

What Is Brain Fog?

Brain fog is a term usually associated with a state of confusion and decreased level of mental clarity.

It is marked by an inability to perform intellectually as expected, misplacing things, and forgetting places, names, common tasks, and words.

What Causes This?

There are many causes for brain fog besides vestibular disorders. Check with a physician to exclude any other neurological, viral, or biochemical disorders. For more information about diagnosing Ménière's Disease, see our brochure on Diagnostic Procedures.

Ménière's Disease

Ménière's Disease may destroy vestibular function of the inner ear. In some very primitive species lacking both a cerebrum and a cerebellum such as worms, the inner ear is the brain. It performs many of the same functions performed by the cerebellum in higher species. As a result, there is a high degree of integration between the cerebellum and the inner ear.

The inner ear basically acts as the antenna to the brain. If this antenna is damaged, information to the brain will be of poor quality. There is nothing wrong with the TV set (the brain). It is not a brain disease.

The vestibular system filters and fine-tunes all sensory information entering the brain -- light, sound, motion, gravitational energy, chemical information, air pressure, temperature, etc. It is

responsible for coordinating, controlling, and fine-tuning vision, hearing, balance, sense of direction, motion, altitude and depth, smell, anxiety level, and depression.

The vestibular system also processes motor function. It coordinates, controls, and fine-tunes all motor information leaving the brain. Therefore, it is responsible for guiding and coordinating the eyes, head, hands, feet, limbs, etc., as well as various mental and physical functions -- voluntary and involuntary.

Inner Ear Functions

The inner ear system has many functions, including the following:

- It acts like a gyroscope giving a sense of balance.
- It acts like a compass, giving an intuitive sense of direction.
- It acts like a guided-missile system, coordinating movements (voluntary and involuntary) and thoughts in time and space.
- It acts like a sensory processor, tuning in and fine-tuning all of the sensory information entering the brain including light, sound, motion, gravity, barometric pressure, electromagnetic fields, temperature, humidity, and chemicals.
- It regulates and dampens anxiety and depression.

Areas Affected

- balance and coordination
- vision and hearing
- sense of direction
- sense of time
- motion sensitivity
- memory
- fatigue
- concentration and distraction
- hyperactivity and over activity
- obsessions and compulsions
- academic performance
- anxiety and depression levels

Results of Vestibular Damage

If your vestibular system is damaged, it could manifest itself in some of the following ways:

- Light - blinking lights, fluorescent lights, and strobe lights might bother you. A 100-watt bulb can seem like 1000 watts.
- Bright colors might bother you.
- Sound - foreground and background noises might blend, or there might be a delay in hearing what people are saying. There may be sensitivity to sound.
- Smells – there may be sensitivity to smells.
- Depth perception – there may be difficulty telling how far away another car is, trouble catching a ball, and fear of heights.
- Motion sensitivity - can cause carsickness, airsickness, and seasickness. There may be trouble in moving elevators, on escalators, or an inability to

ride amusement park rides. The same cells and circuits of the inner ear do not control counter clockwise and clockwise motions. Depending upon the extent of the damage incurred, one might be carsick but not seasick.

- Chemical sensitivities - one may overreact or under react to standard drug dosages or alcohol. An average dosage either does nothing or is too strong. Alcohol might cause drunkenness immediately or quite a while later. Adrenaline is felt like an overdose. This applies to all emotions: guilt, guiltless, sensitivity, insensitivity, fear, or fearlessness.
- Gravity – one may have an out-of-body sensation, feelings of floating, or have trouble when there are no visual clues as to up and down, such as in tunnels and elevators.
- Eye tracking - blurring speed is increased. Forty mph might seem like eighty. It becomes difficult to keep the place on a page. Lines and spaces blend. Reading is like following lines of text in a moving car on a bumpy road. Adults who have already learned to read before vestibular damage occurred might simply find they have stopped reading for enjoyment. The opposite can happen - blurring speed can also be slowed.
- Memory – there may be difficulty in retrieving words or information needed. New information does not stick.
- Direction - sense of direction may be off. One may get lost easily, have difficulty locating familiar places, get turned around in buildings, or have no sense of north, south, east, and west.

- Weather - barometric pressure changes can be felt intensely causing restlessness and nervousness before a storm.
- Rhythm - sense of rhythm may be off causing stammering, stuttering, and hesitations in speech. Internal rhythms may be off. One might notice harmless skipped heartbeats, erratic menstrual cycles, and erratic sleep patterns
- Time - sense of time may be off so that one is always late or early or does not realize how much time has passed. It is difficult to recall if an incident happened a week or a month ago.
- Sleep – there may be difficulty falling asleep, difficulty with sleep walking, nightmares, or having no dreams at all.
- Humidity - greenhouses, laundromats, indoor swimming pools, or dry heat may be troublesome.
- Electromagnetic fields – may be felt while others feel nothing.

Coping with Brain Fog

Brain fog can lead to discouragement, depression, and low self-esteem. It can exacerbate relationship problems, fatigue, and feelings of detachment. Coping with brain fog is challenging. Similar to physical vestibular therapy, experts are focusing on mental operation therapy that teaches shortcuts to thought processes and imagery.

Visit the Meniere's Resources, Inc. website www.menieresresources.org for more information, personal stories, and coping resources, to become a member, or to make a donation.



Art by Danny Pancy

Brain Fog

Vestibular disorders can affect cognitive function.

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Disclaimer: *Although this brochure is intended to reach out to others and offer support, comfort and advice, it is in no way intended to take the place of examination, diagnosis, opinion, or treatment provided by a licensed and qualified health professional.*
