NARCOLEPSY

What is narcolepsy?

Narcolepsy is a chronic neurological disorder that affects part of the brain that regulates when to be asleep and when to be awake. Periods of extreme drowsiness occur throughout the day in individuals with the condition. Other possible symptoms include cataplexy, hypnagogic hallucinations and sleep paralysis (explained below). The onset of symptoms usually begins during the teenage years, peaking at 15 years of age. A less pronounced peak occurs when the individual is in their 30s. It is not a deadly illness, but it may be dangerous if episodes occur during driving, operating machinery, or similar activities. Narcolepsy can usually be controlled with treatment. Treating other underlying sleep disorders can also improve symptoms of narcolepsy.

What causes narcolepsy?

Researchers believe that narcolepsy is caused by reduced levels of a protein called hypocretin, which is made in the hypothalamus of the brain. It is still unclear as to what causes the brain to produce less of this protein.

It has also been suggested that narcolepsy may be associated with conditions which can increase strep titers and subsequently underlying autoimmune responses further contributing to the development of narcolepsy-like symptoms.

Conditions that cause insomnia, such as disrupted work schedules, can make narcolepsy worse.

What are common signs and symptoms of narcolepsy?

The most common symptoms of narcolepsy are:

- Periods of extreme drowsiness every 3 to 4 hours during the day. You may feel a strong urge to sleep, often followed by a short nap (sleep attack).
    - These periods last for about 15 minutes each, although they can be longer.
    - They often happen after eating, but may occur while driving, talking to someone, or during other situations.
    - You wake up feeling refreshed.
- Dream-like hallucinations occur during the stage between sleep and wakefulness. They involve seeing or hearing, and possibly other senses.
- Sleep paralysis is when you are unable to move when you first wake up. It may also happen when you first become drowsy.
- Cataplexy is a sudden loss of muscle tone while awake, resulting in the inability to move. Strong emotions, such as laughter or anger, will often bring on cataplexy.
    - Most attacks last for less than 30 seconds and can be missed.
    - Your head will suddenly fall forward, your jaw will become slack, and your knees will buckle.

- In severe cases, a person may fall and stay paralyzed for as long as several minutes.

Not all patients have all four symptoms.

How can narcolepsy be treated nonpharmacologically?

There is no known cure for narcolepsy. The goal of treatment is to control the symptoms. Lifestyle modification and learning to cope with the effects of the disorder may help individuals with narcolepsy function better at work and during social activities. Some behavioral adjustments include:

- Scheduling three short naps during the day (two in the morning and one in the afternoon), lasting no more than 20 minutes would be ideal. Scheduled naps will control daytime sleep and reduce the number of unplanned, sudden sleep attacks.
- Avoidance of alcohol, nicotine and caffeine should be considered as these things can aggravate symptoms.
- Avoidance of foods high in sugar content may improve sleepiness.
- Stress management.
- Following an exercise program can be beneficial and stimulating.
- Other non-pharmacological means of treatment aim at optimizing sleep hygiene *(see attached)*.

Pharmacological means of treating the symptoms of narcolepsy

The stimulant modafinil (Provigil) is the first pharmacological choice of treatment for narcolepsy. It is much less likely to be abused than other stimulants. The medicine also helps you stay awake. Other stimulants include dextroamphetamine (Dexedrine, DextroStat) and methylphenidate (Ritalin).

Antidepressant medications can help reduce episodes of cataplexy, sleep paralysis, and hallucinations. Antidepressants include:

- Selective serotonin reuptake inhibitors (SSRIs) such as fluoxetine, paroxetine, sertraline.
- Selective serotonin and norepinephrine reuptake inhibitors such as venlafaxine.
- Tricyclic antidepressants such as protriptyline, clomipramine, imipramine, and desipramine

Sodium oxybate (Xyrem) is prescribed to certain patients for use at night.

Patient education adapted from:
http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001805/
http://med.stanford.edu/school/Psychiatry/narcolepsy/articles/bioessays23.pdf