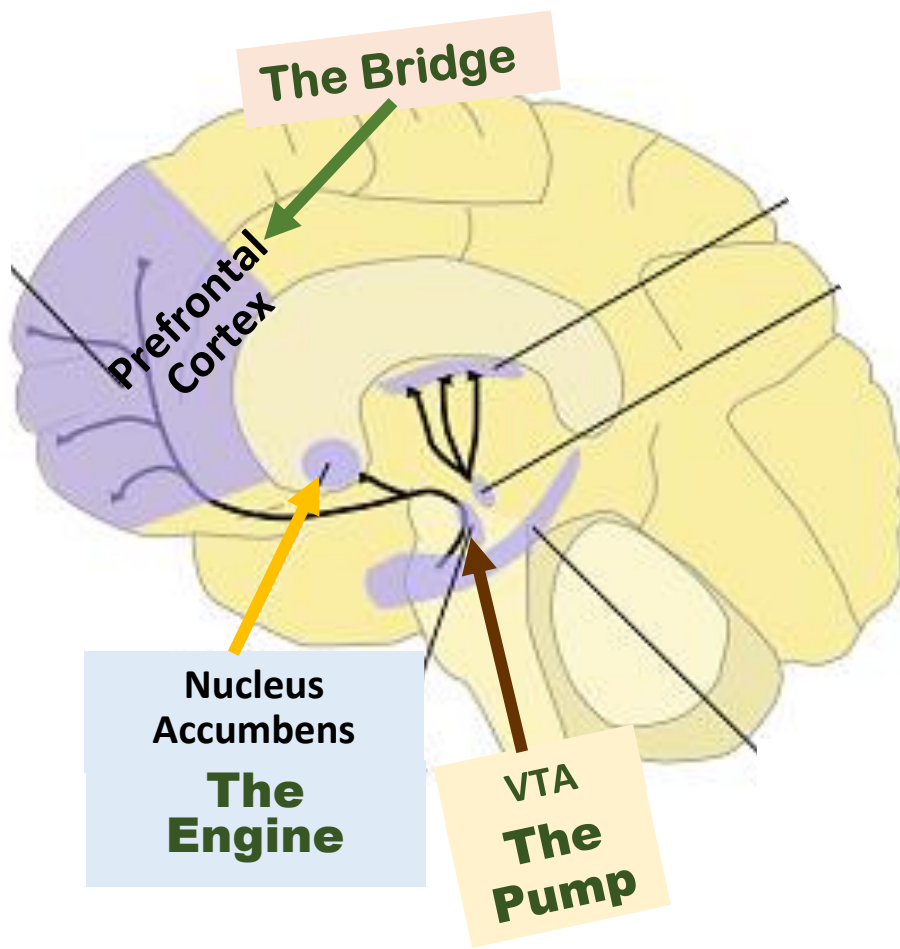
“I say then: Walk in the \_\_\_\_\_, and you shall not \_\_\_\_\_ the \_\_\_\_\_ of the \_\_\_\_\_. For the flesh lusts against the Spirit, and the Spirit against the flesh; and these are contrary to one another...” (Galatians 5:16,17).

Spirit fulfill lust flesh

**“For the law of the Spirit of life in Christ Jesus has made me free from the law of sin and death” (Romans 8:2).**

**“The law of the Spirit of life in Christ Jesus is the only force strong enough to overcome addictions (“the law of sin and death”).**

**“Now the works of the flesh are evident, which are: adultery, fornication, uncleanness, lewdness, idolatry, sorcery, hatred, contentions, jealousies, outbursts of wrath, selfish ambitions, dissensions, heresies, envy, murders, drunkenness, revelries, and the like; of which I tell you beforehand, just as I also told you in time past, that those who practice such things will not inherit the kingdom of God” (Galatians 5:19-21).**



**“But the fruit of the Spirit is love, joy, peace, longsuffering, kindness, goodness, faithfulness, gentleness, self-control...” (Galatians 5:22,23).**

**“And those who are Christ's have crucified the flesh with its passions and desires. If we live in the Spirit, let us also walk in the Spirit” (Galatians 5:24,25).**





1. “For the \_\_\_\_\_ of the \_\_\_\_\_ of life in Christ Jesus has made me free from the \_\_\_\_\_ of \_\_\_\_\_ and death” (Romans 8:2).

law Spirit free law sin

2. “The law of the Spirit of life in Christ Jesus is the \_\_\_\_\_ force strong enough to \_\_\_\_\_ addictions (“the law of sin and death”).

