

3.7.7 Panic Attacks

Finally, one must also consider the possibility of panic attacks which arise from sleep. These are similar in presentation to daytime panic attacks but can be difficult to differentiate from parasomnias, especially sleep terrors. As with sleep terrors, they are not preceded by dream mentation and generally arise from non-REM sleep (Krystal et al. 2015). Unlike non-REM parasomnias, where the patient's recall for the event may be incomplete or absent, and where they may go back to sleep at the end of the episode, panic attacks are typically clearly recalled and can lead to a prolonged awakening. However, the diagnosis of nocturnal panic does not preclude a sleep disorder; the panic may well be precipitated by an obstructive apnoea, for example.

3.7.8 Hypnagogic and Hypnopompic Hallucinations

These are brief hallucinations that occur either at sleep onset (hypnagogic) or waking (hypnopompic). They can be in any sensory modality, but common hallucinations are a sense of there being an intruder or malign presence in the room, hearing the doorbell or their name being called, seeing spiders or snakes or seeing the walls and ceiling collapsing in on them. They are very often unpleasant in nature (Iranzo et al. 2009).

Patients will often describe these experiences as dreams or nightmares, and one needs to elicit more details to differentiate them from dreams. In hallucinations, the person experiences the hallucination superimposed on the real world. They will usually be aware that they are in their bed and in their room and will see, hear or feel the hallucination within the room. So they may feel as if someone is behind their bed, see a figure in the corner of the room or see snakes coming out of their cupboard. The hallucinations are generally short-lived, fragmentary experiences and dissipate as soon as the person is fully awake. In contrast, dreams occur in a 'dream space'. The person dreams that they are in the kitchen, at school, out on the street, etc. The dreams are usually longer and more detailed and involve a sequence of events.

It is also important to differentiate these hallucinations from those found in psychotic disorders. This author has encountered numerous patients who have been put on antipsychotic medications as it was supposed that their hallucinations were a sign of schizophrenia. A careful history will reveal that the hypnagogic/hypnopompic hallucinations occur exclusively at the junctures of sleep and wakefulness, whereas those found in psychotic disorders can occur at any time of the day. Sleep-related hallucinations tend to dissipate rapidly when the lights are turned on, which would be unusual in psychosis. Once they are fully awake, most patients with sleep-related hallucinations rapidly become aware that the hallucinations are not real. Another clue that these are sleep-related hallucinations rather than psychosis is if they are accompanied by sleep paralysis (see below).

The situation is more complex, however, in patients with learning disabilities or dementia who may not always be able to articulate when they experience the hallucinations. This is especially true if they have severe excessive daytime sleepiness, such as in narcolepsy. As these patients drift in and out of sleep many times a day, they may experience hypnagogic/hypnopompic hallucinations throughout the day.

3.7.9 Sleep Paralysis

Sleep paralysis is the experience of being paralysed on waking or, less commonly, on falling asleep. Sleep paralysis is the intrusion of the normal REM atonia and paralysis into wakefulness. The most important task in taking a history of sleep paralysis is to differentiate sleep paralysis from sleep inertia, which is the difficulty waking up fully and is often accompanied by difficulty moving due to fatigue and sleepiness.

In sleep paralysis, the paralysis generally affects the entire body, and the person cannot speak, though they may be able to generate simple vocalizations such as grunts or squeaks. If the patient feels they have difficulty breathing, or have a sense of something pressing on their chest, then sleep paralysis is more likely. Similarly, hypnagogic/hypnopompic hallucinations during the episode mitigate in favour of sleep paralysis. Understandably, most patients describe sleep paralysis as a frightening experience, though some patients who suffer from frequent episodes may get used to them and find them less distressing. Sleep paralysis can occur at sleep onset, though many patients only experience it on waking, and in many patients it occurs more frequently in the supine position. It usually resolves suddenly, often in response to a light touch by the bed partner (Vaughn and D'Cruz 2017). Some patients will report experiencing paralysis during dreams rather than wakefulness; commonly the dream is distressing, and they need to flee or fight but cannot move. It is likely that this is the awareness of normal REM sleep paralysis being incorporated into the dream and is not in itself pathological.

