

Prescribing Sleep

A photograph of a man sleeping in a bed, with a digital clock on a bedside table showing the time 2:11. The image is overlaid with a semi-transparent blue filter. The text 'Prescribing Sleep' is centered over the image in a blue, outlined font.

The International Bestseller

'Startling, vital, a life raft' GUARDIAN

**MATTHEW
WALKER**

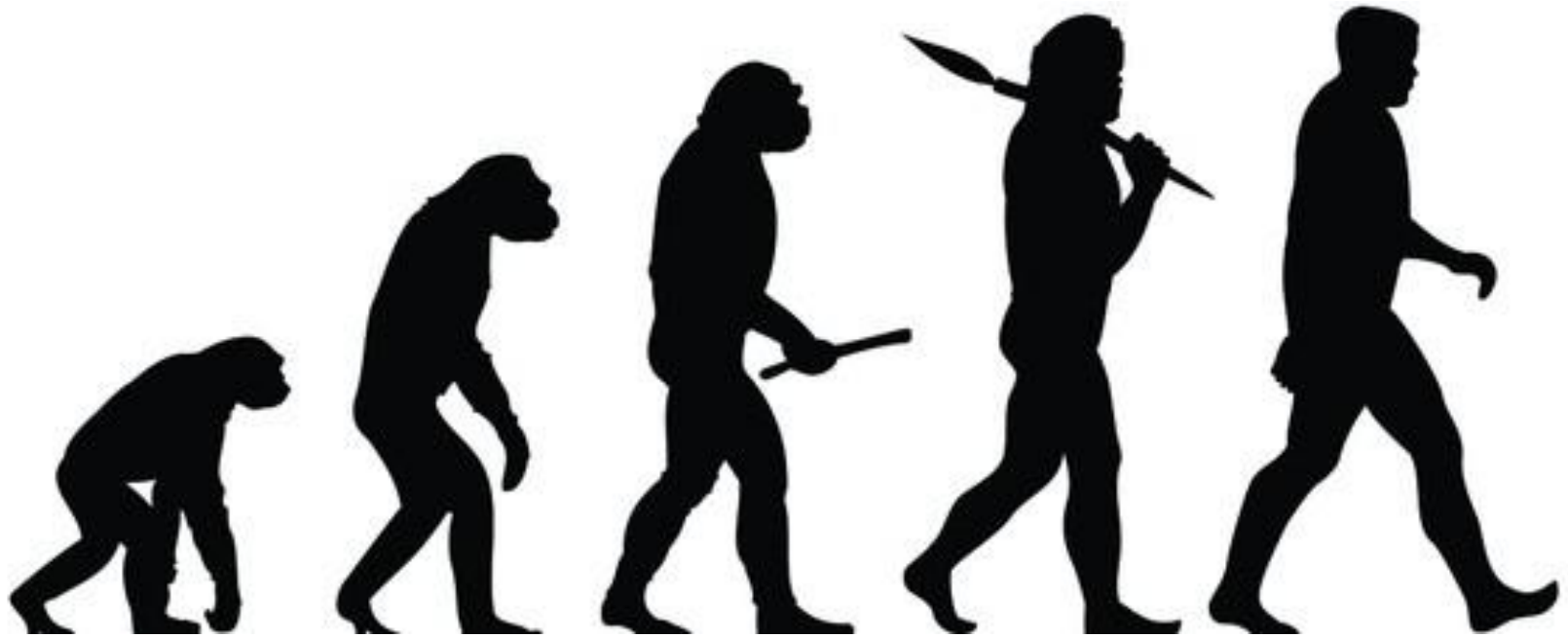
Why We Sleep



The
New
Science
of Sleep
and
Dreams



Sleep – Mother Nature's Greatest Mistake?



Sleep – Mother Nature's Greatest Mistake?

While asleep you cannot:

- Gather food
 - Socialise
 - Mate and reproduce
 - Nurture and protect your offspring
 - Protect yourself
-
- And yet every recorded species sleeps (or something very much like it)!

Owls & Larks Got Rhythm



Owls & Larks Got Rhythm

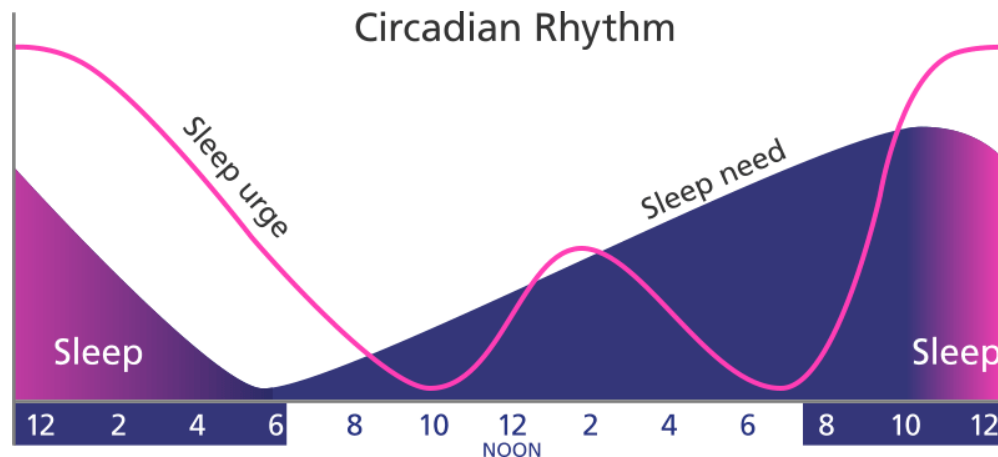
- Approximate 24 hour sleep-wake rhythm
- Larks (morning types) = 40% of population
- Owls (evening types) = 30%
- Others (somewhere between) = 30%
- Owls struggle to go sleep early and find it hard to function in morning, society treats owls as if they were lazy but it is their genetic fate
- Owl's are punished by society, unable to get to sleep early but still having to wake at same time
- Owls have a greater chance of developing depression, anxiety, diabetes, cancer, heart attack and stroke
- There is a reason for different sleep patterns though (from evolutionary perspective) as this increases survival rate by 50% leaving us collectively vulnerable for 4 hours of the night rather than 8



Dancing To Our Own Tune

Dancing To Our Own Tune

- Approximate 24 hour sleep-wake cycle runs by itself
- **First Experiment (1700's)**
- However, it also latches onto repeating patterns
- Daylight is the favoured repeating pattern and acts like manipulating fingers resetting an imprecise wristwatch
- Food, temperature change, and even regularly timed social interactions / cues can all be used to modify the cycle



