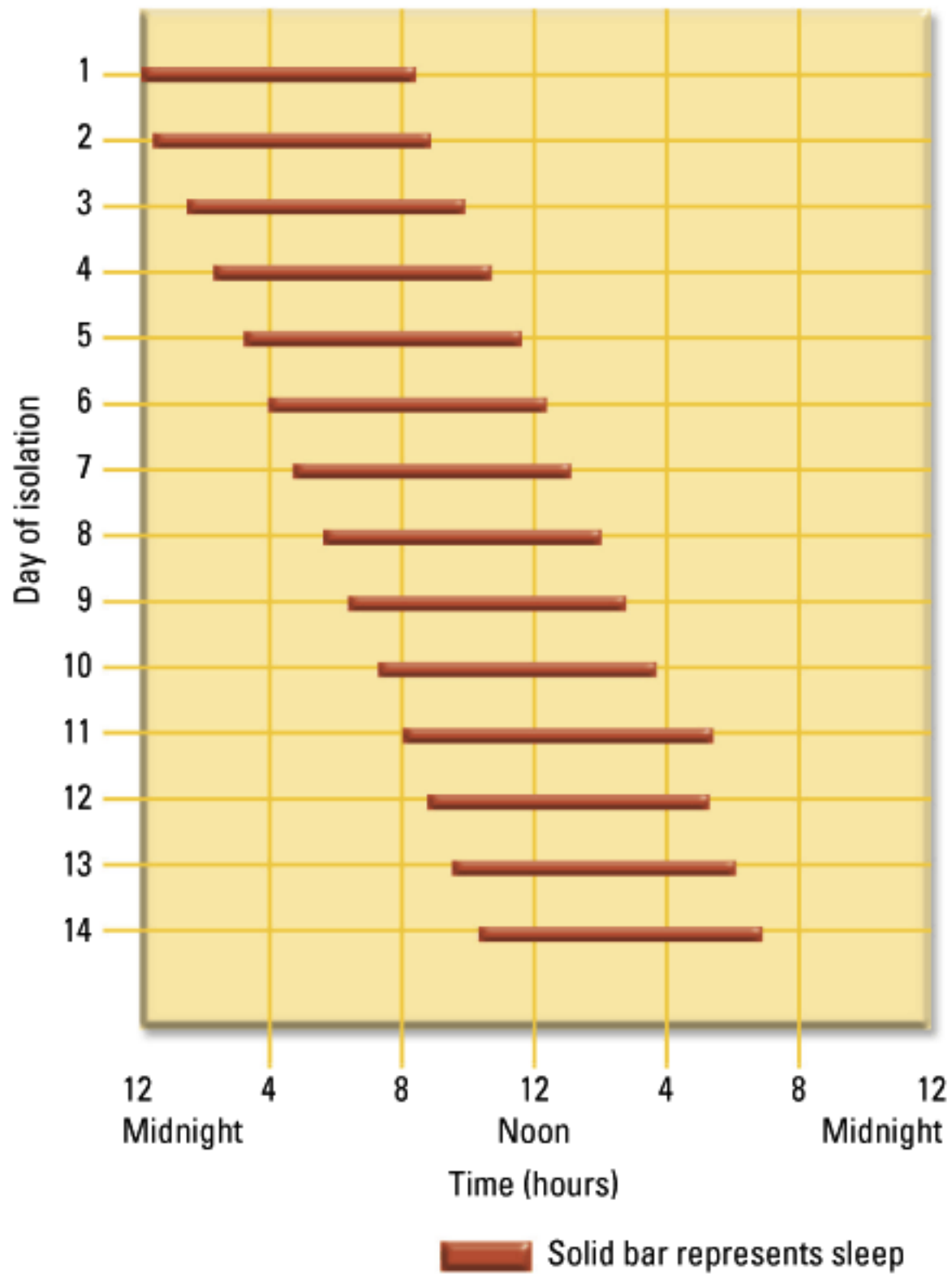


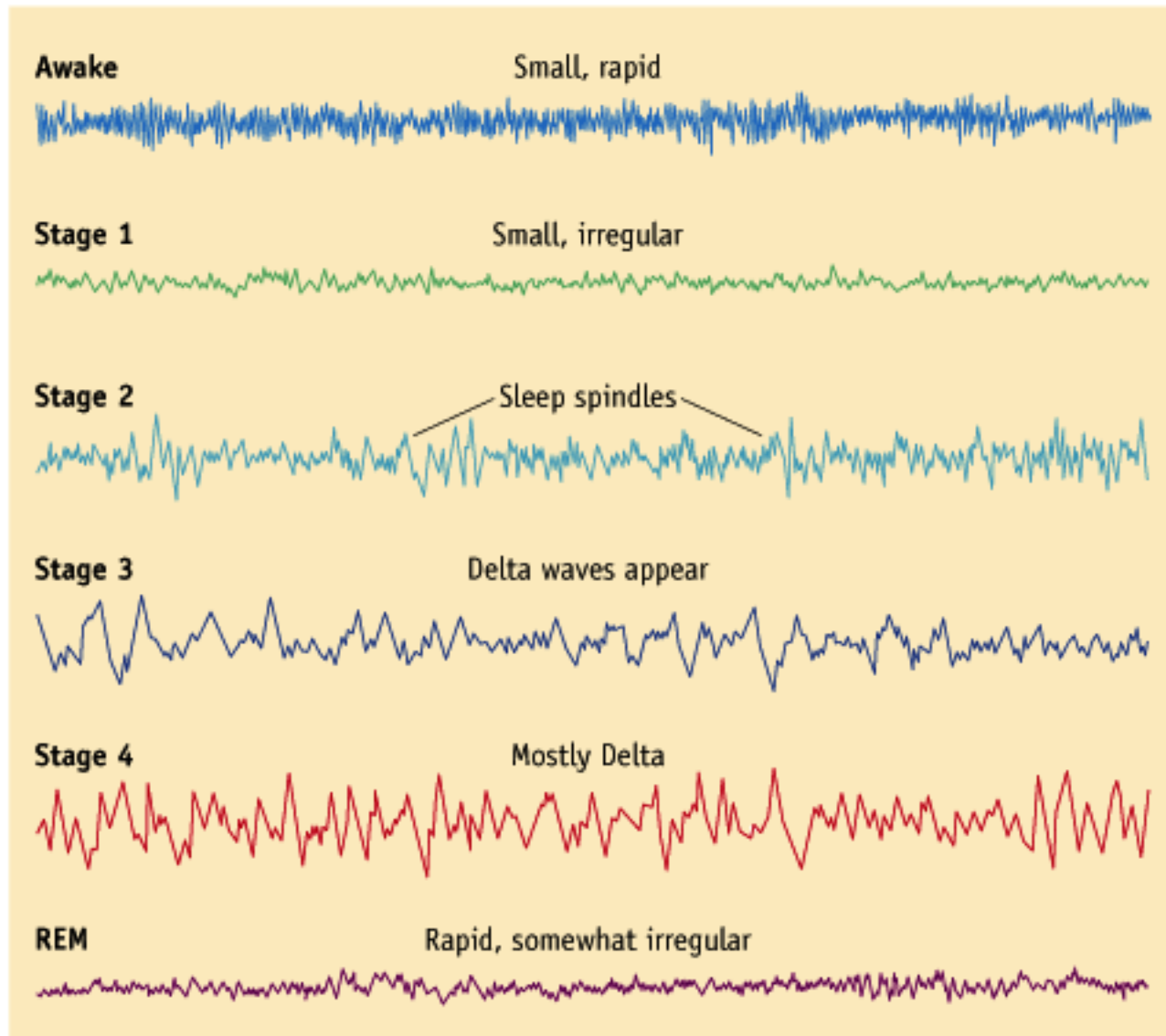
