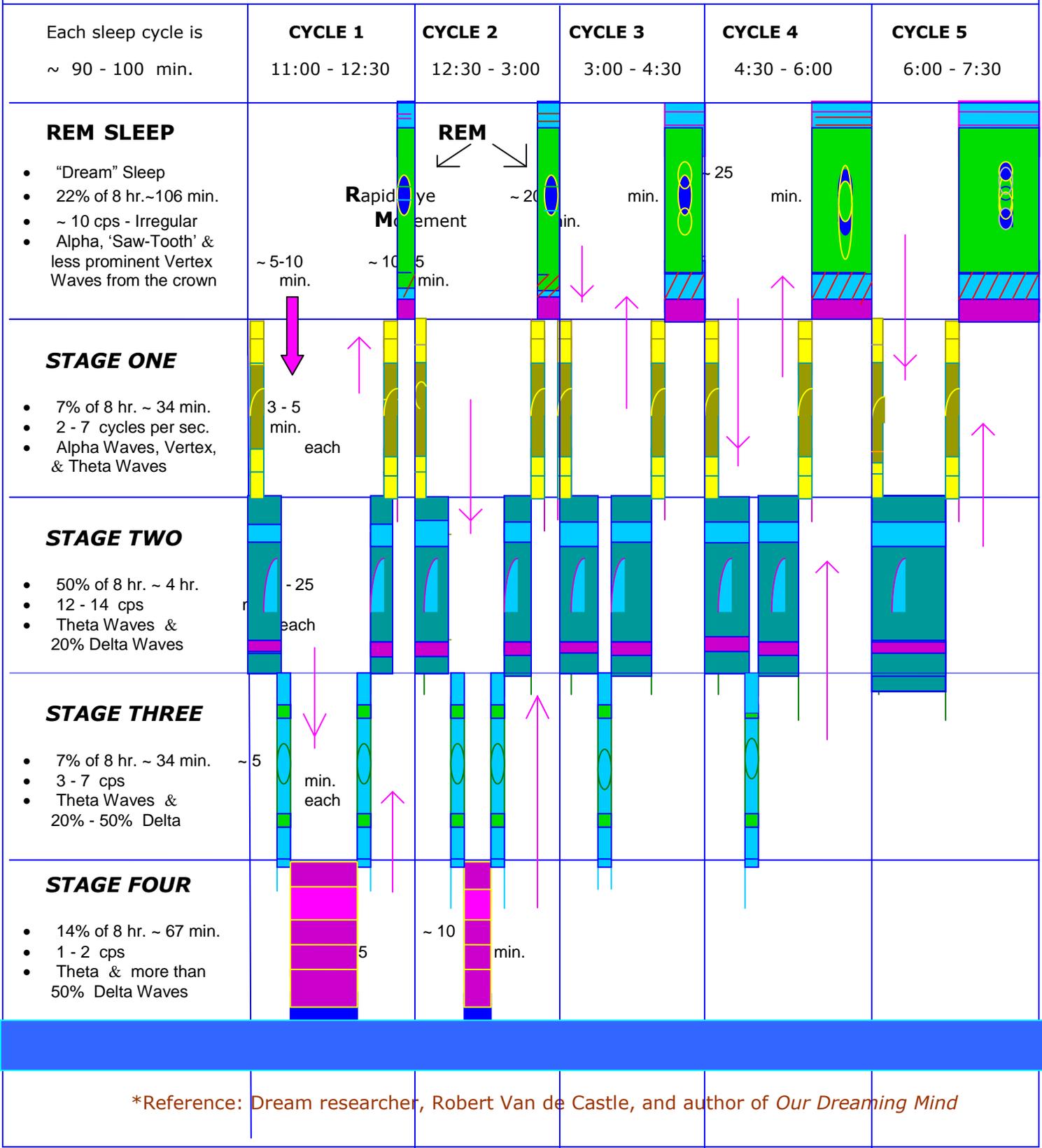


Sleep & Dreams

STAGES OF SLEEP & DREAMING*



STAGES OF SLEEP & BRAIN WAVE PATTERNS (E.E.G.)*

Alert Wakefulness	Low voltage and fairly fast frequency brain waves (even faster if anxious wakefulness)	Beta Brain Waves
Sleepy Wakefulness	*Spindles begin to form	Alpha Brain Waves
REM - Rapid Eye Movement Vivid Dream Sleep	REM sleep lasts 5-10 min. at the end of *Cycle 1 and progressively increases to ~ 25-45 min. by the end of Cycle 5 22% of 8 hours ~ 106 min. Brain Waves - about 10 cps (cycles per second) Irregular brain waves	Alpha Waves, * "Saw-tooth" Waves & less prominent *Vertex Waves from the crown
STAGE 1	7% of 8 hr. ~ 34 min About 2-7 cps Stage 1 sleep becomes a transitional stage of sleep after Cycle 1. Thereafter, we enter REM sleep for progressively longer periods of time.	Alpha Waves, Theta Waves, & sharp Vertex Waves, but Stage 1 has no *k-complexes, *spindles, or *Delta Waves
STAGE 2	50% of 8 hr. ~ 4 hr. (Depression can affect) About 12-14 cps	Theta Waves, Spindles, more Vertex Waves, & 20% Delta Waves
STAGE 3	7% of 8 hr. ~ 34 min. 3-7 cps	Theta Waves & 20% - 50% Delta Waves
STAGE 4	14% of 8 hr. ~ 67 min. 1-2 cps We only enter Stage 4 sleep twice —during the first two cycles. We secrete the growth hormone during Stage 4 sleep.	Theta Waves & more than 50% Delta Waves

***A full cycle of sleep** includes all four stages and REM sleep and is about 90-100 minutes long.

***Stages 2, 3, & 4** have k-complexes, spindles, and increasing percentages of delta waves.

- **k-complexes** - A sharp upward wave that is immediately followed by a drop
- **Spindles** - Sharp waves or spikes, with a fast frequency
- **Delta Waves** - High amplitude (voltage) waves, with a slow frequency
- **"Saw-tooth" Waves** - Brain wave tracings that look like the edge of a saw
- **Vertex Waves** - Sharp brain waves

*Reference: Dream researcher, Robert Van de Castle, and author of *Our Dreaming Mind*

Sleep & Dream Facts

DID YOU KNOW THAT ...

Many important changes take place during **REM** sleep (dream sleep).

- (1) Your eyes will rapidly move around under your closed eyelids (**REM - Rapid Eye Movement**), and saw-toothed brain waves will appear.
- (2) There will be a marked **increase** in blood flow through your **brain**, and through your **genital** area.
- (3) Your **heartbeat** and **breathing** will become very irregular, alternating between very fast, and then, slow regular rhythms.
- (4) Changes will occur in your **urine** volume and composition, and in your **spinal fluid** pressure.
- (5) Your muscles will gradually relax and your spinal reflexes will be greatly diminished. Consequently, all your **major** muscular movements will disappear.

DID YOU KNOW THAT ...

The amount of time spent dreaming **changes as you age**. As a typical **new-born**, you will be in the "Land of Dreams" approximately **50%** of the time you are asleep. Then, until the age of **four**, you will spend about **25%** of your sleep time, dreaming.