only overcome

3. “Now the works of the \_\_\_\_\_ are evident, which are: adultery, fornication, uncleanness, lewdness, idolatry, sorcery, hatred, contentions, jealousies, outbursts of wrath, \_\_\_\_\_ ambitions, dissensions, heresies, envy, murders, \_\_\_\_\_, revelries, and the like; of which I tell you beforehand, just as I also told you in time past, that those who practice such things will not inherit the kingdom of God” (Galatians 5:19-21).

flesh selfish drunkenness

4. “But the \_\_\_\_\_ of the Spirit is love, joy, peace, longsuffering, kindness, goodness, faithfulness, gentleness, \_\_\_\_\_...” (Galatians 5:22,23).

fruit self-control

“And those who are Christ's have \_\_\_\_\_ the flesh with its \_\_\_\_\_ and \_\_\_\_\_ . If we live in the Spirit, let us also walk in the Spirit” (Galatians 5:24,25).

crucified passions desires

disabled dopamine motivation intervention

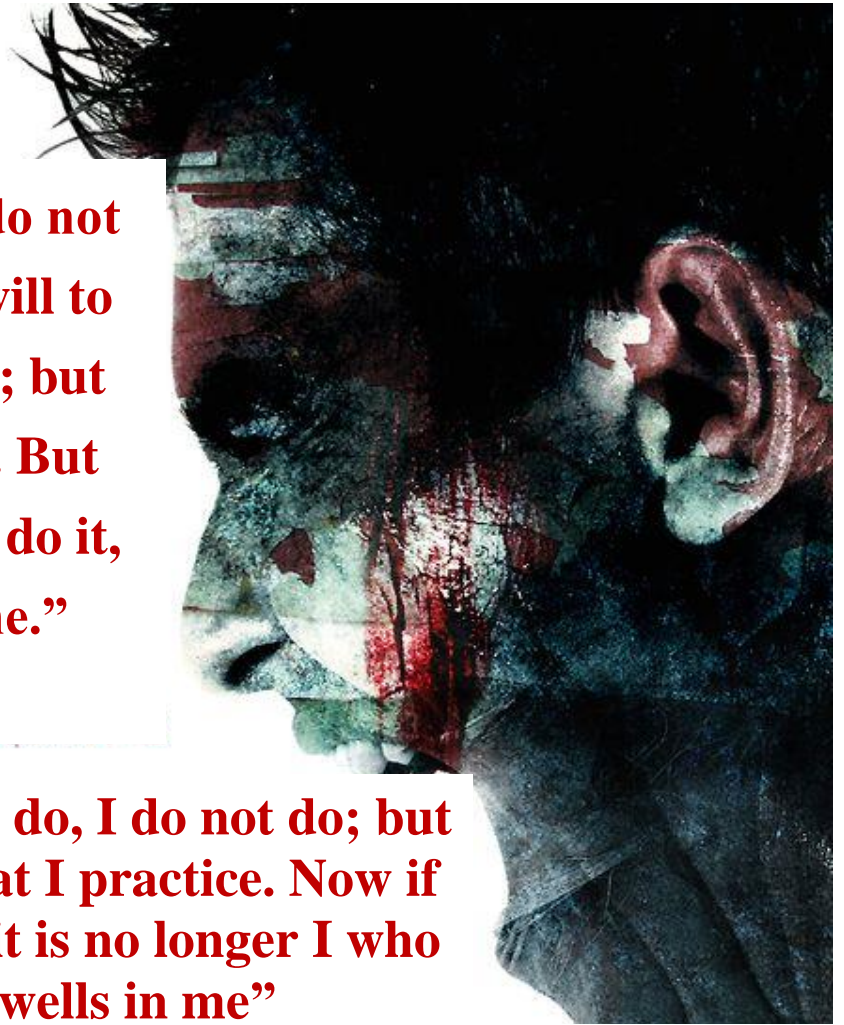
# Picture of a dopamine pathway hijack!

**“For what I am doing, I do not understand. For what I will to do, that I do not practice; but what I hate, that I do . . . But now, it is no longer I who do it, but sin that dwells in me.”**

Romans 7:15-17

**“For the good that I will to do, I do not do; but the evil I will not to do, that I practice. Now if I do what I will not to do, it is no longer I who do it, but sin that dwells in me”**

Romans 7:19,20



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**“The law of God according to the inward man” versus  
“the law of sin” with Jesus as the Deliverer!**

**“For I delight in the law of God according to the inward man. But I see another law in my members, warring against the law of my mind, and bringing me into captivity to the law of sin which is in my members. O wretched man that I am! Who will deliver me from this body of death? I thank God--through Jesus Christ...”**

