Patient Education
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Fatigue After Brain Injury

TIPS TO PROMOTE A SPEEDY RECOVERY

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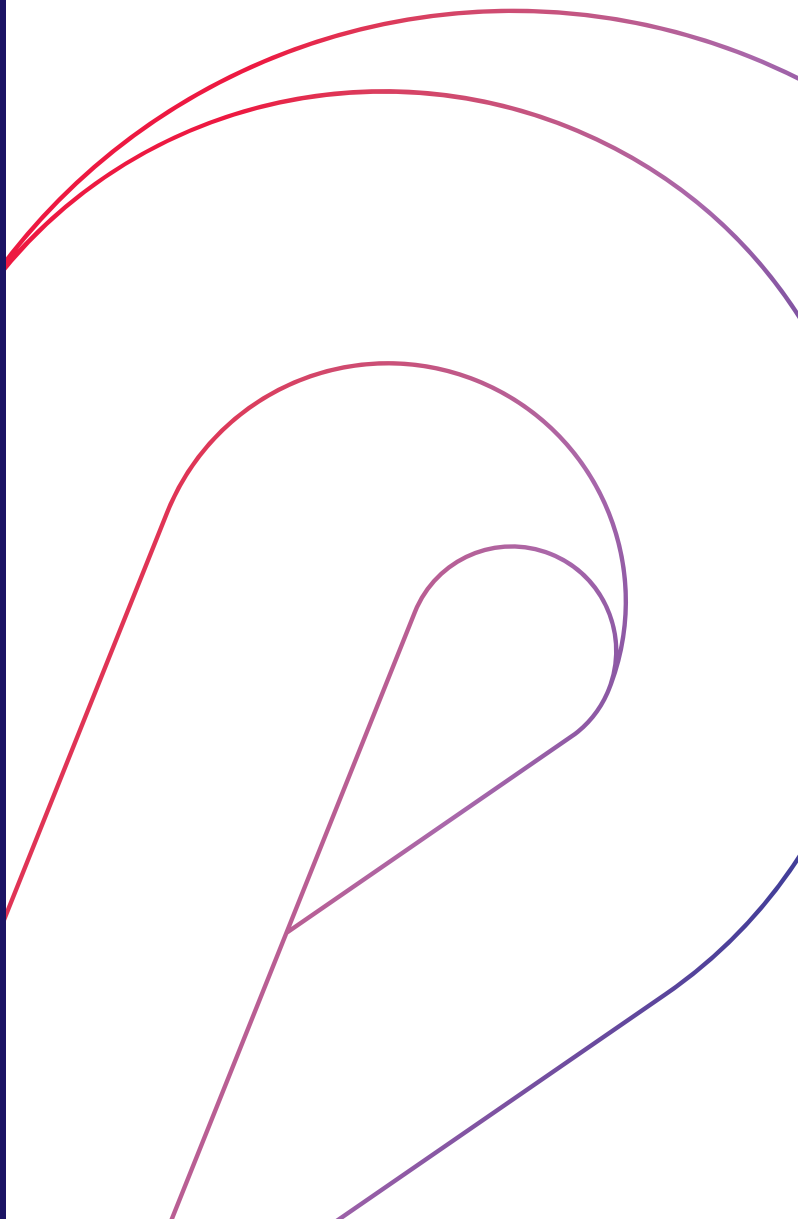
What's Inside:



What is cognitive fatigue?

After a stroke or other brain injury, most patients deal with **cognitive fatigue**. Cognitive fatigue doesn't necessarily mean that you feel "tired." It is when you just can't think or concentrate anymore because your brain is exhausted.

Some people experience the following symptoms when they have cognitive fatigue: feeling "blank," "flooded," overwhelmed, or frustrated. Some notice that they make a lot more mistakes when they are fatigued. Some will get headaches or nausea.

Being frequently cognitively fatigued can slow down your recovery **significantly.**

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Why does fatigue happen?

After even a small brain injury, large areas of the brain take over for the areas that were damaged. Before an injury, only small areas of the brain are active for most tasks. After a brain is injured, the brain becomes less efficient. Large areas of the brain are required to do the same tasks that small areas of the brain could do before. Consequently, the brain uses much more energy to do normal daily tasks.