Sleep inertia occurs on waking. It is not accompanied by difficulty breathing, and hallucinations are rare. The patient subjectively experiences intense fatigue and weakness rather than fear. With effort, they are able to move and speak. It is not related to body position and tends to resolve very gradually, over the space of several minutes or even hours (Table 3.3).

When asking about sleep paralysis, some patients will report having temporary paralysis or loss of sensation in a limb, usually an arm. This is not sleep paralysis and is likely due to extended pressure on the limb from lying on it.

If you have diagnosed sleep paralysis, then establish the frequency of episodes. Sporadic episodes are not uncommon and are generally benign, but frequent episodes can be a sign of isolated sleep paralysis, and frequent episodes in the context of sleepiness may be a sign of narcolepsy.

Table 3.3 Comparison of sleep paralysis and sleep inertia

	Sleep paralysis	Sleep inertia
Timing	Usually on waking but can be at sleep onset	On waking
Movement	Can only move eyes and diaphragm	Able to move, at least a little, but with significant effort
Speech	No; may be able to grunt or squeak	Able to speak though may be difficult
Duration	Seconds to minutes	Minutes to hours
Resolution	Sudden, complete resolution	Very gradual; often has lingering sleepiness after rising
Subjective sensations	Difficulty breathing, frightening, hallucinations	Exhausted, drained, heavy, sleepy

3.8 Assessing Excessive Daytime Sleepiness

This is a common presenting complaint and has a wide differential diagnosis.

3.8.1 Insufficient Sleep Syndrome

Before making a diagnosis of another sleep disorder, one needs to be sure that the patient is not sleepy due to inadequate sleep opportunity. The description of a typical night and the sleep diary may demonstrate that the patient frequently has inadequate time in bed. If a patient sleeps significantly longer on weekends than during the week, this is likely a sign they are getting insufficient sleep during the week. As these patients accumulate a sleep debt which cannot be paid off with one or two longer nights' sleep, one wouldn't necessarily expect them to feel less sleepy when they try to catch up sleep on weekends. Therefore, ask the patient whether they feel less sleepy when they have had an extended period of longer sleep, such as on holiday.

3.8.2 Obstructive Sleep Apnoea (OSA)

Ask the patient if they snore. A collateral history is particularly helpful here, but not absolutely necessary. Most patients, even those who live alone, will know if they have significant snoring. They may wake themselves up snoring or describe embarrassing snoring when falling asleep on buses, in hotel rooms, etc. Other clues include regularly waking with a sore throat or their voice becoming more gravelly. If there is a bed partner, ask if they have ever reported a cessation of the patient's breathing during the night. Apnoeas can be quite alarming, and the bed partner will usually try to rouse the patient the first few times it happens. If there is no bed partner, ask if the patient ever wakes up choking or gasping for breath. Sleep apnoea may cause significant night sweats and marked nocturia (though other causes such

as diuretics need to be taken into account). Another sign to ask about is the presence of frequent morning headaches. Finally, apnoea patients commonly—but not universally—experience excessive daytime sleepiness. The assessment of sleepiness is described in more detail below.

It should be noted that many OSA patients may be completely unaware of any of these features. They may feel they sleep solidly through the night and deny any difficulties with breathing or sleep continuity. The only clues may be daytime fatigue or sleepiness and the physical examination. OSA is more common in men, the older age group and those who are overweight, have retrognathia, an enlarged tongue, a thick neck or enlarged tonsils. Despite this, it is important to remember that OSA can occur in young, slim individuals with no facial abnormalities. Weight gain is a common problem with numerous psychiatric medications, and increasing frequency or severity of the sleep disorder with increasing weight may be an indicator that OSA is the underlying problem, or at least an exacerbating factor.