Dancing To Our Own Tune

- Sleep pressure works in combination with the sleep cycle (but they are independent of each other)
- The more the day goes on, the more the pressure builds to sleep
- Sleeping in the afternoon reduces pressure and makes it more difficult to sleep at night
- (more about sleep pressure)

Dancing To Our Own Tune

- Caffeine Facts
- Caffeine Crash & Sleep Debt



Normal
(no chemical)

Marijuana

Benzedrine



Caffeine

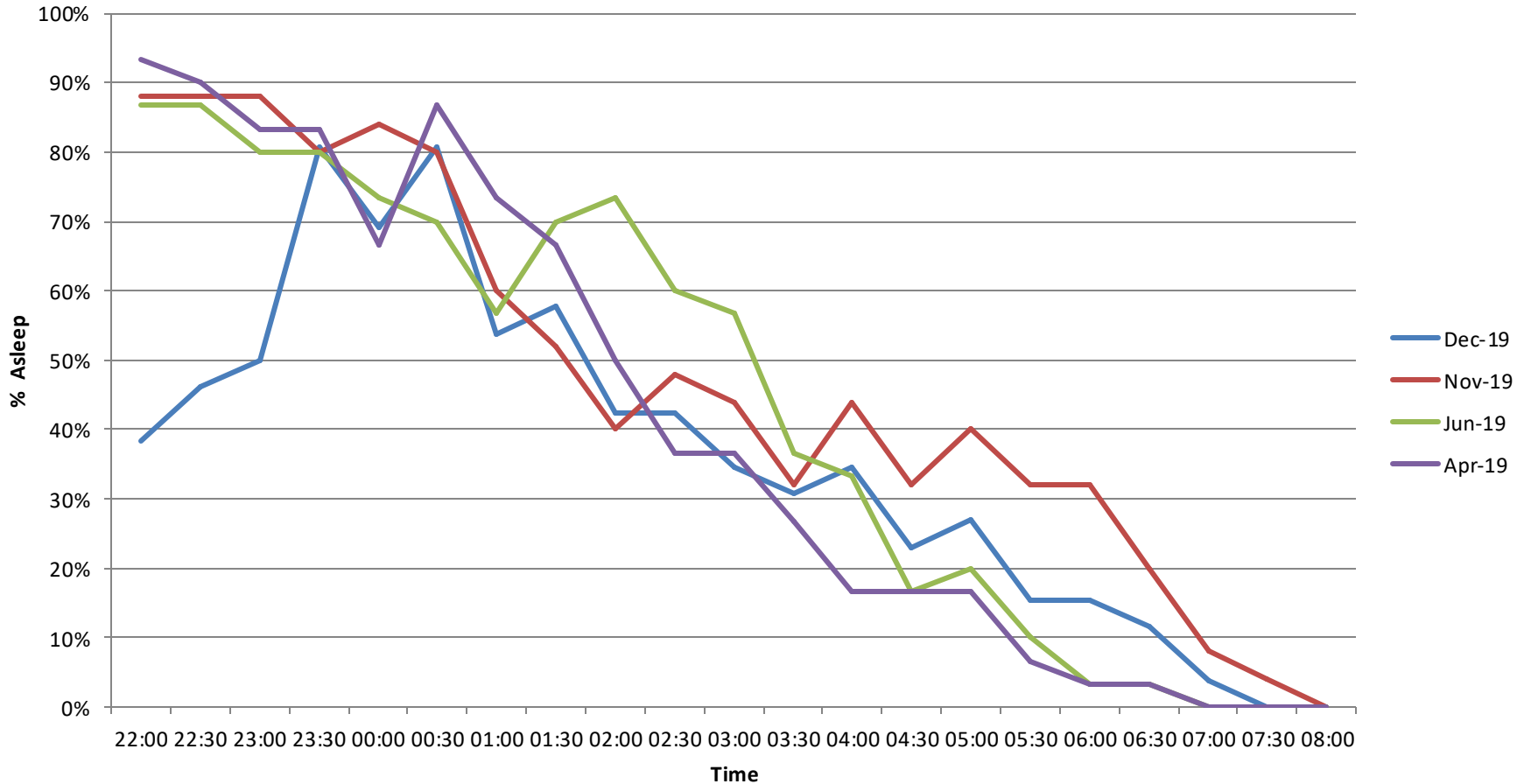


Chloral Hydrate

Dancing To Our Own Tune

Impact of Changing Photoperiods

GRAPH E - Comparative Analysis - XX's 'Time Asleep' Percentage



Dancing To Our Own Tune

Impact of Social Cues (XX)

- 23/01/2020 (03:11)
- 24/01/2020 (01:29)
- 25/01/2020 (02:57)
- 26/01/2020 (03:58)
- 27/01/2020 (00:10)
- 28/01/2020 (00:37)
- 29/01/2020 (00:25)
- 30/01/2020 (02:20)
- 31/01/2020 (23:46)
- 01/02/2020 (02:03)
- 02/02/2020 (00:43)
- 03/02/2020 (04:57)
- 04/02/2020 (00:46)
- 05/02/2020 (02:45)
- 06/02/2020 (00:26)
- 07/02/2020 (00:43)
- 08/02/2020 (00:27)
- 09/02/2020 (00:18)
- 10/02/2020 (00:21)
- 11/02/2020 (01:02)
- 12/02/2020 (00:34)
- 01/03/2020 (01:44)
- 02/03/2020 (23:28)
- 03/03/2020 (23:25)
- 04/03/2020 (23:32)
- 05/03/2020 (01:10)
- 06/03/2020 (01:15)
- 07/03/2020 (23:42)
- 08/03/2020 (22:35)
- 09/03/2020 (22:40)
- 10/03/2020 (23:18)
- 11/03/2020 (23:34)
- 12/03/2020 (23:34)

