A Brief History & Definition

+Narcolepsy is a (currently) incurable chronic sleep disorder most prominently characterized by *overwhelming daytime drowsiness* and sudden *"attacks of sleep"*
+Regardless of circumstances, victims find it difficult to stay awake for long periods of time
+Most unique to narcolepsy, victims suffer from fits of muscle weakness, known as *cataplexy*
+Westphal formally stated the first & most compelling descriptions of narcolepsy in 1877
+Westphal described an abnormal connection between muscle weakness & extreme sleepiness; his reports also suggested a genetic component of disorder
+In 1880, *Gélineau* first gave the name narcolepsy, subsequently recognizing it as a *specific clinical entity*
+In 1902 *Loewenfeld* differentiated the muscle weakness episodes as *cataplexy*
+Medical research from 1917-1927 led to *Von Economo* proposing correctly that the posterior hypothalamus was lesioned in human narcolepsy
+Further work by Yoss & Daly (Mayo Clinic) and Bedrich Roth (Prague, Austria) led to classic description of narcolepsy tetrad
+Research continues today

Symptoms

Note: most of the following symptoms are note indicative of narcolepsy exclusively

+Excessive Daytime Sleepiness:
*most universal symptom of narcolepsy
*uncontrollable need to sleep during day
*fall asleep without warning, anywhere and any time
*low alertness throughout day
*cannot concentrate and function fully
+Cataplexy:
*varying degrees of severity: last few seconds to minutes; slurred speech to complete weakness of most muscles
*uncontrollable and triggered by intense emotions
*about 70% of narcolepsy victims experience cataplexy: varying levels of severity: 1 or 2 episodes/year to several each day
+Sleep Paralysis:
*experience temporary inability to move/speak while falling asleep or upon waking
*usually brief episodes, but victim can often recall what happened and is, in fact, aware of the body's paralysis
*these paralyses mimic those that occur during REM sleep
+Narcolepsy victims can also experience *hypnagogic hallucinations*

Trends & Treatment

+Slightly more common in males than females
+Occurs in all racial and ethnic groups, but rates vary by country:
*Example countries:
US: 1/2,000 affected
Israel: 1/500,000 affected
Japan (world high): 1/600 affected
+Complications:
*misunderstand victim as lazy, rude, lethargic, etc., affecting victim's overall performance
*interference with intimate relationships, especially because cataplexy triggered by *intense* emotions
*physical harm
-increased risk of car crashes (should not drive alone)
-affects ability to carry out daily routines
+Stimulants:
*drugs prescribed that stimulate the central nervous system, allowing one to stay awake during the day
-some drugs have many side effects, new medicine *Modafinil (Provigil)* better
+Antidepressants:
*alleviate: cataplexy, hypnagogic hallucinations, sleep paralysis
+Sodium Oxybate (Xyrem):
*controls cataplexy, daytime sleepiness; strictly regulated by FDA because serious side effects

Thank-you for reading this brochure! If you have any questions regarding narcolepsy, please email me at: *kareej@stanford.edu*.
Further information regarding narcolepsy can be found at: *www.mayoclinic.com/health/narcolepsy*.
If you are experiencing any symptoms of a sleep-related disorder, please contact your physician immediately! Remember,
drowsiness is red alert!

*A pack of Doberman Pincers suffering from narcolepsy

Causes

Note: the exact cause of narcolepsy is still unknown; genetics may play a role in the disorder; larger influence may be a trigger, like an infection, leading to damage to certain brain cells

+Normal sleep pattern vs. Narcolepsy:
*most sleep begins with process known as *NREM* sleep, during which brain waves slow down considerably
*narcolepsy victims immediately fall into *REM* sleep, during which the brain is much more active, effectively bypassing the NREM cycle
*victims also fall into REM sleep randomly throughout day
*other aspects of REM sleep (lack muscle tone, sleep paralysis, vivid dreams) occur at other times during sleep or day
+Brain chemicals:
*hormone *hypocretin* (also known as orexin) regulates REM sleep & staying awake throughout day
*cells that make hypocretin severely damaged in narcolepsy victims; low levels hypocretin in all, lowest in those with cataplexy
*this lack of hypocretin has led to a diagnostic test: measuring levels of hypocretin in spinal fluid

Narcolepsy:

Life is short, stay awake for it!

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