3.8.3 Periodic Limb Movement Syndrome (PLMS)

Periodic limb movement syndrome (PLMS) (repetitive, stereotyped limb movements in sleep) is probably the most difficult sleep disorder to detect on history and is very much a diagnosis of exclusion. PLMS should be suspected if the patient has disrupted sleep and/or excessive daytime sleepiness, but there is a low probability of OSA, or in patients who have OSA which is being effectively treated but who continue to experience disrupted sleep or daytime sleepiness. It should also be suspected if the patient has predisposing factors such as low iron, kidney failure and neuropathy or is on antidepressants, antipsychotics or lithium (AASM 2014). The patient is usually unaware of the leg movements, and they can be so subtle that the bed partner may be unaware of them as well. In severe cases, the partner will complain of repetitive leg movements, or the patient may experience leg twitches at night prior to sleep onset. These need to be differentiated from sleep starts (hypnic jerks) which are more rapid, usually involve the entire body and occur singly rather than repetitively. Many patients with PLMS will have a positive personal or family history of restless legs (AASM 2014). In the absence of these signs and symptoms, one can ask if there are signs of restless sleep, such as blankets tangled round the legs or the bottom of the fitted sheet pulled out. PLMS patients whose pets sleep on their bed may notice that the pets have abandoned the bed in the morning. However, history alone does not have the sensitivity or specificity to make a diagnosis of PLMS, and ultimately a polysomnogram will be required (AASM 2014).

3.8.4 Central Hypersomnolence

If there are no clear indications of an underlying sleep disorder, such as OSA or PLMS, then one should consider the possibility of a central disorder of hypersomnolence.

If the sleep quantity seems adequate, then the two most likely diagnoses to investigate are narcolepsy and idiopathic hypersomnia (IH). Although these will require actigraphy, a PSG and a multiple sleep latency test to confirm the diagnosis, there are a number of clues in the history that make one suspect narcolepsy or IH and help differentiate between the two.

In both narcolepsy and IH, patients report significant sleepiness, often described as irresistible. Most of these patients will nap during the day, either taking planned naps or falling asleep unintentionally. In narcolepsy, these naps are often refreshing, and the person wakes feeling quite alert; sleepiness then gradually increases in intensity leading up to the next sleep episode. Many narcoleptic patients will report vivid dreaming even in brief naps and may experience sleep paralysis and hypnagogic/hypnopompic hallucinations. In IH, naps tend to be longer than in narcolepsy—often longer than an hour—and are usually unrefreshing; IH patients often report that they feel worse after naps rather than better (AASM 2014).

The night-time sleep of many narcoleptics is very fragmented, and they have a higher rate of parasomnias such as RBD. In IH the sleep is typically long, subjectively deep and consolidated, yet unrefreshing. 36%–66% of IH patients experience severe sleep inertia on waking and will require multiple alarms and prompts, and often several hours, before they are able to get out of bed. In contrast, long sleepers (people who simply need more sleep than the mean for their age) will wake feeling refreshed and alert if they have had adequate sleep (AASM 2014).

Age of onset of the symptoms is also informative. Whilst OSA and PLMS become more frequent with increasing age, narcolepsy typically starts between ages 10 and 25. Similarly, the peak age of onset for IH is 16.6–21.2 years (AASM 2014).

Although sleep paralysis and hypnagogic/hypnopompic hallucinations can occur in IH, if they occur frequently, they are much more likely to be a sign of narcolepsy. Sleep paralysis at sleep onset is less common than on waking and may be indicative of narcolepsy.

Cataplexy is rarely observed in the clinic, and so a good history is needed to determine if it is present. Its presentation varies across individuals and between episodes; it can also evolve across time. It is a brief loss of muscle tone and control without loss of consciousness. In mild episodes, it can manifest as the head dropping forward or nodding, the jaw sagging and slurred speech. In more severe episodes, the patient may drop to the ground. It is usually precipitated by emotion, particularly by laughter, and patients may learn to avert attacks by avoiding emotional stimuli and reining in their emotions. The muscle weakness is generally bilateral though there may be greater weakness on one side than the other. It starts suddenly but usually builds in intensity over a few seconds, which sometimes allows the patient to minimize the risk of injury (AASM 2014).

When asked about cataplexy, many patients will report episodes of head nodding or their head dropping forward, but they are often describing sleep episodes rather than cataplexy. One must establish very clearly whether these events are happening when dozing or in full consciousness. In addition, many non-cataplectic people will experience muscle weakness when laughing for a prolonged period, when angry or when scared. It is therefore more indicative of cataplexy if these physical symptoms