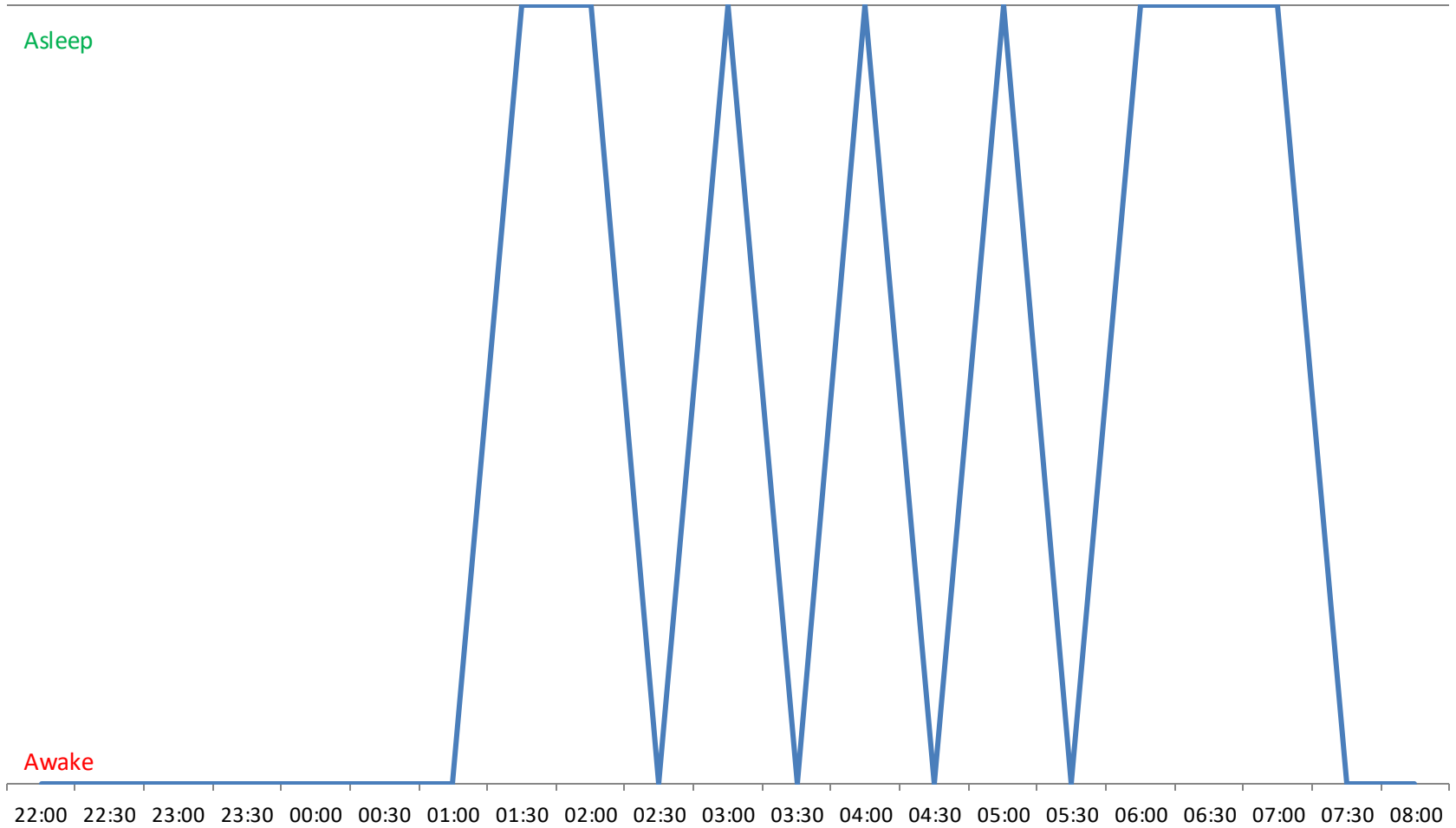
Social Cues
Begin



Dancing To Our Own Tune

10/11/2020 - 11/11/2020 (22:00 - 08:00) XX Time Asleep

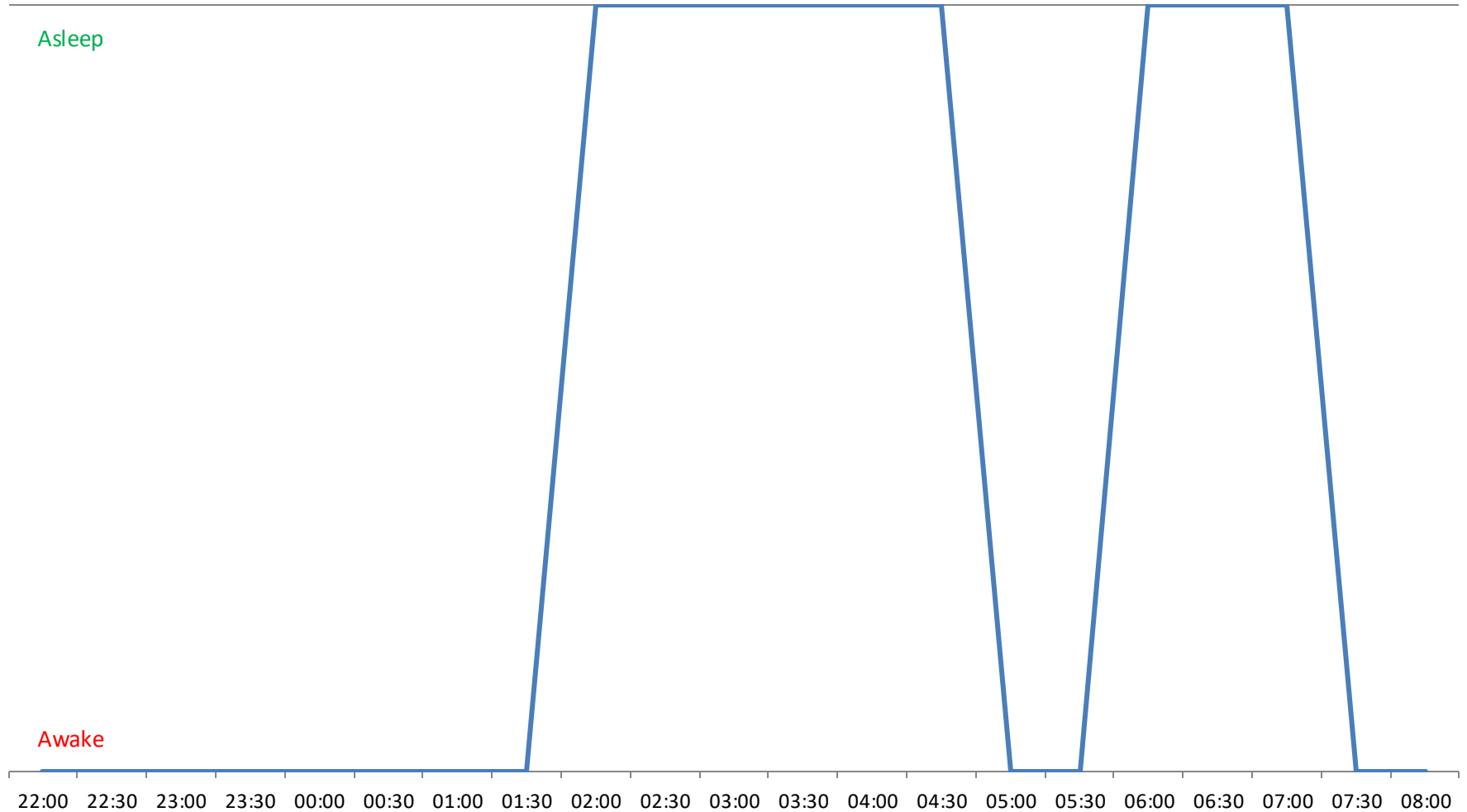
<first night supporting>



Dancing To Our Own Tune