About my signs of cognitive fatigue:

How the brain works

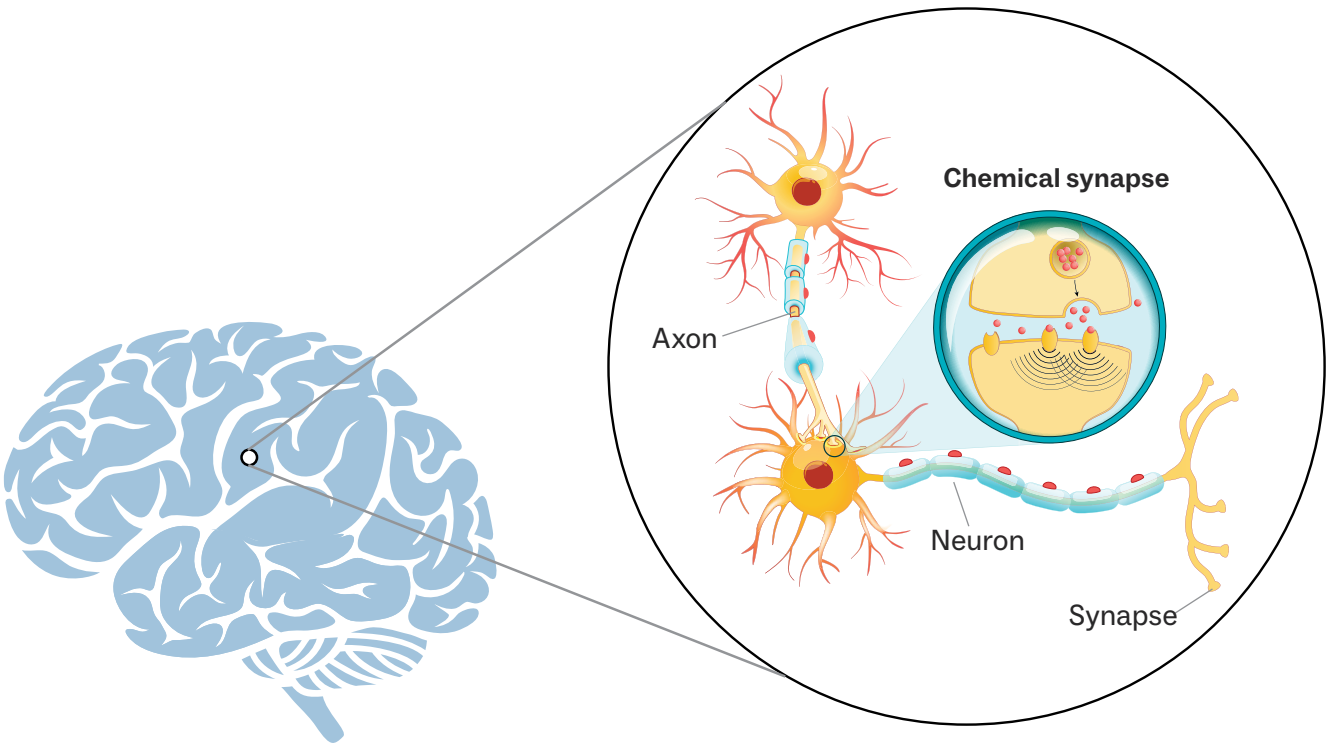
The brain is made up of specialized cells called **neurons**. Neurons pass messages to other brain cells and to your body through wire-like structures called **axons**. Axons send signals to other cells across a small space called a **synapse**.

The axon actually "spits out" chemicals. This is how it communicates with another cell. The type and quantity of chemicals tell the next cell what to do.

After a brain injury

After a brain injury, there are disturbances in how the brain transmits chemicals across the synapse. More chemicals than normal may be released. The brain cells have pumps that usually return these chemicals to the right places, but these pumps may be unable to keep up with the extra work. Additionally, the blood supply to the brain is usually reduced after a brain injury. Blood brings energy to the brain, so brain cells are also dealing with a temporary energy shortage.

Fatigue is a normal part of recovery. However, if it is not managed, the brain cannot recover quickly or well. This booklet explains how to speed up the process of your recovery.