There is only a slight change from the age of four until you become an older adult. Throughout these years, you will dream approximately **22%** of your sleep time - that is, almost **two** hours out of every eight. For reasons not yet known, the amount of time you spend dreaming, will gradually **decrease** after your **seventies**.

DID YOU KNOW THAT ...

Just by **closing** your eyes, you can more easily enter a meditative state that is accompanied by **alpha brain waves**. This state is very conducive for meditating on dream **symbols**. You might try letting your imagination observe **changes** that **evolve** as you contemplate a particular dream symbol. The term for this process, first coined by Carl Jung, is called "**active imagination**."

DID YOU KNOW THAT ...

If you nap in the **morning**, you are **more likely** to have some **REM** sleep. If you nap in the **afternoon**, you are likely to move into **Delta** sleep, also called Stage 4 sleep which has more than 50 % Delta Waves.

Young children have a higher percentage of Stage 4, or Delta sleep, than adults. Elderly people have **markedly less**. These differences may be related to the fact that it is during Stage 4 sleep, that the **growth hormone** is secreted.

DID YOU KNOW THAT ...

During **REM** sleep, your muscles **gradually relax**, and your **spinal reflexes** are greatly diminished. Luckily for you, when your major muscular movements disappear—except for **minor twitching** of your extremities—it becomes impossible to physically act out the activities that you imagine in your dreams. Unfortunately, some people with **sleep disorders**, lack nature's "safety device," and, to their dismay, may act out **everything** they dream!

DID YOU KNOW THAT ...

Alcohol, caffeine, and **many medications,** including **antidepressants** and **sleeping pills,** affect the various stages of sleep and dreaming differently. E.g., Prozac increases REM dream sleep.

Before you take stimulants or depressants, check out any **negative effects** they may have on **each** of the stages of sleep, including REM sleep. A pharmacist, your doctor, or a sleep expert, may be able to assist you. See **below,** for information on Sleep Disorders Centers near you.

Sleep Disorders Centers

To locate a Center near you, contact:

The American Sleep Disorders Association
604 Second St. SW
Rochester, MN 55902, or call (507) 287-6606

International Association for the Study of Dreams (ASD)

e-mail: ASDreams@aol.com
www.ASDreams.org

Tel.: (703) 556-0618
FAX: (703) 556-8729

For pamphlets and application forms, write or call: (925) 258-1822
ASD Educational Services
P.O. Box 1166
Orinda, CA 94563

The International Association for the Study of Dreams sponsors an annual conference for researchers and for dreamers from all walks of life, and from all over the world. The conference, which offers up information and fun in equal measure, features workshops on every conceivable subject related to sleep and dreaming.