Romans 7:22-25



1. "For what I am doing, I do not \_\_\_\_\_. For what I will to do, that I do not \_\_\_\_\_; but what I \_\_\_\_\_, that I do . . . But now, it is no longer I who do it, but \_\_\_\_\_ that dwells in me."  
Romans 7:15-17

understand practice hate sin

2. "For the \_\_\_\_\_ that I will to do, I do not do; but the \_\_\_\_\_ I will not to do, that I \_\_\_\_\_. Now if I do what I will not to do, it is no longer I who do it, but \_\_\_\_\_ that \_\_\_\_\_ in me"  
Romans 7:19,20

good evil practice sin dwells

3. "For I delight in the \_\_\_\_\_ of God according to the \_\_\_\_\_ man. But I see another law in my members, \_\_\_\_\_ against the law of my \_\_\_\_\_, and bringing me into \_\_\_\_\_ to the law of \_\_\_\_\_ which is in my members. O wretched man that I am! Who will \_\_\_\_\_ me from this body of death? I thank God--through Jesus Christ..." Romans 7:22-25

law inward warring mind captivity sin deliver

# Dopamine Pathway Hijack

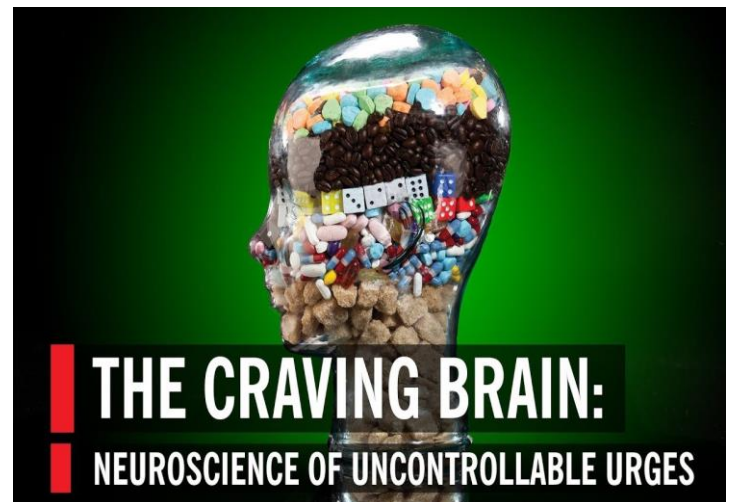


As we've mentioned before, dopamine is released in response to expectations rather than actual levels of pleasure. It's the drive to get it. It's the craving. The pleasure is caused by an opioid brain chemical.

Free Medical Education (adapted)

The addict must understand how his **Desire** pump and **Desire** engine can hijack his **Desire** governor:

“First, the trigger or cue leads to craving. Craving leads to intensified imagining of the desired activity. When it gets intense enough, you go get or do what you want...then you feel pleasure, then loss & guilt, and soon your craving (dopamine) returns.” Marc Lewis



**“Do not be drunk with wine, in which is dissipation; but be filled with the Spirit”**

(Ephesians 5:15-18)



1. As we've mentioned before, dopamine is \_\_\_\_\_ in response to \_\_\_\_\_ rather than actual levels of \_\_\_\_\_. It's the drive to get it. It's the \_\_\_\_\_. The pleasure is caused by an opioid brain chemical.

released pleasure craving

2. The addict must understand how his Desire \_\_\_\_\_ and Desire \_\_\_\_\_ can \_\_\_\_\_ his Desire \_\_\_\_\_:

pump engine hijack governor

3. "First, the \_\_\_\_\_ or que leads to \_\_\_\_\_. Craving leads to intensified \_\_\_\_\_ of the \_\_\_\_\_ activity. When it gets intense enough, you go get or do what you want...then you feel pleasure, then \_\_\_\_\_ & guilt, and soon your craving (dopamine) returns." Marc Lewis

trigger craving imagining desired loss

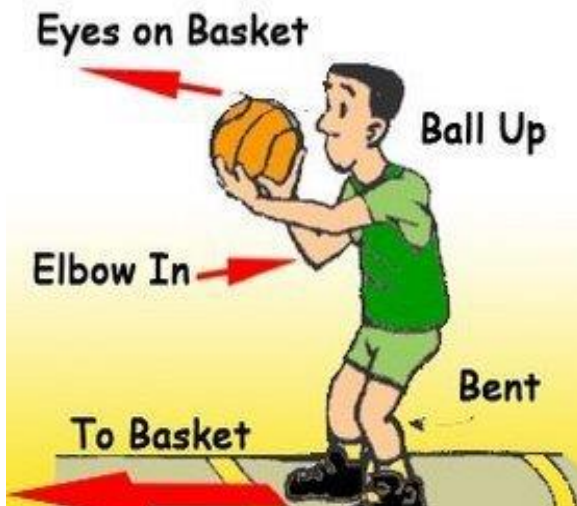
4. "Do not be \_\_\_\_\_ with wine, in which is dissipation; but be \_\_\_\_\_ with the \_\_\_\_\_" (Ephesians 5:15-18)

Drunk filled Spirit



# Neurospiritual

This section explains how the secret to overcoming an addiction is understanding neuroplasticity!