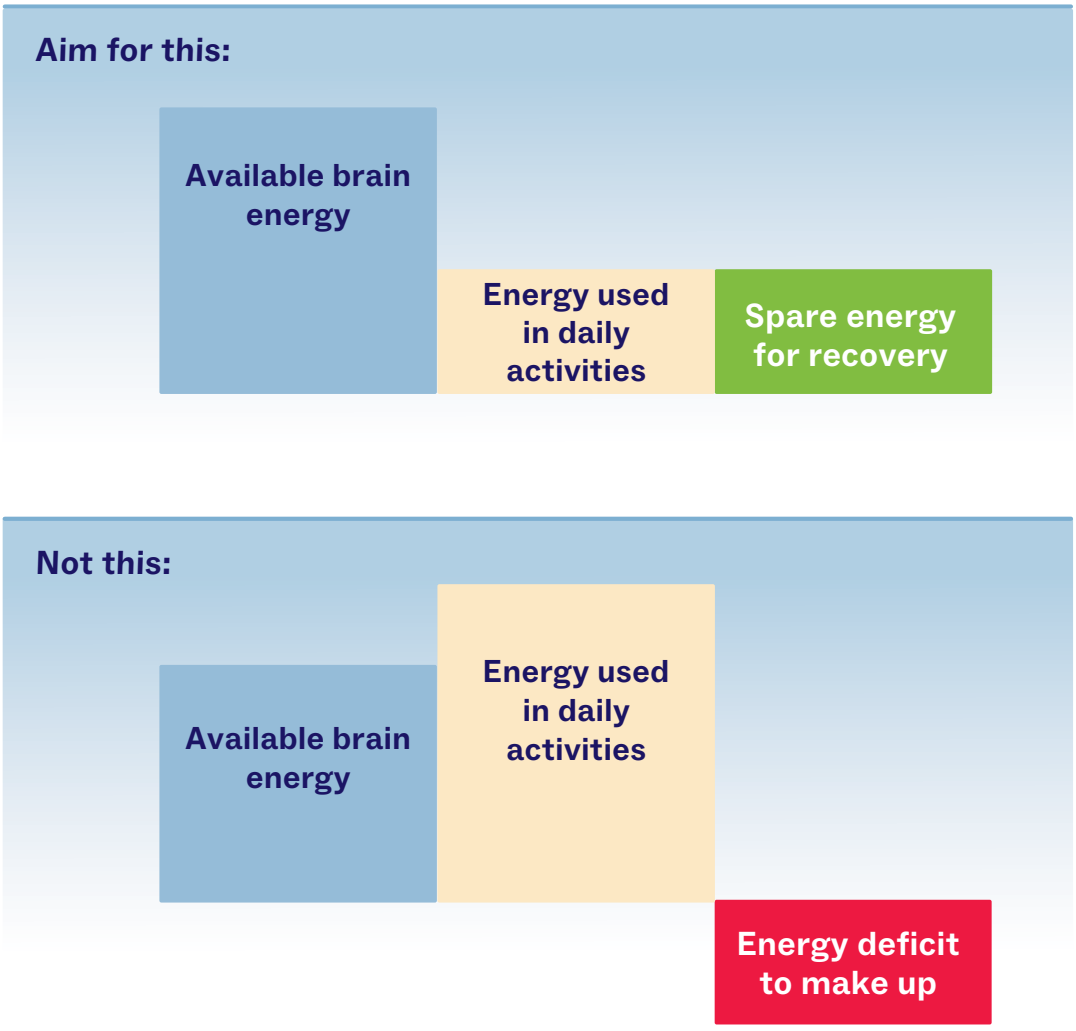
Think about it like this:

The chemical situation in the brain after an injury is similar to what happens if you exercise too hard after not having exercised for a long time. Your muscles will develop a build-up of chemicals (lactic acid) and be sore the next day. If you take it easy for a few days, remain active, and do some stretching, the body reabsorbs the chemicals.

The best way to promote recovery is to SLOWLY return to activity.

If you use up all your energy to do daily tasks, there will be no energy left to help the brain heal. Often your symptoms will get worse and eventually force you to rest until your brain can catch up. If you always have an energy **DEFICIT** (shortage), your recovery will take longer.

