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**Hypnos, Thanatos and a small dose of Morphea**

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## **Abstract**

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The author, a Thoracic and Sleep Physician describes his experiences as a trainee registrar doing sleep studies in the early 1980's when sleep medicine was in its infancy. He gives a brief history of notable discoveries in sleep disorders as well as the classical background of the discipline including a brief resumé of the Greek gods whose names so pervade our concept of sleep in the West.

**Key words:** Sleep, medicine, training, history, Greek mythology

## **Introduction**

During my six years as an undergraduate during the early 1970's in Brisbane, there was no teaching of sleep or its disorders. This was despite the fact that we humans spend large amounts of time asleep, that sleep and disease are intimately related and large amounts of energy are expended on finding an appropriate partner with whom to sleep. It was not until I became a Thoracic Registrar at the Repatriation General Hospital, Heidelberg; Melbourne in the late 1970's that, I entered the awakening world of sleep medicine.

## **History**

Sleep was yet in its infancy. Only twenty years before, rapid eye movement sleep had been described (1). Sleep apnoea was being unravelled and the first use of continuous

positive pressure pumps (CPAP) was described by Professor Colin Sullivan from Sydney in the Lancet in 1981 after I started learning sleep medicine (2). My first patient with profound sleep apnoea a corpulent middle aged man who was clutched from the jaws of death by tracheostomy as it was before the introduction of CPAP.

In those days, CPAP pumps were cumbersome, heavy steel machines usually painted a military grey and more like what would see in a milking shed. The masks and tubing used were archaic and improvised by bits and pieces of plastic and rubber bands and by the time the patient was wired up for the night with a large oximeter throbbing on his ear, he looked like a character from a science fiction movie.

### **Thoracic & Sleep Registrar**

Thoracic Registrar had to monitor the patient's sleep on a polygraph; no mean feat as you were also on call for the night for thoracic medicine problems and admissions for the whole hospital. In those days there was no sleep laboratory and only those with the most severe sleep apnoea were studied, always in a bed in the thoracic ward, behind a yellow curtain which incidentally made all patients look jaundiced regardless of the degree of cyanosis. Irrespective of impertinent interruptions from the wards, cardiac arrests, acute admissions from the casualty department, the insertion of chest tubes not to mention nuisance

calls from babbling, semi-comatose junior resident medical officers suffering from chronic sleep deprivation, my lot was to stand picket by the bedside all night fighting the nausea of fatigue and to watch the jerking pens' scratchy ink marks on the ever growing pile of polygraph paper. Notations were made suppressed hostility....'lights off'....'snoring loudly'...'supine'.....'REM'.... 'prolonged apnoeas'.... 'desaturating to 60%'.....'loud supine snoring'....'gone to the toilet'.

Avarice I believe is the most despicable of the Seven Deadly Sins, but on those nights, this was my *mea culpa*. Like a man who had just crossed the Sahara on his knees and only inches away from the cool, refreshing oasis of sleep, I sat there, entranced by my tormenter, drinking deep, noisy, draughts of sleep oblivious of my suffering.

As dawn's rays finally broke through a grey, cold, winter's morning, I staggered off to the Residents' Quarters, like a reptile in need of hibernation, for my ablutions, only to be greeted by my beaming, sleep-replete consultant, Dr Colin Barter, rubbing his hands together with sickening enthusiasm, ready to review my sleep study. This torture was followed by the morning ward rounds, lunch-time respiratory exercise tests, a quick sandwich and an epic outpatient clinic of aging veterans with COPD. As the sun reclined into her wintry bed, I drove home on "automatic pilot", following tail lights through smog and traffic...home to my Penelope; the end of my sleep-deprived

odyssey. But alas...a distraught baby....an exhausted wife...colic...perhaps a new tooth...an empty bottle of colic water...

### Sleep Jargon

Anyone with any knowledge of sleep medicine knows of its jargon. The science of sleep disorders have spawned a new breed of Tamino's and Pamina's (viz *Die Zauberflöte*) who have passed all the initiation rights of the Temple of Wisdom and Sleep to enter as true believers, into Terra Hypnos; Those happy go lucky daylight physicians, those bird-catching Papageno's, who have not passed through this stringent trial of fire and water, supervised by the High Priest of Sleep, Sarastro, are condemned to pure worldly pleasure outside the inner sanctum of true Sleep Medicine.