Say you're learning how to shoot a free-throw. If it's your first time doing it, you don't yet have a pathway for that movement in your brain. When you're first learning, your brain is like a forest full of trees and dense foliage with no clear pathway between point A and point B.

In order to improve your free-throw, you need to refine and strengthen the free-throw pathway in your brain. The way you do that is through practice. Practice gradually widens the trail through the trees (increases the muscle memory in your brain).

Eventually with enough practice, what started as a trail has become a full-blown highway. Now, you're a master, draining almost every free-throw and the movement is completely second nature. This is neuroplasticity. Halo Sports

“I would say that addiction is a kind of skill. The addict’s brain learns to efficiently identify and aim behavior. There's less prefrontal activation because it's the same behavioral routine repeating itself day after day, hour after hour.”

Dr. Marc Lewis

It would be hard, but a professional basketball player could stop all basketball activities and start learning and practicing baseball. Old (basketball) neural pathways would become weaker when used less (decreased learning and practice). New baseball pathways would grow stronger when they are used more (increased learning & practice). Likewise, it would be hard, but the addict could stop all drug use activities and start learning and practicing Christianity, fishing, hiking, etc., with the same results.





1. When learning to shoot a basketball free-throw, what is the state of the pathway for that movement in your brain?

Like a forrest full of trees and dense foliage between point A and point B.

2. What do you need to do to improve your free-throw?

Refine and strengthen the free-throw pathway in your brain.

3. How do you refine and strengthen the free-throw pathway in your brain?

Practice gradually widens the the trail through the trees (increases muscle memory in your brain).

4. Describe the process to becoming a master free-throw shooter?

With enough practice, what began as a trail has become a full-blown highway, as the movement becomes second nature (instinctual).

5. What is this brain process (learning to shoot a free-throw) called?

Neuroplasticity

6. Explain why basketball free-throw neuroplasticity could be compared to addiction neuroplasticity.

The basketball player was motivated by his desire desire to learn and practice shooting free-throws.

The addict is motivated by his desire for drugs, so he makes an effort to learn how to get and do his drug of choice. As he continues to practice he becomes highly skilled at supporting his drug habit.

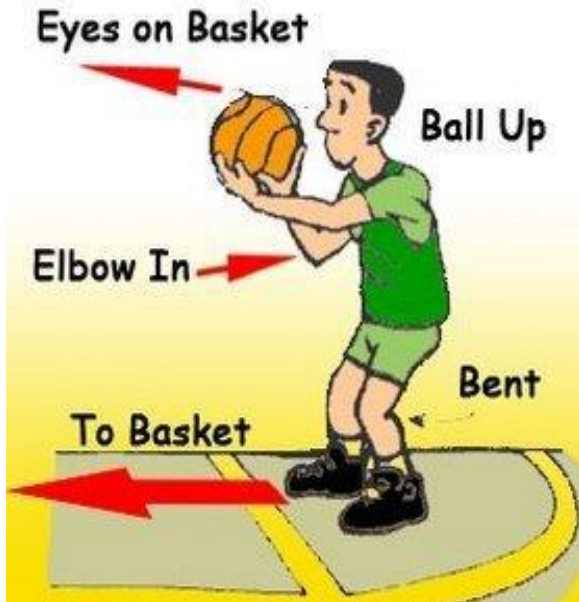
7. Explain the brain process (neuroplasticity) of a professional basketball player becoming a professional baseball player.

When he stops playing basketball that pathway (muscle memory in the brain) becomes weaker and overgrown. And as he learns and practices baseball skills, that pathway (muscle memory in the brain) becomes refined an stronger.

8. Compare the basketball to baseball transformation process to an addiction to Christian transformation.

With a desire to overcome addiction, the addict quits getting high and begins to learn the skill of Christianity. Immediately his addiction pathway (muscle memory in his brain) will weaken. As he practices the Christian way of life, the fruit of the Spirit pathway (muscle memory in his brain) will grow.