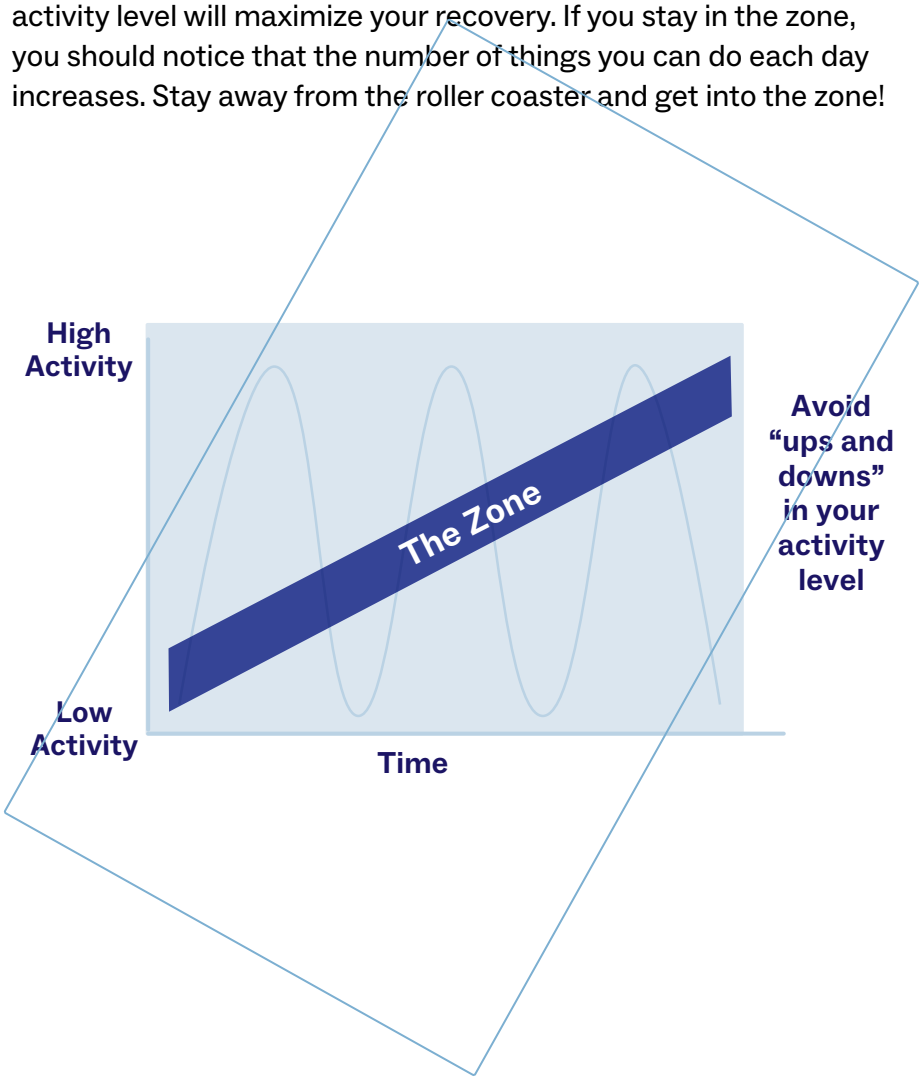
To recover more quickly, you need to learn how to balance brain activity and rest to have enough energy each day.



Getting in the zone

After a brain injury, some people will feel okay for a while and try to maintain their normal activity levels (or make up for what they have not been able to do). They keep going after they start feeling tired and "push through" unpleasant symptoms. After a while, their symptoms get so bad that they are forced to stop. It may take a day or two of total inactivity to feel okay again. **You need to avoid this pattern** — your brain cannot heal if you do this. "Pushing through" results in even more chemicals being released that the brain can't keep up with.

Your treatment team will help you get into a zone where your activity level will maximize your recovery. If you stay in the zone, you should notice that the number of things you can do each day increases. Stay away from the roller coaster and get into the zone!



How do you know if you are in the zone?