### Literature and Sleep

.... Which brings me to Hypnos and Thanatos (3). I would like to draw the reader, like Pluto seducing Persephone, to the Sleep Underworld. This still poorly-understood persona, 'Sleep', figures largely in our unconscious mind and yet influences the tides of men's lives like an invisible but powerful force. To quote the murderous and troubled mind of Macbeth who says;

*"Methought I heard a voice cry "Sleep no more!*

*Macbeth does murder sleep"-the innocent sleep;*

*Sleep that knits up the ravell'd sleeve of care,  
The death of each day's life, sore labour's bath,  
Balm of hurt minds, great Nature's second course,  
Chief nourisher in life's feast,-" (Macbeth, Act II, Scene II)*

### **The Underworld**

Hades, also called Pluto, was the Greek god of the Underworld where flowed several subterranean rivers. They were the Acheron, the Cocytus, the Phlegethon, and finally the famous Styx. The reader's eyes may glaze over as I tell you some Underworld geography; that the Acheron was a main river with its tributary, the Cocytus, swelled by the Phlegethon, the Lethe and the Styx. To cross the Acheron (and hence the Styx), it was necessary to apply to old Charon, the official ferryman of the Underworld, who by all accounts snored, no doubt in part due to a severe malocclusion as he was not overweight (viz my PhD thesis, "Sleep apnoea from malocclusion in Melbourne ferry operators", University of Melbourne Press, 1992).

The cost of the one-way ticket was an obolus (there were a few exceptions such as Persephone who had a season ticket and Virgil of who wrote his own script in Book 6 of the Aeneid as he was in the pay of Augustus). This was fortunately GST-free then. For those not steeped in the subtleties of classical allusions, the GST is a Greek acronym for the "Gone over the Styx Tax". As some pensioners tried unsuccessfully to

claim GST exemptions, as one can imagine, this caused considerable strain on the Underworld bureaucracy, so much so that with many would be passengers opted for live organ transplants and efficacious chemotherapy (an oxymoron?) to put off paying GST. A tax dodge was started by some bottom of the harbour Greek green grocers who used to place an obolos on the tongue of the deceased. Guarding the Underworld was Cerberus, the monster watchdog with fifty heads, and sometimes three, born of the giant Typhoeus (hence the disease, typhus) and the goddess, Echidna after which our monstrous, monotreme is named.

...Now to digress. Sleep cognoscenti will immediately see the subliminal sleep association here, as the echidna is one of the few mammals, which does not have REM sleep. By way of background, only three things function in REM sleep; the diaphragm, the external ocular muscles and the pudenda. All skeletal muscle becomes flaccid. Sleep-deprived wives/mistresses amongst readers will attest to this and marvel at how REM occurs with increasing frequency as the night progresses and especially around dawn.

Those who drank the waters of the Lethe forgot the past. The river fortunately flowed to two destinations and the extremities of the Underworld; Tartarus and Elysium, the latter, the Elysian Fields, where peace, harmony and good weather prevailed. The



French, who were later pioneers in sleep, built a magnificent avenue, the Champs Élysées, though the heart of Paris.

However, the Lethe also led to the “black hole” of Tartarus where those who had offended the gods were punished and was later developed by the Christian Church as an undesirable destination to be avoided at the considerable cost (viz. indulgences, Martin Luther, and the origins of the Reformation). Thus the term, “Go to Hades”. “Do not pass, Go, do not collect two hundred”. For those wine lovers among you, tartaric acid may be found in the lees of wine, the racemics of which were first described by Louis Pasteur. Tartarus had gates of bronze and was surrounded by a triple wall and then by the River Phlegethon and with an avenue leading up to it but obstructed by a gate made of diamond which making escape somewhat hard.

Hades had several helpers, or auxiliaries, including Thanatos, Death, viz. euthanasia, who supplied Hades with his subjects, and was usually represented as a winged spirit like his brother, Hypnos, Sleep, who lived with him in the Underworld and looked so much like him that everyone kept on getting them confused. Hypnos put men to sleep by touching them with his magic wand or by fanning them with his dark wings. The son of Hypnos was Morpheas, the god of dreams, who while having a few REM epochs while his wife tried to sleep, conceived an only daughter, Hygeia; hence the

term "sleep hygiene" so commonly used in the Temple of Sleep. Her daughter in turn was called Panacea referred to in the Hippocratic Oath and the patron of oncologists.

The most well know of the gods, Asclepius, the god of health and healing, is often depicted leaning on a tree-trunk in meditation, holding a scroll representing medical learning and the latest Medicare fee schedule. The son of Apollo, he learned the science of medicine from the centaur, Chiron (not to be confused with Charon, the ferryman) but was later killed by Zeus for raising the dead; hardly a novel concept. However it was that mortal and observant Hippocrates who first described sleep disorders, including insomnia, nocturnal epilepsy, the dangers of sleep deprivation and medical negligence by the Greek physician, or *iatros*, as well as the dangers of excessive sleep and also excessive daytime somnolence later so corpulently described millennia later in *Pickwick Papers*.

As the medical world is finally discovering that we mortals and even a considerable number of the gods, invest a considerable time in the state of voluntary unconsciousness, let us pay tribute to the earnest endeavours of past pioneers in this field, both famous and unknown, like many a registrar who fought REM deprivation to discover the deeper secrets of Hypnos and Thanatos and who at times sought just a small dose of Morphea.

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