Narcolepsy

- A dyssomnia usually characterized by irresistible sleep episodes during the day.

- Other symptoms:
  - Fragmented nighttime sleep.
  - Often transition directly from awake to REM state. Strong emotions reported on awakening.
  - Cataplexy: involuntary muscle weakness (atonia), ranging from mild to total collapse, but without sleep onset.
  - Vital signs difficult to detect if severe (case of Allison Burchell).
Doctors have pronounced Allison Burchell dead three times. A rare medical condition, called narcolepsy, means she is overcome by irresistible urges to fall asleep. She then loses control of her muscles and to all appearances is no longer alive.

It was in 1995 when Allison was first pronounced dead at the age of 17. An usherette found her, apparently unconscious, in a cinema after she had slumped to the floor. The last thing Allison could remember was laughing, but then she found she couldn’t move even though she could still hear the film and the giggles from the audience.

She was taken from the cinema, but was fully conscious while nurses, believing her to be dead, prepared her body for the mortuary. She could hear the medical staff chatting as they worked but was unable to let them know she was not dead. She said: "They had no idea I could hear everything they were saying. I was paralysed, but in my head I was calling them all the names under the sun. I was petrified."

Allison was taken to the mortuary where she eventually came round. She said: "There were all these corpses around me and I just didn’t know what to do. I just sat there and then the attendant came in and I think he got an even bigger shock than I did."

A few years after her diagnosis, Allison suffered another attack and was taken to a mortuary after being pronounced dead for the second time. Allison, who is now married with four children, said: "When the doors to the mortuary closed it felt like being in a tomb. It dawned on me that someone else had to die before they’d open the doors again so I was wishing it to happen."

She suffered her third attack in the Seventies, after she had moved to Melbourne, Australia. Allison’s 15-year-old son, Stephen, begged paramedics not to put his mum in the freezer after she had collapsed at home. Medical staff eventually took heed of her son’s fears and Allison was put in a side ward where she eventually came round. Allison said: "You can see and hear everything going on around you but there is no way to convey to anyone that you are not dead. It is the most terrifying thing imaginable."

**Narcolepsy**

- Other symptoms (continued):
  - Prone to sleep paralysis
  - Prone to hypnagogic hallucinations: dream-like experiences while falling asleep or awakening
  - Often triggered by emotional experiences

**Possible causes**
- Genetic condition resulting in reduced levels of hypocretin
- Overactive REM atonia/sleep mechanism

**Treatment**
- Naps, Modafinil, Stimulants
- For cataplexy: sodium oxybate, SSRI antidepressants
Note multiple types of atonia while awake:

- Sleep paralysis (if not a dream)
- Night shift paralysis
- Cataplexy

Sleep apnea

- Pauses (second to minutes) in breath during sleep.
  - 1 in 18 adults
  - Usually person is unaware
  - Nearly always co-occurs with snoring (though snoring without apnea is also common)
  - Home diagnosis: observe person for frequency or prolonged pauses between snoring with no breathing

- Types
  - Central: lack of effort (very rare)
  - Obstructive: airway blockage
  - Complex: combination of central and obstructive (very rare)

Sleep apnea

- Can cause severe of O₂ deprivation
  - <70% O₂ blood saturation can occur in apnea
  - Compare to minimum achievable of about 95% after holding breath

- Risk factors: being male, overweight, or over 40; but can even strike children.
Sleep apnea

- Health consequences
  - Excessive daytime sleepiness
  - Congestive heart failure, hypertension (oxygen deprivation)
  - Memory and other cognitive deficits (oxygen deprivation)
  - Worsens with age if untreated
  - In children: failure to thrive, headache, irritability
    - Usually resolved by tonsillectomy

Sleep apnea (obstructive)

- Treatment:
  - Losing weight
  - Sleep on side
  - Continuous positive pressure machine
  - Dental appliances
  - Surgery

REM behavior disorder

- REM sleep without atonia and with motor activity
- Leads to physical acting out of dream activities
- Often leads to injury to patient or bed partner

Possible causes:
- Degenerative neurological disorder (38% of have this disorder later develop Parkinson’s)
- Pons lesion (rare)
- Alcohol, sedative withdrawal, some antidepressants (rare)

Treatment:
- Safe sleeping environment
- Clonazepam (GABA enhancer): suppresses motor system