



Sleep and depression


BY ONADIPE OLUWASOLABOMI ANUOLUWAPO

WHAT IS SLEEP?



**Sleep is that
golden chain that
ties health and our
bodies together.**

THOMAS DEKKER



**Early to bed
and early to rise
makes a man
healthy,
wealthy and
wise - Benjamin
Franklin**

SLEEP AS A SCIENTIFIC CONCEPT

- ▶ Stedman's medical Dictionary describes sleep as:
- ▶ “A natural periodic state of rest for the mind and body, in which the eyes usually close and consciousness is completely or partially lost, so there is a decrease in bodily movement and responsiveness to external stimuli”.
- ▶ The areas of the brain associated with sleep are the ventrolateral preoptic nucleus and the suprachiasmatic nucleus of the hypothalamus.
- ▶ Neurotransmitters involved in sleep are serotonin, histamine, Norepinephrine, Acetylcholine, glutamate, orexin.

SLEEP CYCLE STAGES

NREM - Stage 1

- When You Initially Fall Asleep
- Lightest Stage of Sleep

NREM - Stage 2

- When You Start to Lose Awareness of our Surrounding Environment
- Brain Starts To Go "Offline"

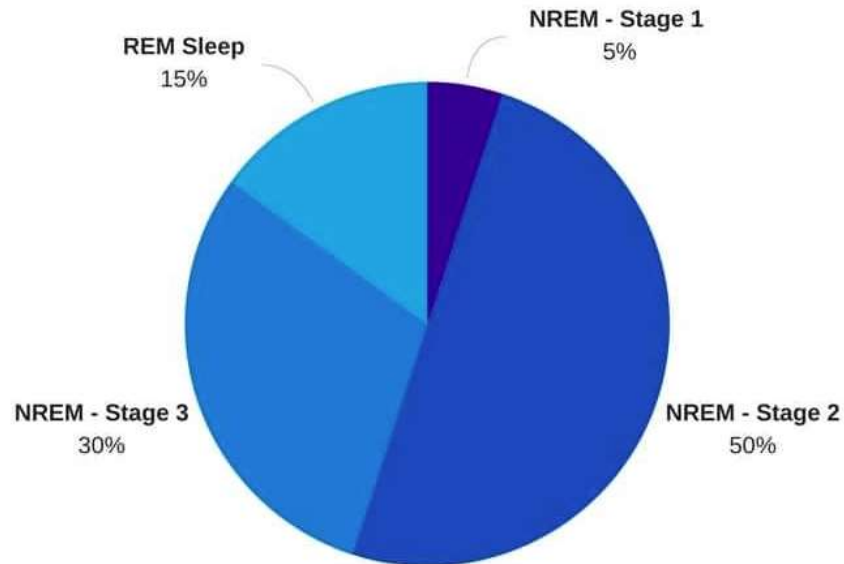
NREM - Stage 3

- Deepest Stage of Sleep (Minimal Brain Activity)
- Rebuilding Hormones are Released

REM Sleep

- Brain is Highly Active (Dreaming is Likely to Happen in this Stage)
- Mental Revitalization Starts to Happen

Stages of Sleep During a Typical Night of Sleep



DEPRESSION

- ▶ Depression is a medical illness that is characterized by feelings of severe self-dejection that negatively affects daily life and activities.
- ▶ Its also called **Major depressive disorder**
- ▶ The DSM-5 Diagnostic criteria for major depressive disorder includes episodes characterized by atleast 5 of the 9 diagnostic symptoms lasting more than 2 weeks.