# The Bible's use of the word "practice" implies neuroplasticity!



“Now the works of the flesh are evident, which are: adultery, fornication, uncleanness, lewdness, idolatry, sorcery, hatred, contentions, jealousies, outbursts of wrath, selfish ambitions, dissensions, heresies, envy, murders, drunkenness, revelries, and the like . . . those who **practice** such things will not inherit the kingdom of God” (Galatians 5:19-21).

Use of the word **“practice”** implies that each of the “works of the flesh” listed above was learned and practiced. The word “practice” means “performed repeatedly or habitually” (Strong’s Dictionary).

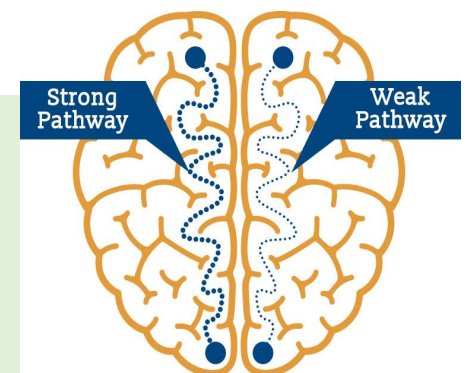
**With “practice” pathways for “works of the flesh” grow wider and faster. This is harmful neuroplasticity (addiction).**

**The following passages imply that with practice and the Holy Spirit’s help, “works of the flesh” pathways weaken and “fruit of the Spirit” pathways strengthen.**

“I say then: Walk in the Spirit, and you shall not fulfill the lust of the flesh... And those who are Christ's have crucified the flesh with its passions and desires. If we live in the Spirit, let us also walk in the Spirit” (Galatians 5:16,24,25).

“But the **fruit** of the Spirit is love, joy, peace, longsuffering, kindness, goodness, faithfulness, gentleness, self-control”

(Galatians 5:22,23).





1. Name 3 "works of the flesh" that apply to you.

Revelries , selfish ambitions, drunkenness

2. Regarding "the works of the flesh," what does the word "practice" imply:

That the "works of the flesh" listed were learned and practiced.

3. What happens to brain pathways when "works of the flesh" are practiced?

They grow wider, stronger and faster. This is negative neuroplasticity (addiction).

4. What does "walk in the Spirit" mean?

To live according to the Spirit (Scriptures).

5. What does "fulfill the lust of the flesh" mean?

To live according to your lusts (sinful desires).

6. What does "crucified the flesh with its passions and desires" mean?

To stop thinking about and doing your sinful desires and passions, so their pathways will weaken and die.

The Holy Spirit help us do this, as we try!

7. List "the fruit of the Spirit?"

Love =

Joy

Peace

Longsuffering

Kindness

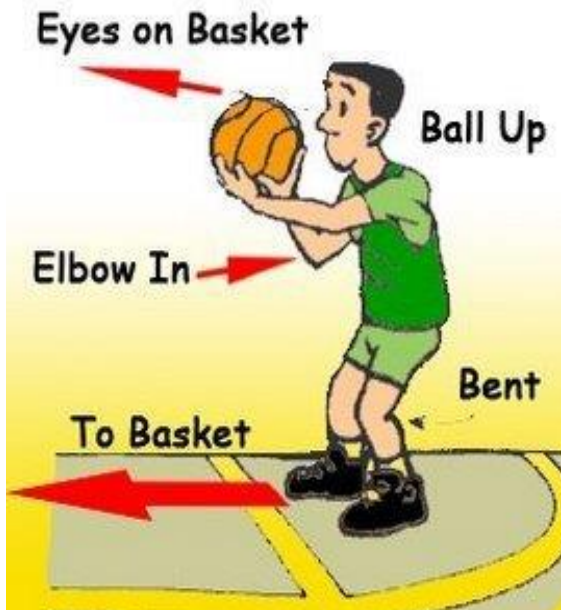
Goodness

Faithfulness

Gentleness

Self-control

# The New Testament word “exercise” implies spiritual neuroplasticity!

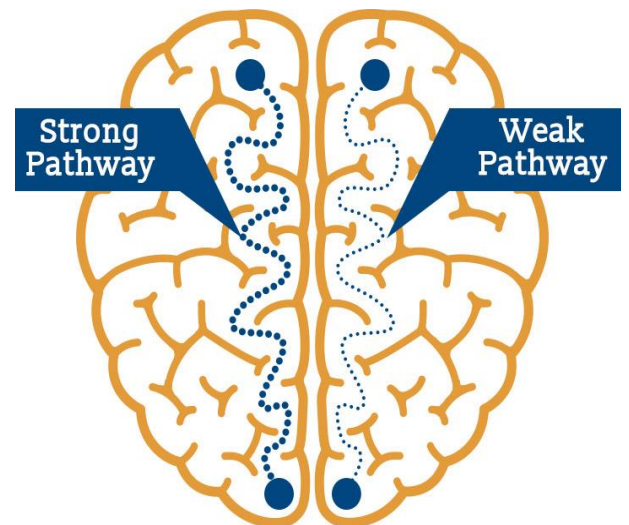


“...Exercise yourself toward godliness. For bodily exercise profits a little, but godliness is profitable for all things . . . Meditate on these things; give yourself entirely to them, that your progress may be evident to all” (1 Timothy 4:7,8,15).