11/11/2020 - 12/11/2020 (22:00 - 08:00) - XX Time Asleep

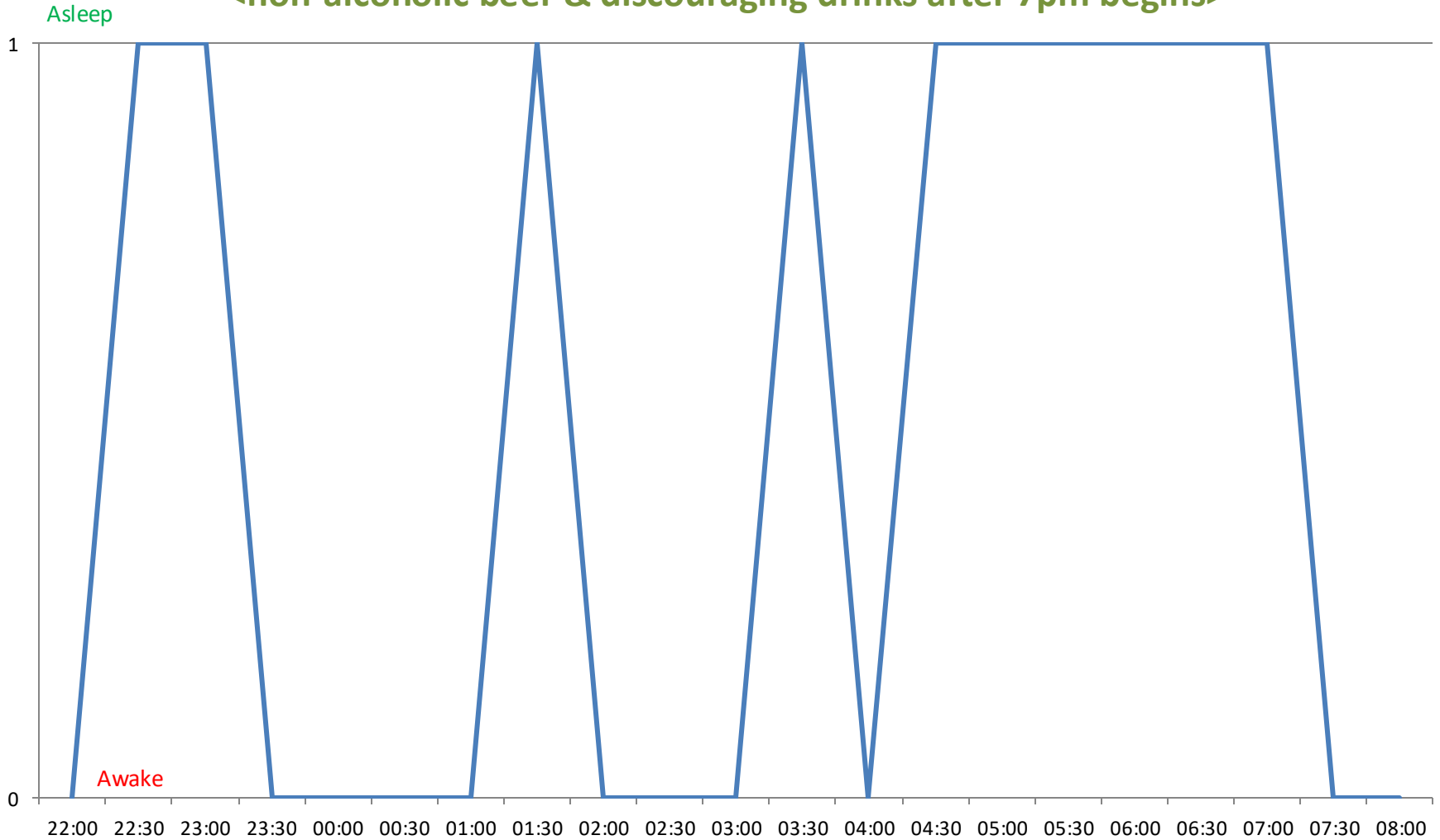
<light dimming in evening begins>



Dancing To Our Own Tune

12/11/2020 - 13/11/2020 (22:00 - 08:00) XX Time Asleep

