

# Hallucinations

## Description

A hallucination is a false perception occurring without any identifiable external stimulus and indicates an abnormality in perception. The false perceptions can occur in any of the five sensory modalities. Therefore, a hallucination essentially is seeing, hearing, tasting, feeling, or smelling something that is not there. The false perceptions are not accounted for by the person's religious or cultural background, and the person experiencing hallucinations may or may not have insight into them. Therefore, some people experiencing hallucinations may be aware that the perceptions are false, whereas others may truly believe that what they are seeing, hearing, tasting, feeling, or smelling is real. In cases when the person truly believes the hallucination is real, the individual may also have a delusional interpretation of the hallucination.

Hallucinations must be distinguished from illusions, which are misperceptions of actual external stimuli. In other words, an illusion is essentially seeing, hearing, tasting, feeling, or smelling something that is there, but perceiving it or interpreting it incorrectly. An example of an illusion might be hearing one's name called when the radio is playing. There is an external auditory stimulus, but it is misperceived. True hallucinations do not include false perceptions that occur while dreaming, while falling asleep, or while waking up. Unusual perceptual experiences one may have while falling asleep are referred to as hypnagogic experiences. Unusual perceptual experiences one may have while waking up are referred to as hypnopompic experiences. Hallucinations also do not include very vivid experiences one may have while fully awake (such as especially vivid daydreaming or imaginative play).

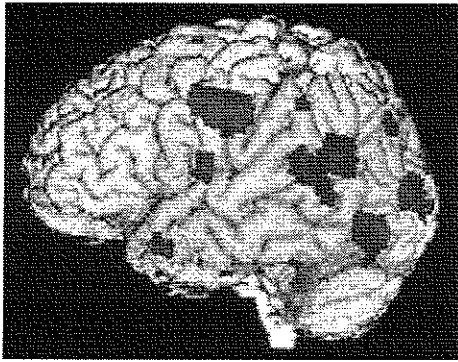
Hallucinations are a symptom of either a medical (e.g., epilepsy), neurological, or mental disorder. Hallucinations may be present in any of the following mental disorders: psychotic disorders (including **schizophrenia**, **schizoaffective disorder**, **schizophreniform disorder**, **shared psychotic disorder**, **brief psychotic disorder**, **substance-induced psychotic disorder**), **bipolar disorder**, major depression with psychotic features, **delirium**, or **dementia**. Auditory hallucinations, in particular, are common in psychotic disorders such as schizophrenia.

Use of certain recreational drugs may induce hallucinations, including **amphetamines** and cocaine, hallucinogens (such as lysergic acid diethylamide or LSD), phencyclidine (PCP), and cannabis or marijuana. For example, visual hallucinations are commonly associated with substance use. Individuals may report false perceptions of little people or animals (sometimes referred to as Lilliputian hallucinations). In addition, withdrawal from some recreational drugs can produce hallucinations, including withdrawal from alcohol, sedatives, hypnotics, or anxiolytics. Withdrawal from alcohol, for instance, commonly causes visual hallucinations, especially at nighttime.

# Types

Hallucinations are categorized according to which sensory modality is involved and, in addition, are categorized as either mood-congruent or mood-incongruent. The types of hallucinations are:

- **Auditory:** The false perception of sound, music, noises, or voices. Hearing voices when there is no auditory stimulus is the most common type of auditory hallucination in mental disorders. The voice may be heard either inside or outside one's head and is generally considered more severe when coming from outside one's head. The voices may be male or female, recognized as the voice of someone familiar or not recognized as familiar, and may be critical or positive. In mental disorders such as schizophrenia, however, the content of what the voices say is usually unpleasant and negative. In schizophrenia, a common symptom is to hear voices conversing and/or commenting. When someone hears voices conversing, they hear two or more voices speaking to each other (usually about the person who is hallucinating). In voices commenting, the person hears a voice making comments about his or her behavior or thoughts, typically in the third person (such as, "isn't he silly"). Sometimes the voices consist of hearing a "running commentary" on the person's behavior as it occurs ("she is showering"). Other times, the voices may tell the person to do something (commonly referred to as "command hallucinations").
- **Gustatory:** A false perception of taste. Usually, the experience is unpleasant. For instance, an individual may complain of a persistent taste of metal. This type of hallucination is more commonly seen in some medical disorders (such as epilepsy) than in mental disorders.
- **Olfactory hallucination:** A false perception of odor or smell. Typically, the experience is very unpleasant. For example, the person may smell decaying fish, dead bodies, or burning rubber. Sometimes, those experiencing olfactory hallucinations believe the odor emanates from them. Olfactory hallucinations are more typical of medical disorders than mental disorders.
- **Somatic/tactile hallucination:** A false perception or sensation of touch or something happening in or on the body. A common tactile hallucination is feeling like something is crawling under or on the skin (also known as formication). Other examples include feeling electricity through one's body and feeling like someone is touching one's body but no one is there. Actual physical sensations stemming from medical disorders (perhaps not yet diagnosed) and hypochondriacal preoccupations with normal physical sensations, are not thought of as somatic hallucinations.
- **Visual hallucination:** A false perception of sight. The content of the hallucination may be anything (such as shapes, colors, and flashes of light) but are typically people or human-like figures. For example, one may perceive a person standing before them when no one is



**Colored positron emission tomography scan (PET scan) of the brain of a patient with schizophrenia who is experiencing a hallucination. Highlighted areas show brain activity. The patient's hallucination consisted of heads that spoke to him. The active areas of the brain seen here (the auditory and visual areas) confirm that the patient "saw" and "heard" the heads in the hallucination.**

(Wellcome Dept of Cognitive Neurology. Photo Researchers, Inc./Science Source. Reproduced by permission.)

See color insert for color version of photo.

there. Sometimes an individual may experience the false perception of religious figure (such as the devil, or Christ). Perceptions that would be considered normal for an individual's religion or culture are not considered hallucinations.

- **Mood-congruent hallucination:** Any hallucination whose content is consistent with either the depressive or manic state the person may be in at the time. Depressive themes include guilt, death, disease, personal inadequacy, and deserved punishment. Manic themes include inflated self-worth, power, knowledge, skills, and identity and a special relationship with a famous person or deity. For example, a depressed person may hear voices saying that he or she is a horrible person, whereas a manic person may hear voices saying that he or she is an incredibly important person.
- **Mood-incongruent hallucination:** Any hallucination whose content is not consistent with either the depressed or manic state the person is in at the time, or is mood-neutral. For example, a depressed person may experience hallucinations without any themes of guilt, death, disease, personal inadequacy, or deserved punishment. Similarly, a manic person may experience hallucinations without any themes of inflated self-worth, power, knowledge, skills, or identity or a special relationship to a famous person or deity.