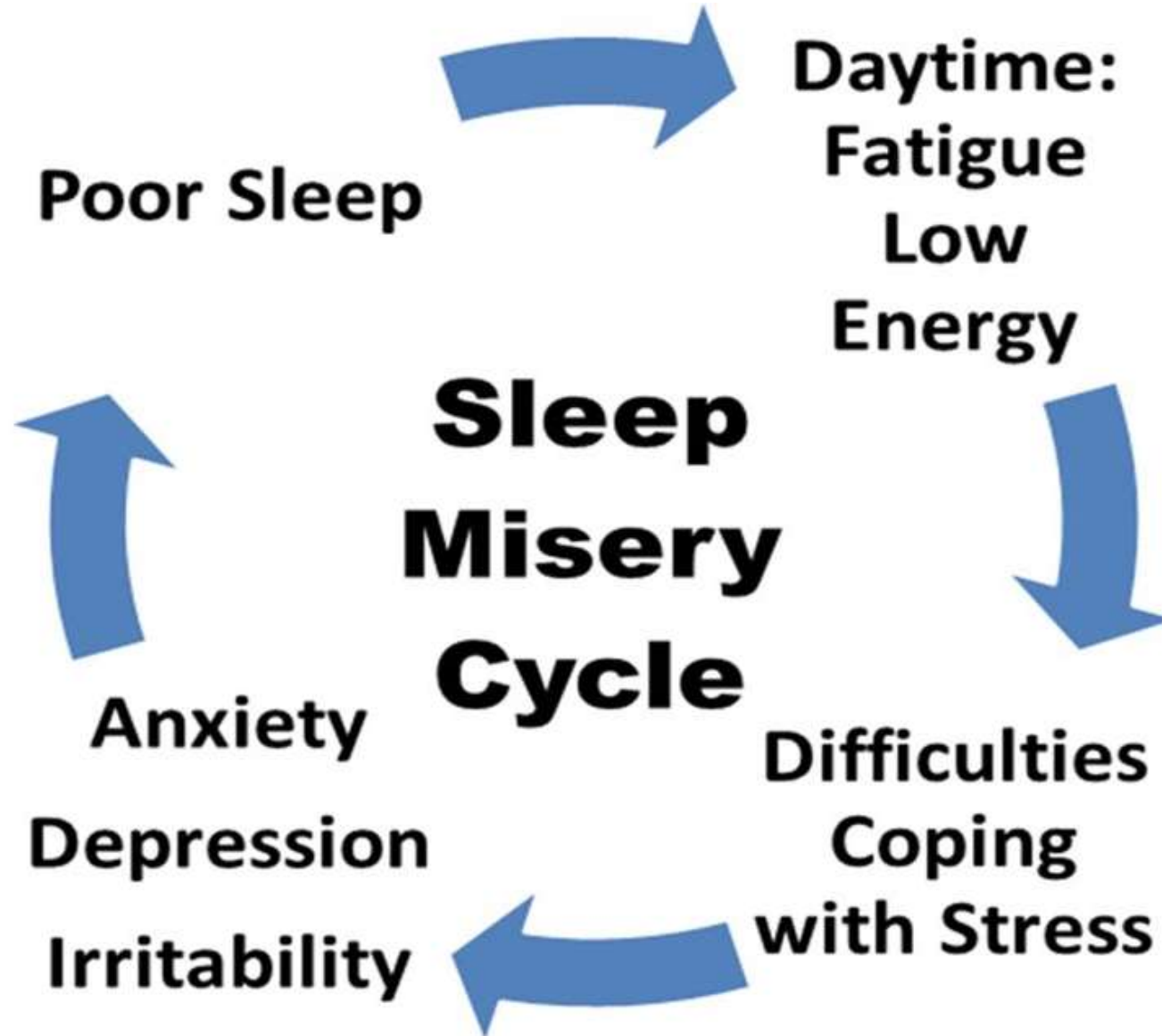
TABLE 1: Diagnostic Criteria for Major Depressive Disorder (DSM-5)

- A. Five or more out of nine symptoms (including symptoms 1 & 2) in the same 2-week period:
 - 1. A depressed mood or anhedonia (subjective or observed); can be irritable mood in adolescents & children
 - 2. Loss of interest or pleasure in most daily activities
 - 3. Change in weight or appetite
 - 4. Insomnia or hypersomnia
 - 5. Psychomotor agitation or retardation (observed)
 - 6. Loss of energy or fatigue
 - 7. Inappropriate guilt or sense of worthlessness
 - 8. Impaired concentration or indecisiveness
 - 9. Thoughts of death, suicidal ideation or suicidal attempt
- B. Symptoms cause significant distress or impairment
- C. Episode is not attributable to substance or medical condition
- D. Episode not better explained by a psychotic disorder
- E. Patient has not had a previous manic or hypomanic episode

Reference: American Psychiatric Association (2013)