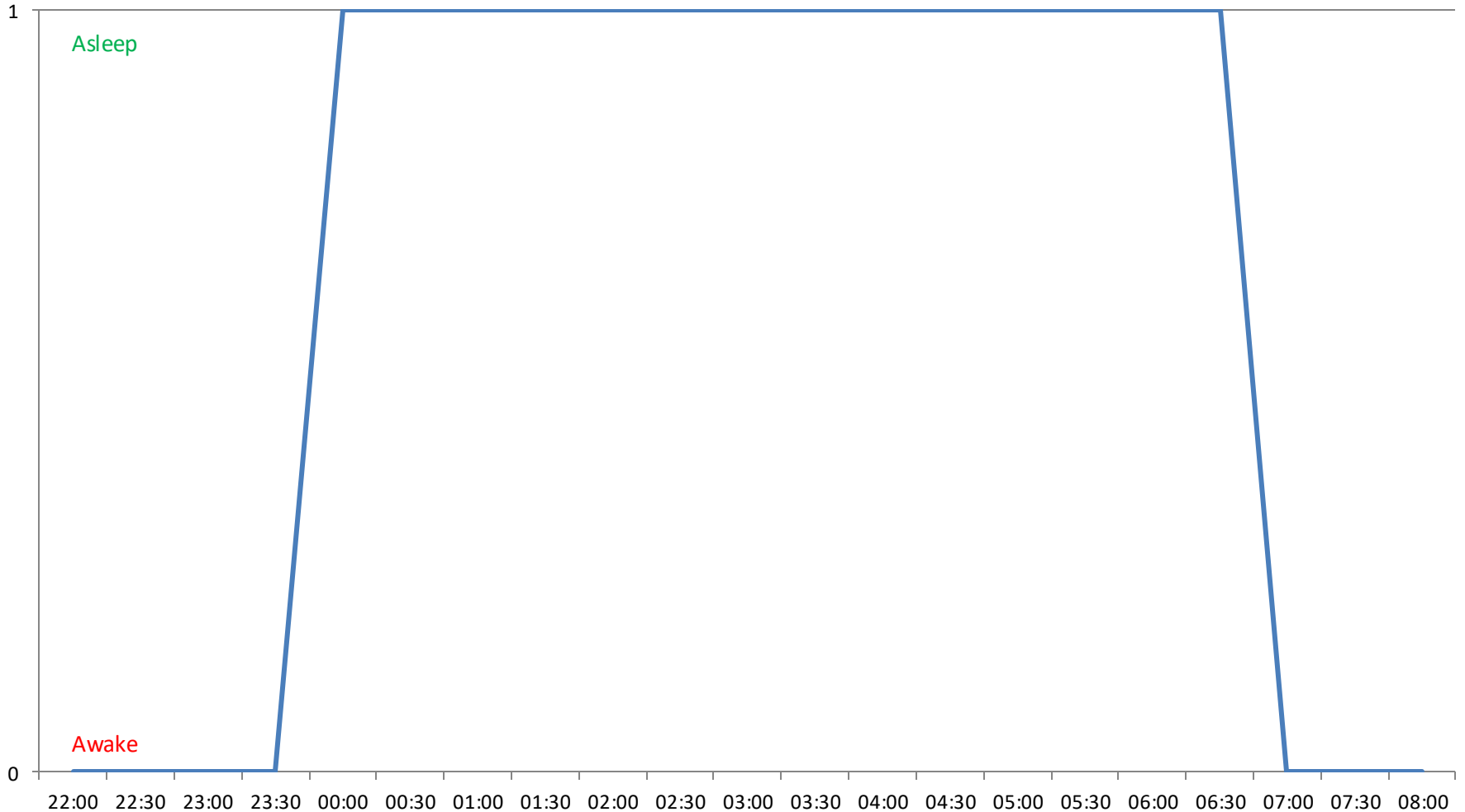
<non-alcoholic beer & discouraging drinks after 7pm begins>



Dancing To Our Own Tune

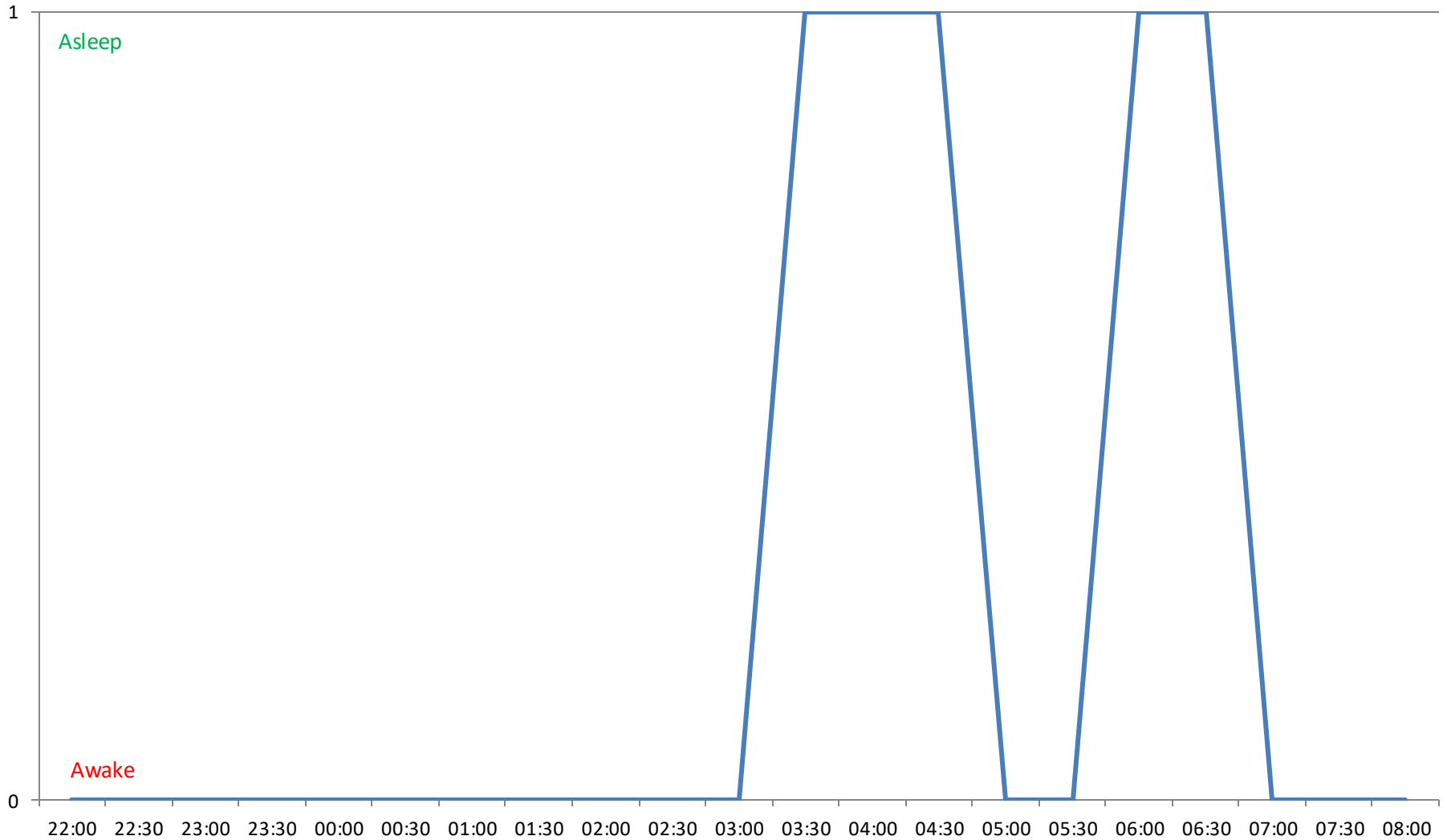
13/11/2020 - 14/11/2020 (22:00 - 08:00) XX Time Asleep