The words “exercise” and “godliness” imply activities to strengthen your spiritual pathways. Use of the word “meditate” implies prayer, Bible study and thinking spiritual thoughts to strengthen your spiritual pathways.

These are additional spiritual fruit (spiritual pathways) that are grown through our “diligence” (practice) and the Holy Spirit’s help:

“...His divine power has given to us all things that pertain to life and godliness . . . For this very reason, giving all diligence, add to your faith virtue, to virtue knowledge, to knowledge self-control, to self-control perseverance, to perseverance godliness, to godliness brotherly kindness, and to brotherly kindness love” (2 Peter 1:3,5).







1. In 1 Timothy 4:7,8, what does "exercise yourself toward godliness" imply?

Think about and practice doing spiritual activities to strengthen your spiritual pathways.

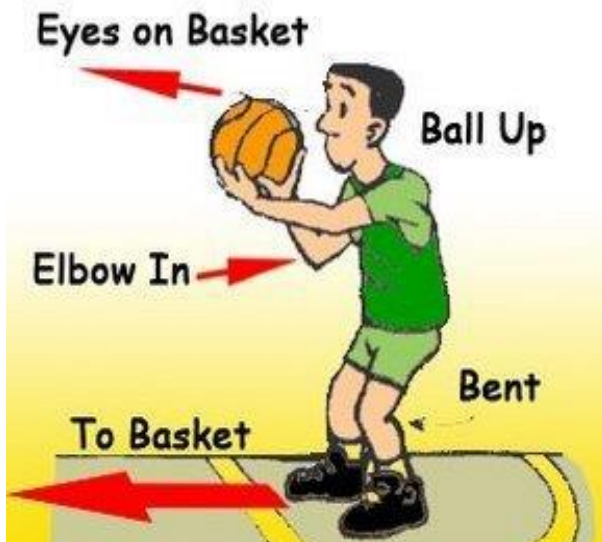
2. In 1 Timothy 4:15, what does "meditate on these things imply?"

Prayer, Bible Study and thinking spiritual thoughts will Activate the Holy Spirit's help and strengthen our spiritual pathways.

3. In 2 Peter 1:3 what does "His divine power has given us all things that pertain to life and godliness" mean?

Help from the Holy Spirit is available when we diligently ask for the Holy Spirit's help to practice the spiritual activities in 1 Peter 1:3,5.

## Overcoming addiction could be compared to an athlete quitting one sport and learning another.



The process between shooting your first basketball free-throw and becoming a professional at shooting free-throws, is called neuroplasticity.

It is this same process that turns a first-time drug abuser into a highly skilled drug addict!

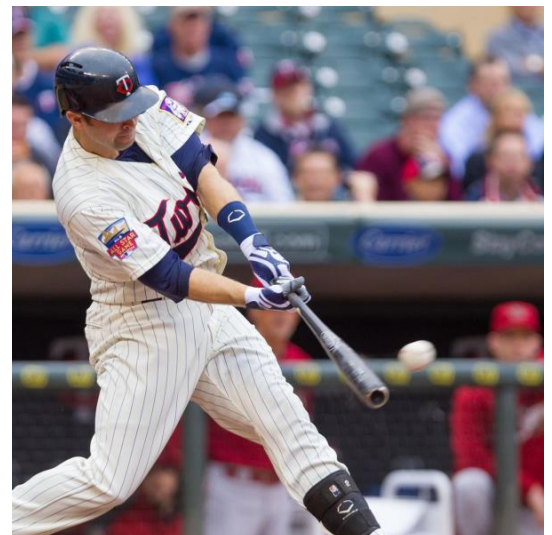
Neuroscientist Marc Lewis explains.... I would say that addiction is a kind of skill. The addict's brain learns to efficiently identify and aim behavior. There's less prefrontal activation because it's the same behavioral routine repeating itself day after day, hour after hour.