Your brain will usually signal when you are doing too much. For most people, this means that they start feeling overwhelmed, have headaches, or feel confused. Before an injury, most people ignore these signals to "push through" and "get the job done." This does not work after a brain injury. By increasing your awareness of body signals and increasing your ability to predict which activities will result in fatigue, you will develop skills for staying in the zone.

Your energy scale

Each person has unique needs to maintain energy throughout the day. This energy scale is designed to help you be aware of where your energy level is throughout the day and what to do about it. By tracking your activities and energy, you will become an expert in monitoring your own fatigue and learning what exhausts you and what is refreshing. Most people find that taking lots of little rest breaks throughout the day helps them manage their fatigue.

10
9
8
7
6
5
4
3
2
1

10 units of energy

You feel refreshed and energized, your thinking is clear and sharp, and you are ready for action.

Daily demands that take away from your available energy:

- Pain
- Poor sleep
- Emotional stress
- Reading
- Thinking
- Socializing

6 to 7 units of energy

You still feel pretty good but may start to notice the first signs of energy drain. These signs are different for everyone but may include fatigue, irritability, sluggishness, noise sensitivity, headache, or other symptoms.

TAKE A MICRO-BREAK: 5 to 15 minutes in a quiet and calm place.

3 to 4 units of energy

You have gone too far but may not realize it. You experience symptoms that interfere with your activities that may include slowed thinking, and difficulty dealing with problems or commotion; you are physically and emotionally on edge.

STOP: Retreat to a quiet place **and rest.**

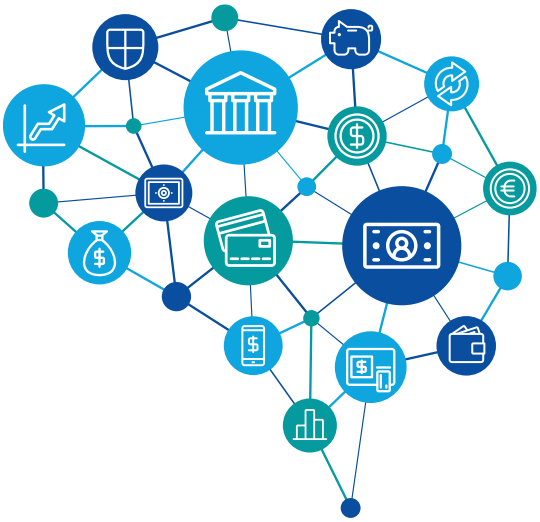
1 to 2 units of energy

If people "push-through" their fatigue and symptoms, they sometimes experience a state where they have difficulty relaxing their mind or body.

WIRED TIRED: It may take several days to recover.

Treat your brain like an energy bank

You will do much better if you save your energy so that you have extra energy in reserve. Try to deposit more energy than you take out. Don't bounce in and out of energy bankruptcy. You will pay for it.



Energy deposits:

1. **Hourly rest breaks at least 5 minutes long.** If your "break" is more exciting than watching paint dry, it is probably not resting your brain enough. It helps to rest before you start feeling fatigued.
2. **Naps.** We suggest a 20- to 30-minute nap at lunchtime. Longer naps or naps later in the day can interfere with your sleep at night, so try to keep them short.
3. **Food and hydration.** Don't get too hungry or too thirsty. Keep a snack and a bottle of water with you. Make sure your snack isn't junk food or it won't help. Don't get dehydrated either, or you will be more likely to have headaches and your brain won't be able to clear out its waste products well.
4. **Exercise.** As your doctor directs, return to exercising. Exercise improves blood flow to help restore vital brain functions. It also helps the brain produce neurotransmitters including brain-derived neurotropic factor (BDNF), which promotes healing and recovery.

Energy withdrawals:

1. **Electronics and fluorescent lights.** Patients do better when they use natural lighting and avoid using computers and other electronics. If you need to use computers, it can help to dim the screen or use a glare guard.
2. **Noise.** You might notice that you are hypersensitive to lots of background noises as well as visual "noise." Clean, quiet places will be the most soothing.
3. **Thinking.** Most people find that regular tasks that used to be easy require more thought. Save your mental energy by making checklists, using a planner, prioritizing and budgeting your thinking. Writing things down and processing them on paper is much less fatiguing and "unloads" your brain.
4. **Pain.** Pain can quickly drain your cognitive reserves. Talk to your doctor if pain is an issue.
5. **Emotions.** Talk about it. Let others know how you are feeling. Your therapists can help you get more support.