<shower as part of evening routine begins>



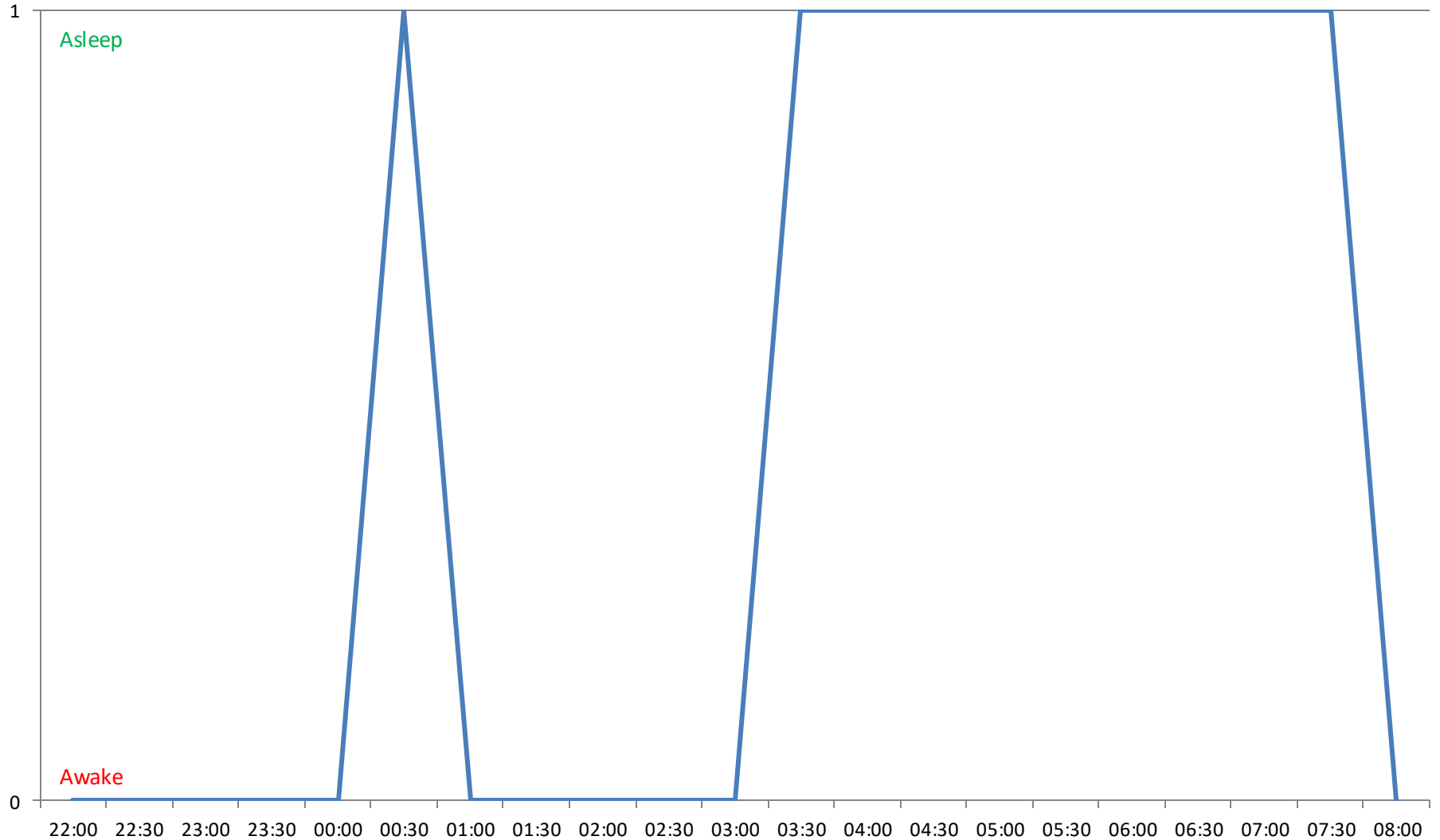
Dancing To Our Own Tune

14/11/2020 - 15/11/2020 (22:00 - 08:00) XX Time Asleep



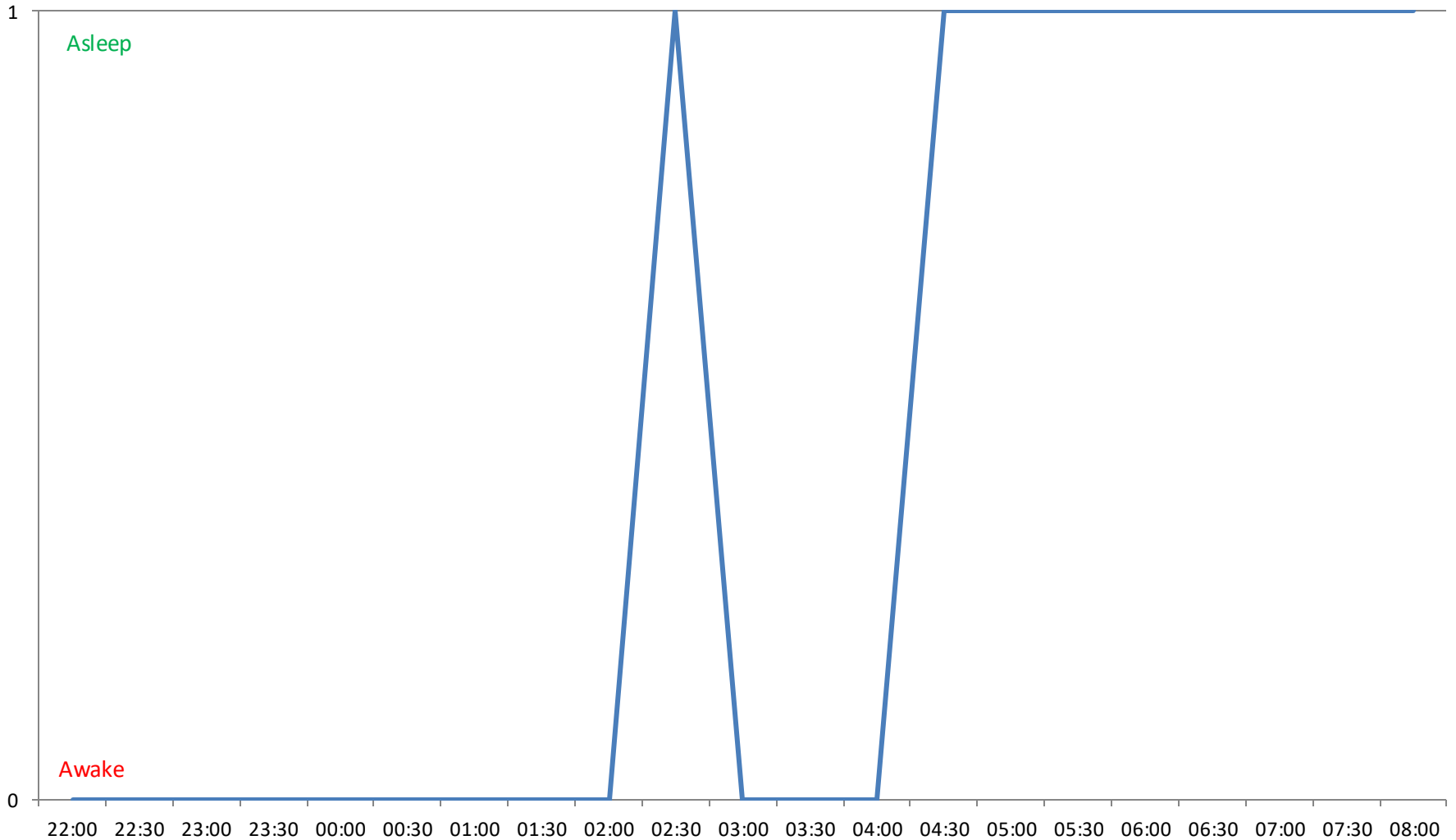
Dancing To Our Own Tune