SLEEP & DEPRESSION

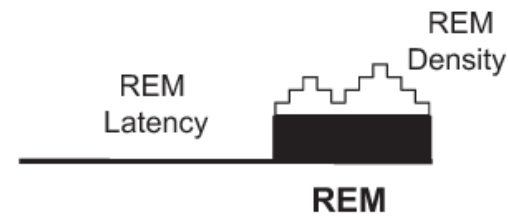




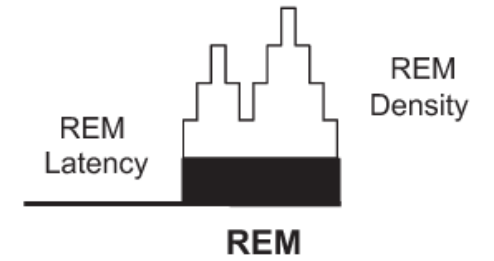
HOW DEPRESSION AFFECTS SLEEP

- ▶ Depression is associated with both Insomnia and excessive daytime sleepiness.
- ▶ A typical short REM latency is followed by an abnormally long REM period.
- ▶ Greater portion of REM sleep during the first third of the night
- ▶ Increased percentage of sleep time in REM sleep.

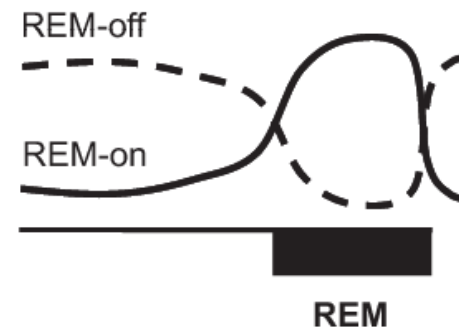
A Healthy subjects



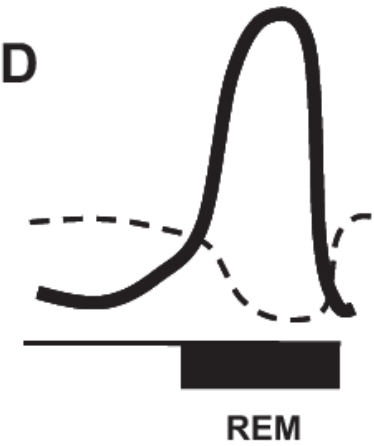
B Depressed patients



C



D



Insomnia and hypersomnia

- ▶ Insomnia is difficulty falling or staying asleep. Studies have shown that people with insomnia are 10 times likely to have depression.
- ▶ Insomnia symptoms in depression can occur in different ranges like,
 1. Difficulty falling asleep
 2. Difficulty staying asleep
 3. Unrefreshing sleep
 4. Early morning awakening.
- ▶ Hypersomnia is characterized by extreme oversleeping but unrefreshing sleep or not feeling rested afterwards.

Sleep disturbances can lead to depression

- ▶ **Abnormal sleep or lack of sleep interferes with one's energy level and mood during the day.**
- ▶ Disrupted sleep can lead to emotional changes.
 1. OBSTRUCTIVE SLEEP APNEA
 2. RESTLESS LEG SYNDROME
 3. SEASONAL AFFECTIVE DISORDER also called winter depression where by circadian rhythms may become desynchronized during longer nights and trigger depression.

Treating sleep disorders in depressed patients

- ▶ Treatment of sleep disorders have found to be helpful in depressed patients
- ▶ Psychological treatments such as cognitive behavioural therapy are known to **help insomnia**.
- ▶ Continuous positive airway devices (CPAP) are effective for Individuals suffering from obstructive sleep apnea , insomnia and depression.
- ▶ Patients who suffer from SAD can be treated using bright light therapy.
- ▶ SSRI AND TCA should be avoided in severe sleep diturbances and OSA

When you suffer from depression "I'm tired" means a permanent state of exhaustion that sleep doesn't fix.

Do I fear
the sleepless
nights?
You
have no idea
how long
the dark lasts
when you cannot
close your eyes
to it.

**I SLEEP LESS,
I'M TIRED.
I SLEEP MORE,
I'M TIRED.**

PictureQuotes.com

Sleep just isn't sleep
anymore, it's an
escape.



**At night,
I can't sleep.
In the morning,
I can't wake up.**

No amount of
sleep in the world
could cure the
tiredness I feel.

References

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