

## Sensory Overload

Sensory overload, sometimes known as sensory fatigue, is a condition that arises when the brain receives more information than it is capable of processing.

This does not pertain to data absorbed by learning. Reading or listening to a lecture about quantum physics and struggling to understand the topic, for example, will not lead to sensory overload. Instead, this condition arises from the five senses – sound, touch, taste, sight and smell – growing overburdened. Usually, this is a result of attempting to process too many sensations at the same time. The brain cannot decide what it should be focusing on and descends into freefall.

## Sensory Overload Explained

Imagine the human brain is a computer hard drive. If you ask your computer to complete a range of tasks one at a time, it will do so without complaint. If you simultaneously try to play a video, listen to music, open multiple large files and surf the web, however, your computer is likely to freeze and crash.

When faced with too much input at once, the brain reacts in the same way. It starts to panic at being exposed to all this new stimulus and struggles to cope. This means that, amid sensory overload, standard brain function is impossible.

## What Causes Sensory Overload?

As discussed, sensory overload occurs when the brain tries to process too much data at any single time. This may be an excess of stimulation to one solitary sense, or a combination of several at once.

Here are some examples of how a single sense can be triggered into overload.

- Sight – flashing lights; flickering, fast-paced edits on a screen; excessive crowding in a small or public space; color combinations that the brain cannot process.

- Scent – extremely strong and unfamiliar aromas, such as spoiled food; a combination of potent smells deemed unpleasant, such as the contents of a waste disposal unit.
- Hearing – uncommonly loud noise, such as a music concert or sports arena; multiple different sounds competing, such as many people talking at once in a meeting.
- Taste – strong or spicy foods that the palate has never experienced before; a combination of tastes that the brain rejects, like milk and orange juice.
- Touch – unexpected touch, such as being grabbed from behind; tactile sensations that the brain may mistake for a threat, such as an insect crawling on the skin.

An excess of any of these single senses can lead to an episode of sensory overload. Alternatively, and more commonly, the brain may struggle with a combination of senses. Common examples of incidents that may provoke sensory overload include:

- Attempting to hold a conversation in a busy nightclub. This will involve the sounds of somebody shouting in the ear competing with loud, throbbing music, usually accompanied by flickering strobe lighting.
- Attending a football game, with the sight of cheerleader choreography competing with music and announcements over the loudspeaker, when a surge in movement from the crowd leads to being touched or shoved unexpectedly.
- Attempting to process mismatched, chaotic color schemes while absorbing other sensory data. An example of this is the horror film *A Nightmare on Elm Street*. The monstrous villain of this movie wears a sweater designed with red and green stripes – two colors that the human eye finds extremely difficult to view together, creating a sense of palpable dread and discomfort.
- Lack of sleep or occupational stress, leading to burnout – the brain is simply no longer capable of processing any further data or stimulus, leading to a physical and emotional revolt. This can also cause Attention Deficit Trait, or ADT – a form of short-form, situation-prompted Attention Deficit Disorder

These are just some of the examples of what can cause sensory overload. This problem can strike at any time.

## What Happens When Somebody Experiences Sensory Overload?

Sensory overload is best described as a complete shutdown of the brain's functioning. Refer back to our example of a computer crashing when asked to perform too many tasks at once. The human brain will react similarly.

This is sometimes referred to as a meltdown, especially in young children with still-developing brains. It is hugely important to understand the difference between sensory overload and a simple temper tantrum in children. A tantrum is an outburst from a child that is yet to learn how to manage their emotions. Sensory overload, meanwhile, requires careful management.

It is not just children that experience sensory overload. As per our examples above, this concern can impact adults too – including the best and brightest minds. According to Healthline, some of the common symptoms of sensory overload include:

- Inability to concentrate on any one stream of input, as too many senses are active at once
- Feeling extremely – and potentially irrationally – irritable or angry
- Growing overwhelmed and needing to leave a situation immediately, seeking somewhere without any stimulation.
- Extreme and sudden waves of fear, anxiety or agitation – the so-called, “fight or flight” response
- Overwhelming sensitivity to touch – the lightest brush of fabric against the skin can feel painful.
- If you have ever petted a cat, you will likely be familiar with the result of sensory overload. Cats have a reputation as unfriendly and unpredictable, as they can go from purring contentedly to biting and scratching within seconds while being petted.

This is because cats are particularly susceptible to sensory overload. Pleasure can turn to pain in an instant for our feline friends. Society frowns upon humans hissing, biting and scratching each other, so our brains react in a slightly different way.

## Is Sensory Overload a Medical Condition?

Sensory overload is a symptom, not a disorder and in and of itself. This means that sensory overload is not officially recognized by the American Psychiatric Association in the Diagnostic and Statistical Manual of Mental Disorders, aka DSM-5.

Anybody can experience sensory overload, regardless of whether they have a history of this concern. However, sensory overload is more common in people that live with a pre-existing mental or emotional health condition. Sensory overload is considered a symptom of a wide range of common mental disorders. These include:

- Autism – Autism and sensory overload often go hand in hand. People on the autistic spectrum are frequently overwhelmed by sensory input. This is commonly referred to as Sensory Processing Disorder, or SPD.
- Attention Deficit Hyperactivity Disorder (ADHD) – somebody living with ADHD will struggle to focus on particular sensory input. This constant shift in attention can lead to sensory overload.
- Generalized Anxiety Disorder – Generalized Anxiety Disorder leads to elevated production of Cortisol – aka, “the stress hormone” – in the body. This constant state of tension leads to mental fatigue, reducing resistance to sensory overload.
- Post-Traumatic Stress Disorder (PTSD) – PTSD, especially in combat veterans, leads to a state of hyperarousal – constantly remaining alert to stimulus all around. This diligent state of awareness and vigilance can quickly lead to sensory overload.
- Fibromyalgia – the constant and chronic pain caused by Fibromyalgia leads to an avalanche of sensory data reaching the brain at all times. This, naturally, makes people with Fibromyalgia prone to sensory overload.
- Multiple Sclerosis (MS) – difficulty processing sensory data, and growing overwhelmed by such stimulus, is an early symptom of MS. It is believed that up to half of all people with MS are susceptible to sensory overload.