T24

## The Inner Clock



T25

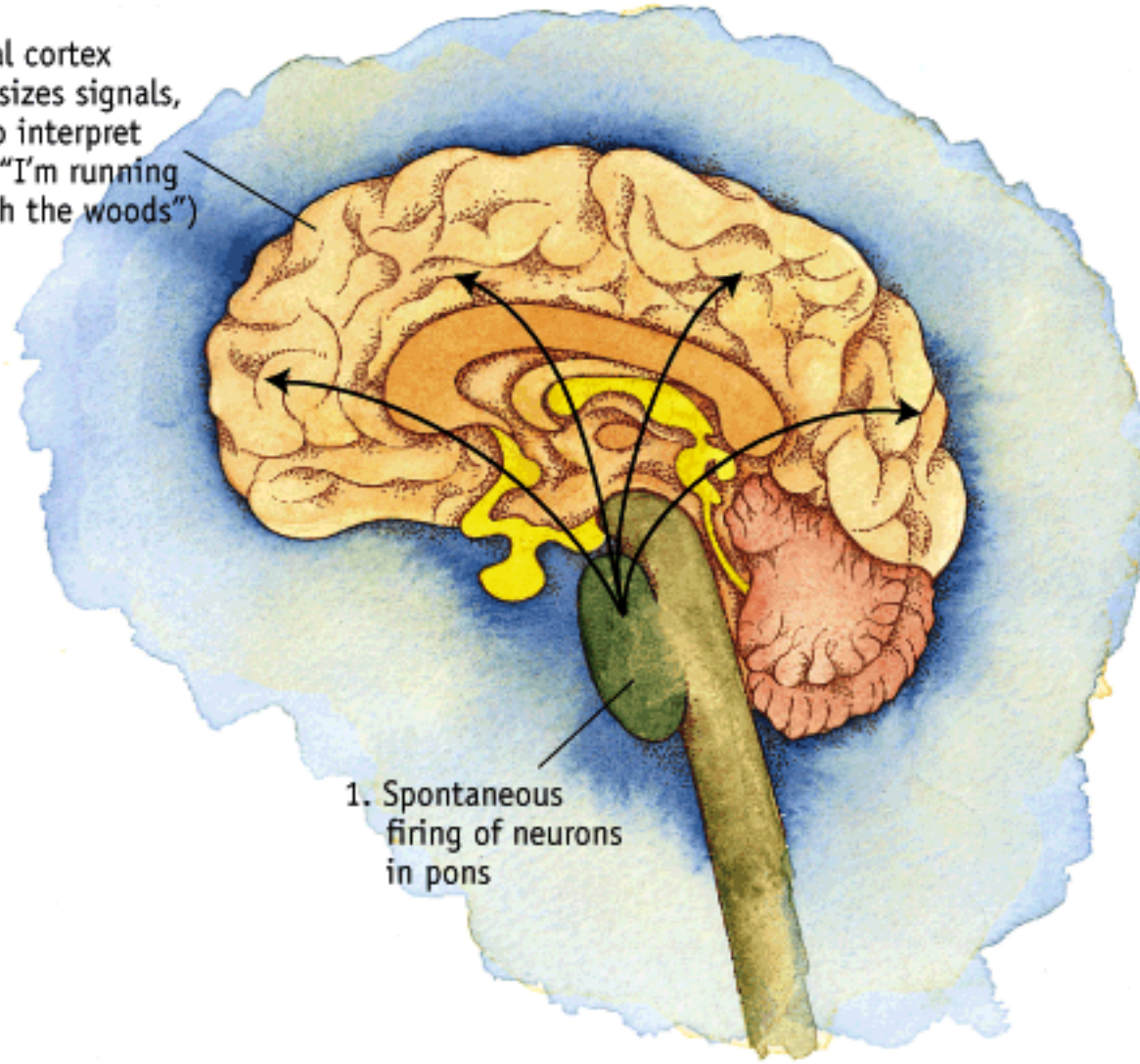
## Brain Wave Patterns During Wakefulness and Sleep