With practice, addiction behaviors become highly consolidated, habitualized, and ritualized. Wondering, thinking, judging, considering, and comparing are no longer needed. Dr. Marc Lewis

**It would be hard, but a professional basketball player could stop all basketball activities and start learning and practicing baseball.**

Old (basketball) neural pathways become weaker when they are used less (decreased learning and practice). New baseball pathways grow stronger when they are used more (increased learning & practice).

Likewise, it would be hard, but the addict could stop all drug use activities and start learning and practicing Christianity, fishing, hiking, etc., with the same results.





1. The process between shooting your first basketball free-throw and becoming a professional at shooting free-throws, is called \_\_\_\_\_.

neuroplasticity

2. It is this same process that turns a first-time drug abuser into a highly \_\_\_\_\_ drug addict!

skilled

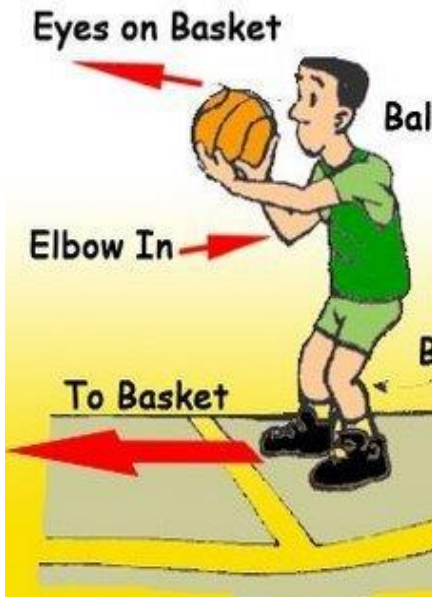
3. Neuroscientist Marc Lewis explains..... I would say that addiction is a kind of \_\_\_\_\_. The addict's brain \_\_\_\_\_ to efficiently identify and aim behavior. There's less prefrontal activation because it's the same behavioral routine repeating itself day after day, hour after hour.

skill learns

4. With \_\_\_\_\_, addiction behaviors become consolidated, \_\_\_\_\_ habitualized, and ritualized. Wondering, thinking, judging, considering, and comparing are no longer needed. Dr. Marc Lewis

practice highly

**The New Testament concept of decreasing ungodly behaviors (ungodly pathways) and replacing them with godly behaviors (godly pathways) is neuroplasticity!**



**“And do not be conformed to this world, but be transformed by the renewing of your mind...”**

**(Romans 12:2).**

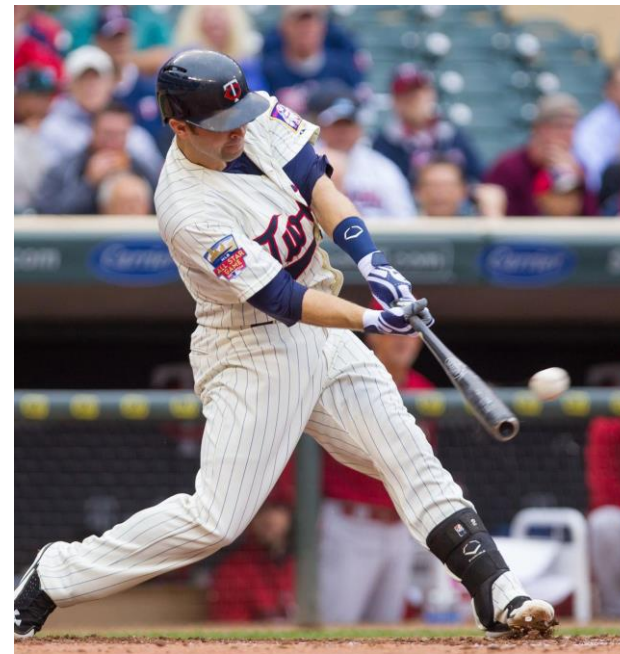
**“Do not be conformed” refers to decreasing worldly behaviors, which would weaken the worldly pathway.**

**“Be transformed” and “renewing of your mind” refer to increasing godly behaviors which would strengthen this new godly pathway.**

**“Put off” refers to abandoning a sinful pathway.**

**“Put on” refers to beginning to build a godly pathway.**

**“That you put off, concerning your former conduct, the old man which grows corrupt according to the deceitful lusts, and be renewed in the spirit of your mind, and that you put on the new man which was created according to God, in true righteousness and holiness” (Ephesians 4:22-24).**





1. What does the phrase "Do not be conformed" refer to?

Decreasing worldly behaviors, which would weaken a worldly pathway.

2. What are the phrases "Be transformed" and "Renewing of your mind" referring to?

Increasing godly behaviors, which would strengthen a godly pathway.