Notes

Notes

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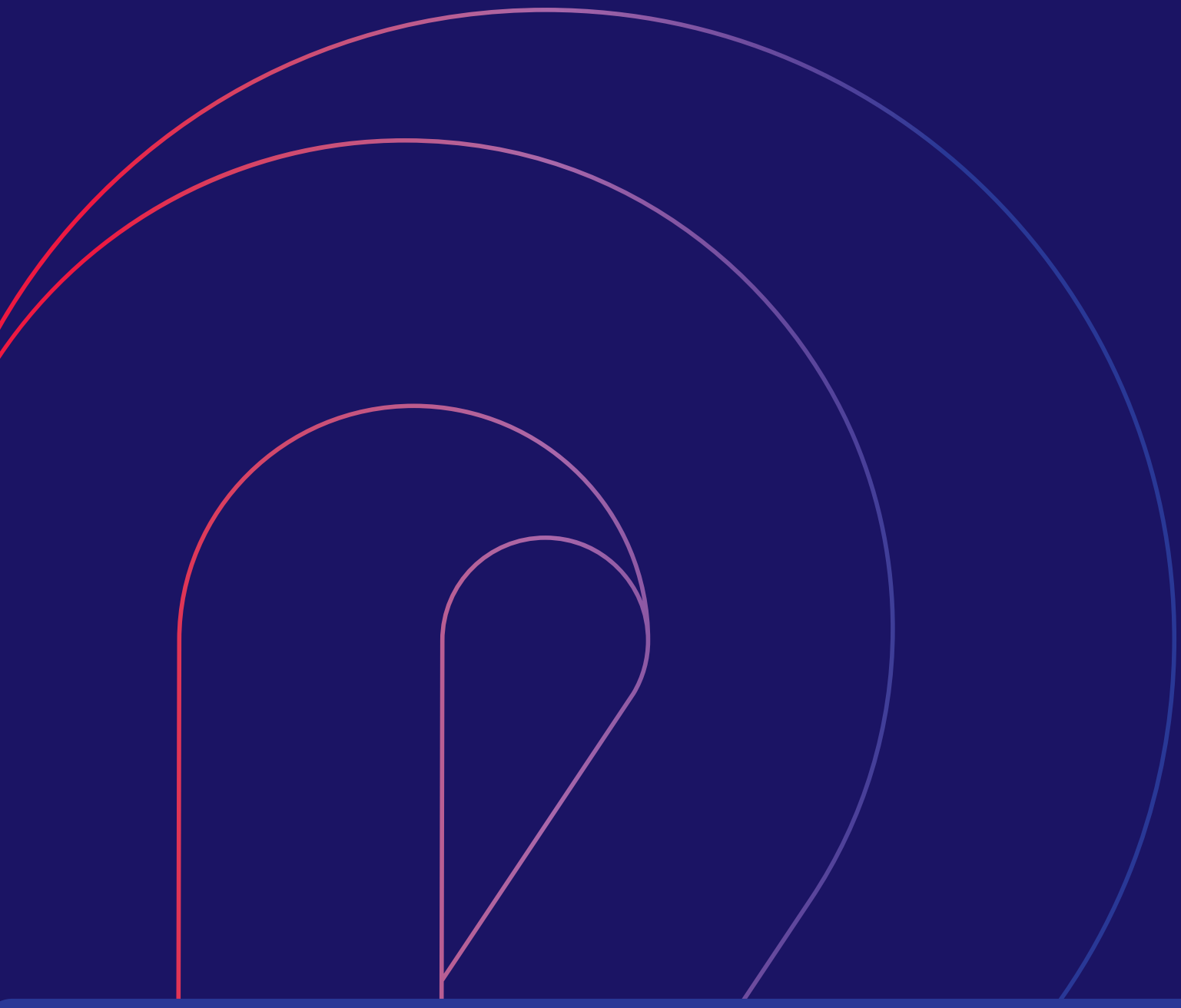

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