15/11/2020 - 16/11/2020 (22:00 - 08:00) XX Time Asleep



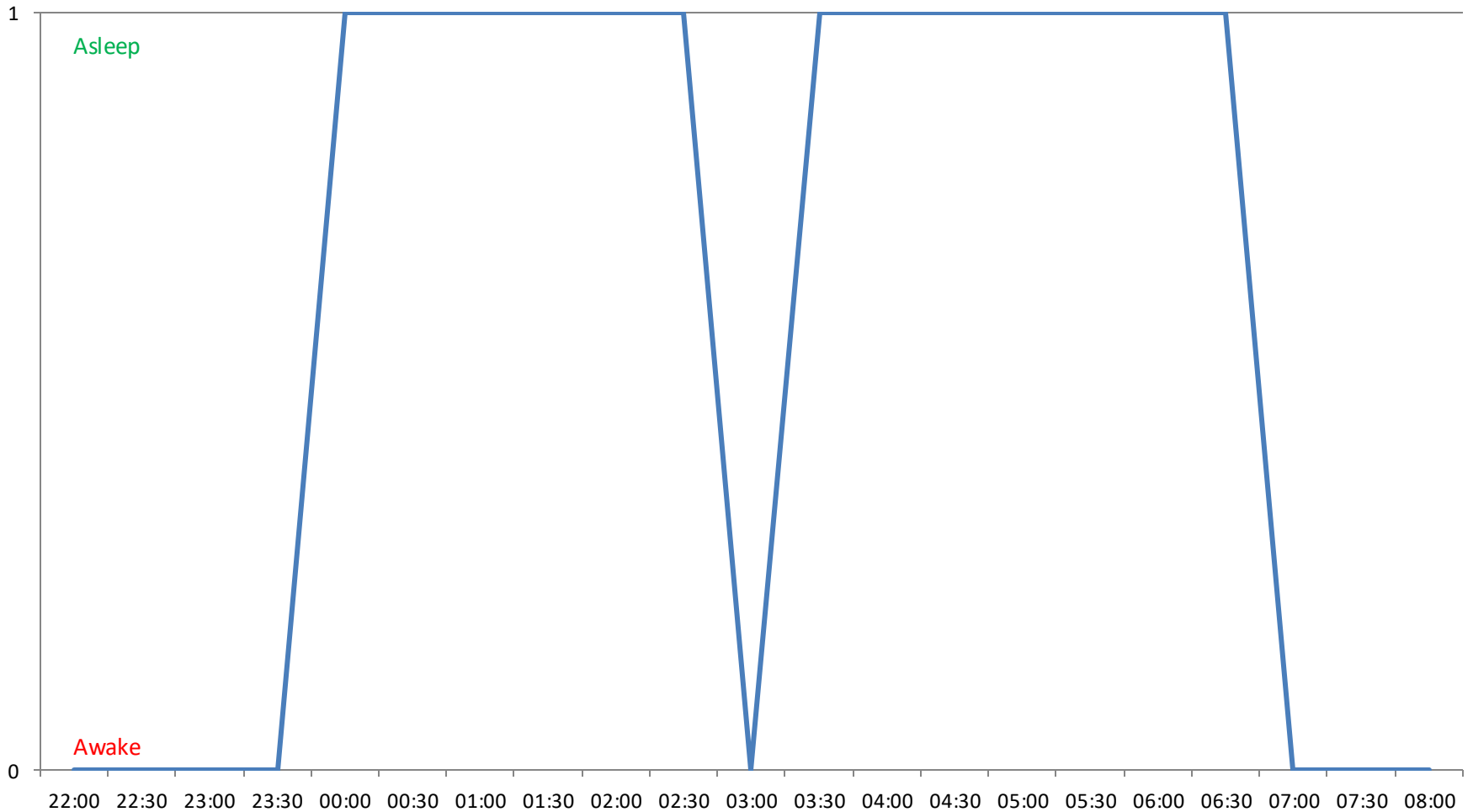
Dancing To Our Own Tune

16/11/2020 - 17/11/2020 (22:00 - 08:00) XX Time Asleep



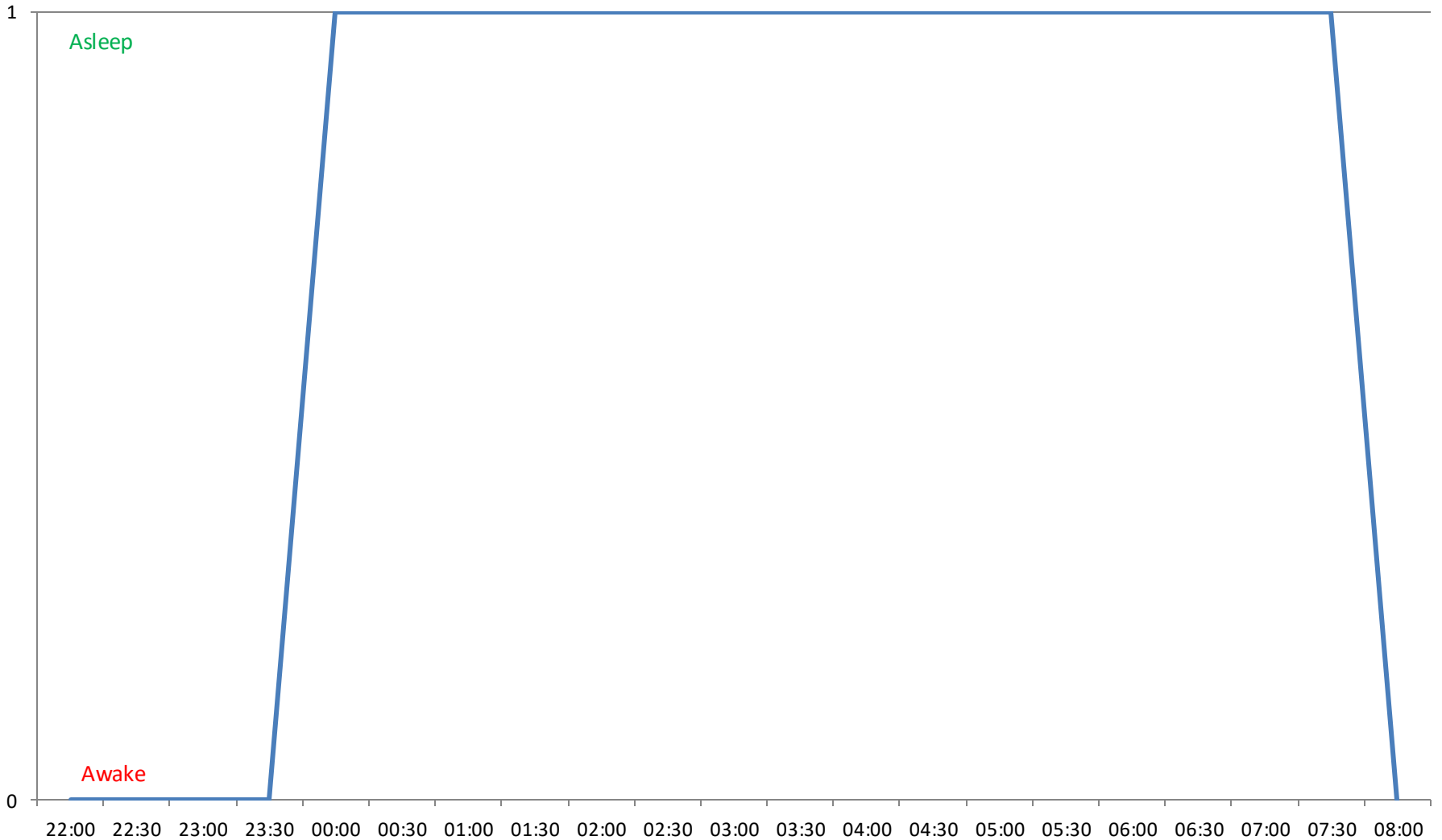
Dancing To Our Own Tune

