

The survival circuit describes how the brain and body respond to threats. The survival circuit is a normal and natural part of being human. The survival circuit helps us to handle any threats that could threaten our safety. There are four main steps in the circuit:

1 Something that we see, hear, smell, taste or touch alerts the brain that there could be danger. The brain reacts *immediately, unconsciously* and *automatically*.

2 The brain sends signals throughout the body to prepare for possible danger. It uses nerve cells that are called the sympathetic nervous system. Just like in step 1, the signals to the body are sent *immediately, unconsciously* and *automatically*.

Some examples of how the body reacts to these signals are:

- Heart rate increases.
- Breathing gets faster.
- Body starts to sweat.
- Digestion slows down or stops.

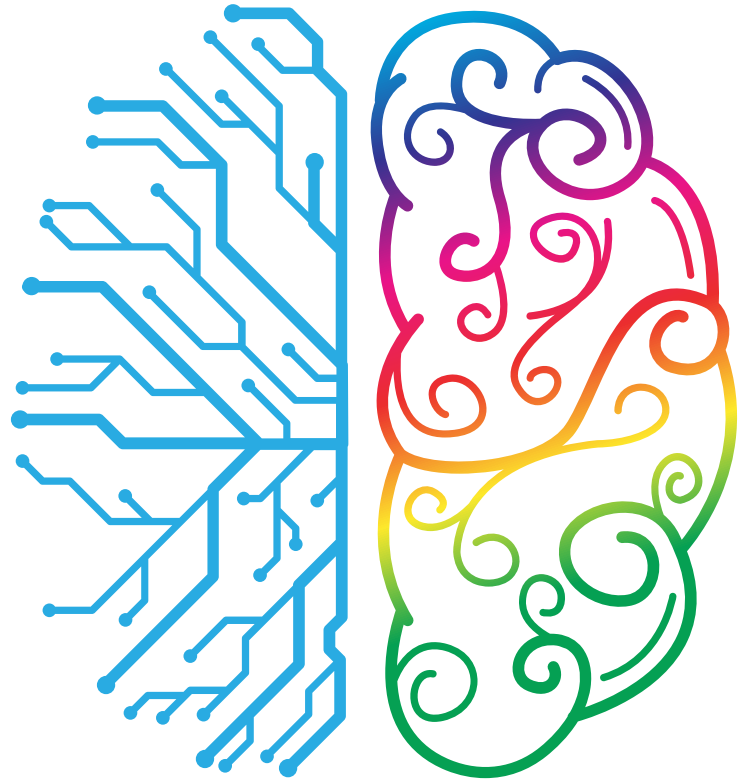
3 Other parts of the brain start to look at what is happening and try to gather more information. The brain compares what is happening to memories and other things we know. The brain tries to determine whether the threat is real or not.



4 If the brain decides the threat is not real or that it can be controlled, signals are sent to the body to begin relaxing. Nerve cells in the parasympathetic nervous system help the body to go back to normal.

Trauma changes the way brain cells connect to each other. In post-traumatic stress disorder (PTSD), the survival circuit becomes overreactive and sensitive to anything that might seem like a threat.

- The parts of the brain involved in fear production become overactive.
- The parts of the brain that control fear, calm us down, and help us learn to overcome anxiety all get suppressed.
- The alarm signals from the brain may stay active, even when the threat is no longer present.
- The survival circuit may activate due to memories or reminders of memories. This includes objects and other things in the environment that do not actually pose a threat.
- When the person comes across these reminders or memories, they may have strong reactions and behaviors that don't seem to fit the current situation.



Trauma can impact a person's attention, memory (both short-term and long-term), and how they process information. The brain changes the way a person sees, experiences, and understands the world. These changes in the brain typically result in new behaviors, which are often labeled as symptoms. These symptoms can lead to a variety of problems and diagnoses. Many professionals frequently focus on the symptoms and overlook the person's trauma experience.