If you are prone to sensory overload but have never been formally diagnosed with a medical condition, you may be what is referred to as a Highly Sensitive Person, or HSP. Up to 30% of

the global population are believed to be HSPs; people that experience heightened physical and emotional reactions to stimulus. HSPs need to be careful about avoiding excessive data, as they are particularly prone to sensory overload.

### How Can Sensory Overload be Managed?

If you frequently experience sensory overload, prevention is better than cure. This issue can be triggered by a range of situations. Avoiding placing yourself in these scenarios is preferable to attempting to cope with the aftermath.

This is not always possible, though. The vast majority of sensitive people still need to hold down a job and wish to socialize with friends and family members outside of their homes.

If you feel the symptoms of sensory overload, remove yourself from a situation as quickly as possible. Find a, “safe space” that is devoid of sensory data. This means somewhere quiet, dimly lit and devoid of strong, acrid smells. If visiting a location for the first time, it is advisable to pinpoint such a location as soon as you arrive. This could be a bathroom, a parking lot, a basement – anywhere that you can cool off.

Learn how long it will take to recover from sensory overload, too. Unfortunately, this is often a case of trial and error. You may find that one or two minutes away from excessive stimuli leave you feeling fine. Alternatively, it may take some time for your body and brain to calm themselves appropriately. Take as long as you need – there is no right or wrong length of time.

### How Can Sensory Overload be Avoided?

As discussed, the only surefire way of avoiding sensory overload is to remain alone, ideally in a sensory deprivation tank, at all times. This is unrealistic, and an unfair expectation upon a sensitive person.

Thankfully, there are ways to minimize the risk of sensory overload when out in public. These include:

- Wearing dark glasses to minimize the impact of bright or flashing lights.
- Investing in noise-canceling headphones to block out competing noise.
- Keeping to corners of rooms, thus avoiding feeling surrounded in crowds.
- Having a clear escape route from situations that threaten to grow overwhelming.
- Drinking plenty of water. A hydrated brain copes better with stimulus
- Avoiding artificial stimulants, such as excessive caffeine or sugar
- Always having a plan of action – such as taking a shopping list to the supermarket – to avoid growing overwhelmed.
- Practice mindfulness, yoga or meditation to restore balance to your mind and body.
- All sensitive people have different triggers and tolerances for stimulus when it comes to sensory overload. Learn your limits, and take the steps required to protect yourself.

If you feel comfortable doing so, inform your friends and work colleagues of your sensitivities. This should lead to them moderating their behavior accordingly and avoiding suggestions to meet in locations that likely to lead to sensory overload.

There is no stigma attached to sensory overload. The world can feel overwhelming to us all at times. In the year 2021, we are often faced with more sensory data than the human brain can keep up with. Protect yourself and avoid placing your senses under unnecessary strain. Your sensitivity should be considered a blessing, not a curse.

### Summary of Useful Links

Throughout our discussion of sensory overload, we have linked to various helpful resources. If you wish to refer back to these at your leisure, please find them listed below.

[autismspeaks.org/sensory-issues](https://autismspeaks.org/sensory-issues)

[thecenterforconnection.org/blogarchive/2016/4/27/the-relationship-between-sensory-processing-and-sleep](https://thecenterforconnection.org/blogarchive/2016/4/27/the-relationship-between-sensory-processing-and-sleep)

<https://hbr.org/2005/01/overloaded-circuits-why-smart-people-underperform>

<https://health.clevelandclinic.org/what-happens-to-your-body-during-the-fight-or-flight-response>

[healthline.com/health/sensory-overload](https://healthline.com/health/sensory-overload)

[healthrising.org/blog/2013/10/03/sensory-overload-study-suggests-brains-fibromyalgia-pummeled-much-information](https://healthrising.org/blog/2013/10/03/sensory-overload-study-suggests-brains-fibromyalgia-pummeled-much-information)

<https://hsperson.com>

<https://msfocusmagazine.org/Magazine/Magazine-Items/Posted/Sensory-Problems-in-MS>

<https://medium.com/change-your-mind/why-being-an-hsp-is-a-good-thing-how-to-love-your-sensitivity-5382a33f1ab8>

[psychologicalscience.org/observer/burnout-and-the-brain](https://psychologicalscience.org/observer/burnout-and-the-brain)

[ucsf.edu/news/2018/06/410786/unbearable-sensation-being-living-sensory-processing-disorder](https://ucsf.edu/news/2018/06/410786/unbearable-sensation-being-living-sensory-processing-disorder)

[understood.org/en/community-events/blogs/what-i-wish-id-known-sooner/2017/10/10/i-had-a-meltdown-and-finally-understood-sensory-overload](https://understood.org/en/community-events/blogs/what-i-wish-id-known-sooner/2017/10/10/i-had-a-meltdown-and-finally-understood-sensory-overload)