## Activation-Synthesis Theory of Dreams

### ACTIVATION-SYNTHESIS THEORY OF DREAMS

2. Cerebral cortex synthesizes signals, tries to interpret them ("I'm running through the woods")

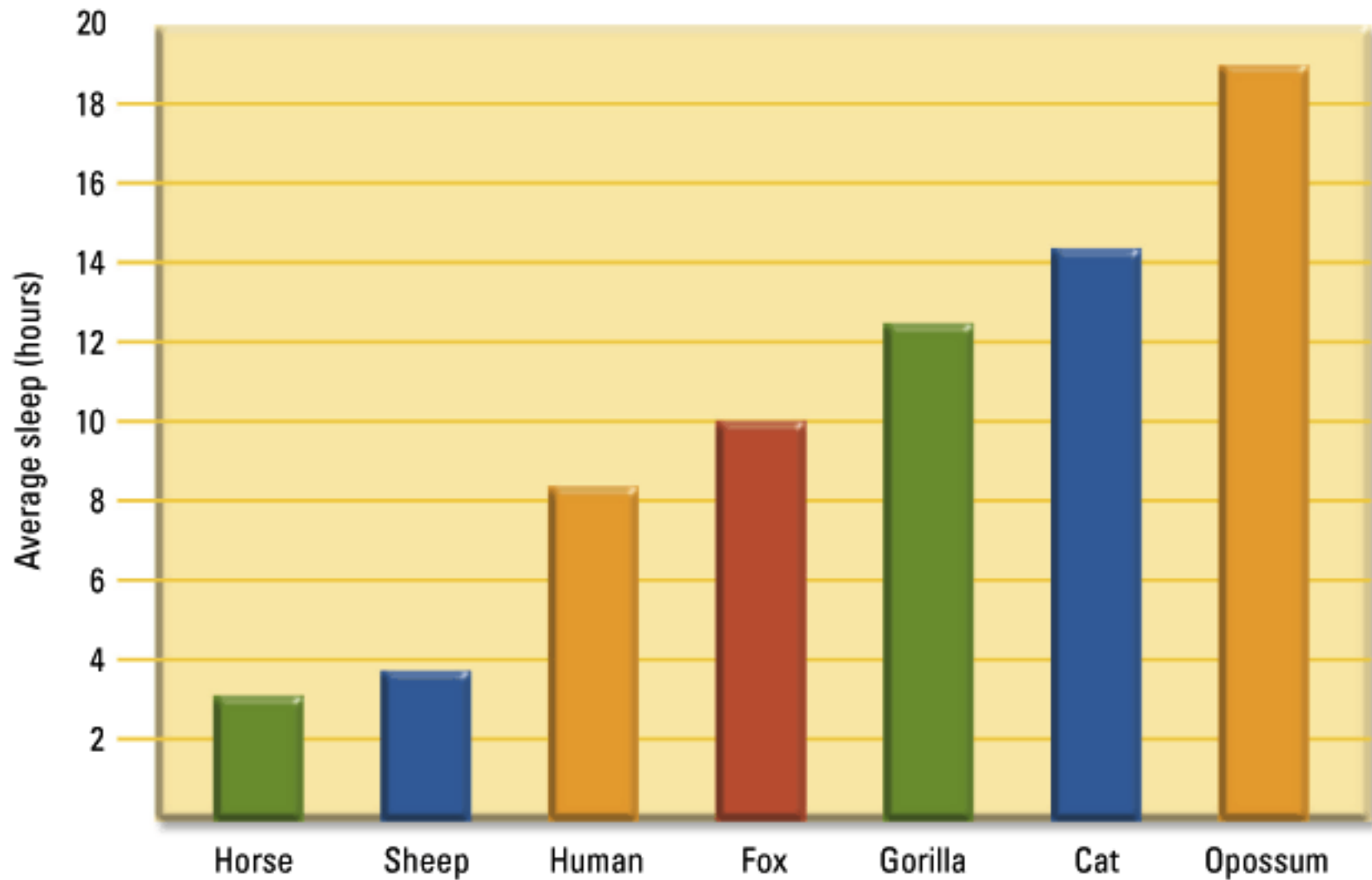


1. Spontaneous firing of neurons in pons

**FOUR DREAM THEORIES COMPARED**

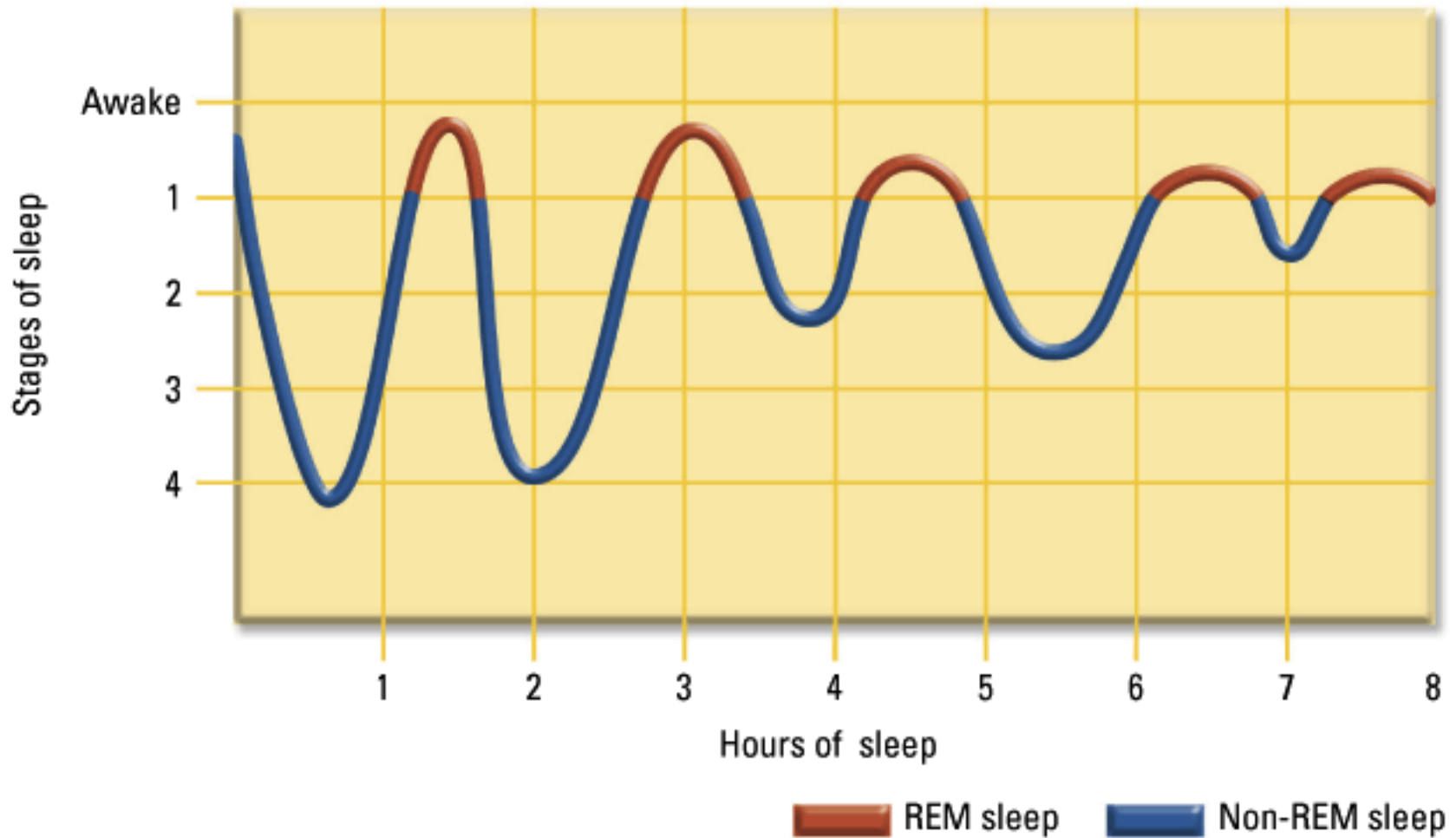
| <b>Theory</b>        | <b>Purpose of Dreaming</b>  | <b>Weaknesses</b>   |
|----------------------|---|---|
| Psychoanalytic       | To express unconscious wishes, thoughts, and conflicts  | Interpretations are often far-fetched; there is no reliable way to interpret latent meanings accurately |
| Problem-focused      | To express ongoing concerns of waking life and/or resolve current concerns and problems                                     | Some theorists are skeptical about the ability to resolve problems during sleep                         |
| Mental housekeeping  | By-product of a process of either eliminating or strengthening neural connections in the brain                              | Says more about REM sleep than about dreaming; does not explain storylike or recurrent dreams           |
| Activation-synthesis | None; dreams occur because of random brain-stem signals, though cortical interpretations may reflect concerns and conflicts | Does not explain coherent, storylike dreams or non-REM dreams   |

## T27 Daily Hours of Sleep: Cross-Species Comparisons



T26

## A Typical Night's Sleep



| CONSCIOUSNESS-ALTERING DRUGS |   |   |
|------------------------------|---|---|
| Type                         | Substance                                 | Range of Effects  |
| Sedatives                    | Alcohol, barbiturates, benzodiazepines    | Slowdown of body functions, relaxation, drowsiness, possibly depression and loss of consciousness |
| Stimulants                   | Caffeine, nicotine, amphetamines, cocaine | Speed up of body functions, alertness, energy, elation, jitteriness, loss of appetite             |
| Hallucinogens                | LSD, marijuana                            | Heightened sensory awareness, distorted perceptions of time and space, hallucinations             |
| Opiates                      | Heroin, morphine, codeine                 | Suppressed pain, depressed neural activity, relaxation, drowsiness, euphoria                      |