At the ASD website, you will find the answers to questions such as: What do dreams about weddings mean? How is depression shown in dreams? Which medications decrease restorative Stage 4 sleep? And there's more. ASD annual dream conferences are held in **stunning locales** and attract **fun-loving,** international dreamworkers and authors.

Dreamwork

- [Top Ten Dreamwork Techniques](#) — “Your Guide to Happiness, Wisdom, and Purpose”
- [What Did You Dream Last Night?](#) — “Ask A Puzzling Question Tonight . . . Discover Your Dreaming Mind’s Answers Tomorrow”
- [Artists Dreaming Joy](#) — A workbook that helps artists express a multitude of joys

R E F R E S H I N G S L E E P

General Principles

Strive for a balance of rest, activity, and recreation.
Put your attention fully on the present.
When planning a future action, or when solving a specific problem,
focus fully on the action steps, goals, etc.

Choose a deeper purpose for your life.
Act to fulfill this deeper life mission.
Determine whether your actions and attitude are helping you fulfill
the primary life purpose you have chosen.

**Resolve conflict as it occurs, or, as soon as it is appropriate.
If resolution is not yet a reality, or seems impossible,
visualize a best-case scenario . . . many times.**

**If you have a nightmare, resolve the tension at work, in your relationships, in your body.
Do you attack yourself? Are your assaults mirrored in your immune system?**

Strive to become encouraging, loving, imaginative, and curious.
Plan and revise.
Teach those in your care to strive for ideals and happiness.
Trust, and pray.
Visualize all that is good . . .

Meditate for three to five minutes, several times each day, by focusing only on your breathing.
Your spirit-conscious mind will initiate healing and restfulness while you sit and meditate.

Each month, write out twenty answers for the sentence: "I long for . . ."
Then, in a relaxed way,
realize a few from your list.

Practical Steps for a Refreshing Sleep

Enjoy a light, early supper between 5:30 and 7:00 p.m.
For example, minestrone soup.
Have a warm, cooked, substantial meal at lunchtime.
During the day, sip warm water from a thermos every thirty minutes.
Avoid cold drinks.

Exercise for thirty continuous minutes outside each day —
ideally, between 6 a.m. and 10:00 a.m.
Take a walk after supper.
Avoid stimulants and alcohol, especially after 7:00 p.m.
Avoid T.V., computers, and electronics an hour before sleep.
Instead — Socialize, read light material; listen to music, etc.

Keep the temperature in your bedroom at about 68 degrees.
Use room-darkening curtains or shades.

Soothe Your Senses

Enjoy scent: basil, cloves, geranium, jasmine, and oil of lavender — Place a drop or two on the forehead.
Listen to melodious music.
Avoid sounds that overly stimulate.

Avoid reading in the bedroom. Don't have a T.V. in this room.
Make the bedroom peaceful, orderly, and beautiful.
Use live plants, pictures, and colors to create a pleasing atmosphere.

Just Before Sleep, Enhance Your Relaxation

Enjoy a sleep ritual thirty minutes before retiring. Use sesame oil while giving and receiving a full-body massage. Enjoy a warm bath.

If you are pressed for time, spend a few a minutes massaging the bottoms of the feet with oil.

**Then, using circular movements, massage the area between the brows and just below the navel.
Stretch slowly a few times.**

Write about your feelings, concerns, and events in a Dream & Gratitude Journal. Once you go to bed, find a comfortable position, close your eyes and pray.

Then, focus on your breathing.

Continue to deep breathe while visualizing a color that inspires feelings of relaxation and alertness,

**Imagine a sound that inspires feelings of relaxation and alertness,
Imagine a beautiful scene from nature . . .**

Imagine three symbols—encouragement, love, & guidance

Stretch a few times — above the head, horizontally, and toward the feet.

End with a few relaxing, deep breaths, then, invite a dream that nourishes your spirit . . .

Establish a habit of staying in bed, with your eyes closed, even if you cannot sleep. Hide your clock. Keep the light off. Alternate between thoughts of nature and your breathing.

Words for the Wise

Follow a regular sleep-wake cycle *every* day of the week.
Preferably, rise by 6:00 or 7:00 in harmony with the sunrise.
Be ready for sleep by 10:00 p.m.

In the morning, if time allows . . . Once again give and receive a full-body massage. Enjoy a warm bath.
If you are pressed for time, spend a few a minutes massaging the bottoms of your feet with oil.
Using circular movements, massage the areas between the brows and just below the navel.

Don't be picnic-deprived. Spend time in nature. Enjoy and create beauty. Do what refreshes but does not fatigue. Discover five reasons for gratitude.
Pray, for you are spirit . . .