3. What is the phrase "the old man which grows corrupt according to deceitful lusts" (Ephesians 4:22-24) referring to?

This phrase is referring to the person's "former conduct" pathway that had grown.

4. What does the phrase "Put off" (Ephesians 4:22) refer to?

To stop practicing these ungodly lusts, which will weaken their pathway.

5. What is the phrase "be renewed in the spirit of your mind" referring to?

To begin to embrace being spiritually minded.

6. What does the phrase "The new man which was created according to God, in true righteousness and holiness" (Ephesians 4:22-24)?

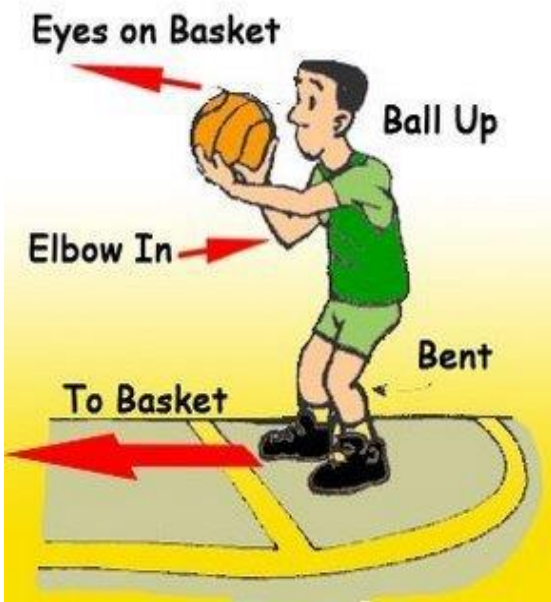
This phrase is referring to the person's new godly pathway that was growing.

7. What is the phrase "put on" referring to?

To start practicing godly behaviors, which will strengthen their pathway.



# We Have Positive and Negative Pathways



**“But God be thanked that though you were slaves of sin, yet you obeyed from the heart that form of doctrine to which you were delivered. And having been set free from sin, you became slaves of righteousness”**

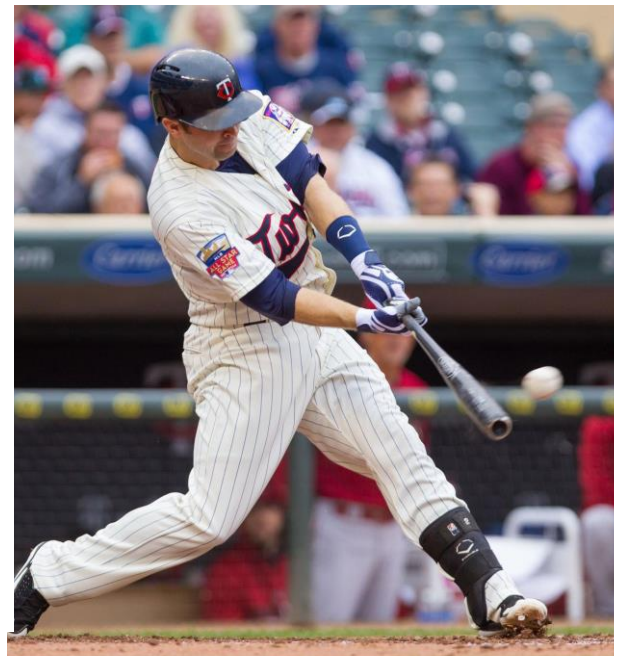
(Romans 6:16-18).

**“Slaves of sin” is caused by negative neuroplasticity (addiction).**

**“Slaves of God” is caused by positive neuroplasticity (addiction).**

**“But now having been set free from sin, and having become slaves of God, you have your fruit to holiness, and the end, everlasting life”**

(Romans 6:22).





1. What phrase in Romans 6:16-18 refers to a positive addiction?

"Slaves of righteousness"

2. What phrase in Romans 6:16-18 refers to a negative addiction?

"Slaves of sin"

3. Explain negative neuroplasticity?

It is the learning and practicing of ungodly behaviors which strengthens their pathways.

4. Explain positive neuroplasticity?

It is the learning and practicing of godly behaviors which strengthens their pathways.

5. Explain basketball to baseball transformation to Romans 6:22.

"Set free from sin" is compared to the player quitting (overcoming) basketball.

"Having become slaves of God" is compared to the player committing to learning and practicing baseball.

6. Apply Romans 6:22 to overcoming addiction.

When the addict obeys the Gospel and receives "the gift of the Holy Spirit," he stops ungodly addictive behavior.

Then, the recovering addict begins to learn and practice "fruit to holiness" (godly behaviors).