17/11/2020 - 18/11/2020 (22:00 - 08:00) XX Time Asleep
<afternoon dose *medication* discontinued>



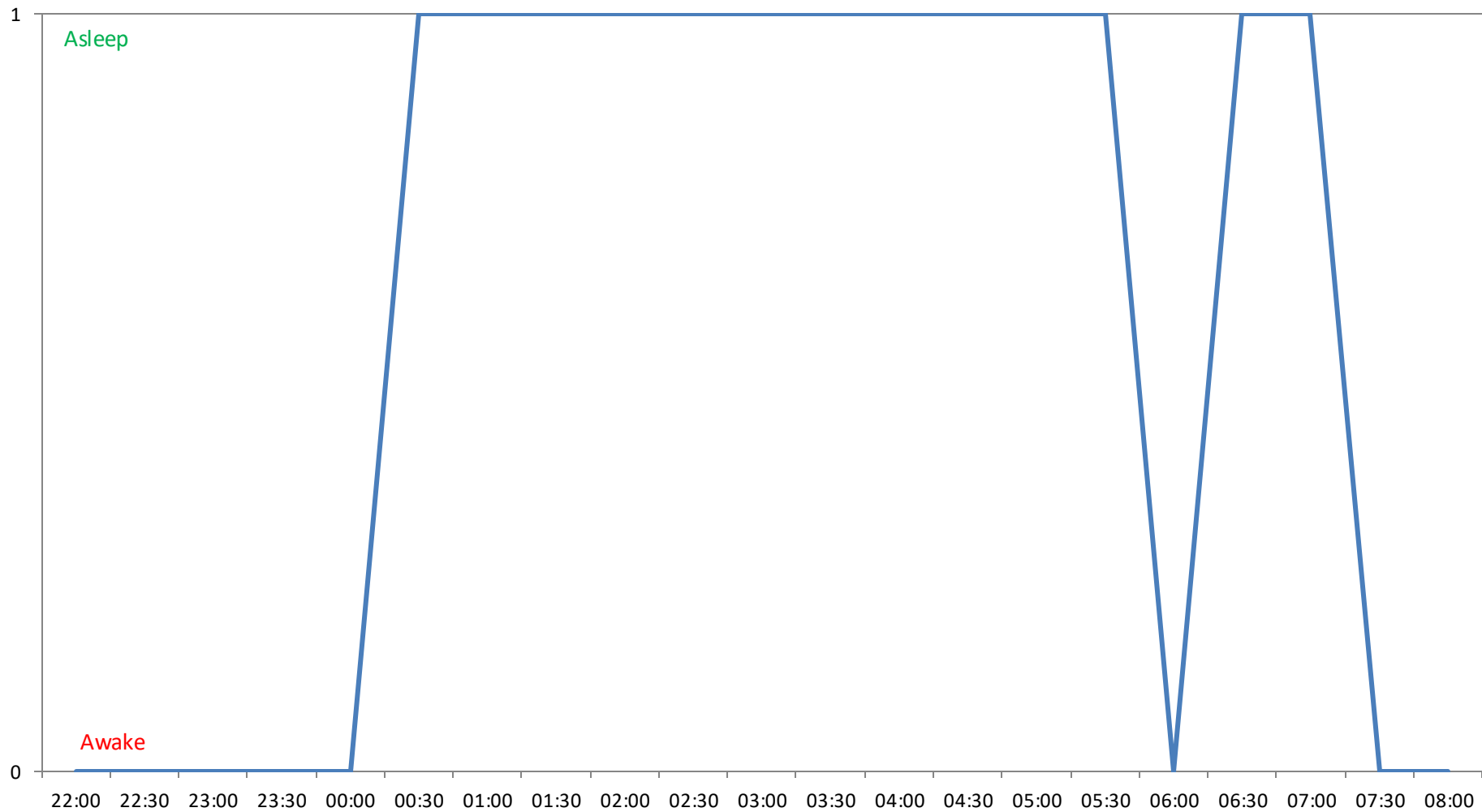
Dancing To Our Own Tune

18/11/2020 - 19/11/2020 (22:00 - 08:00) XX Time Asleep



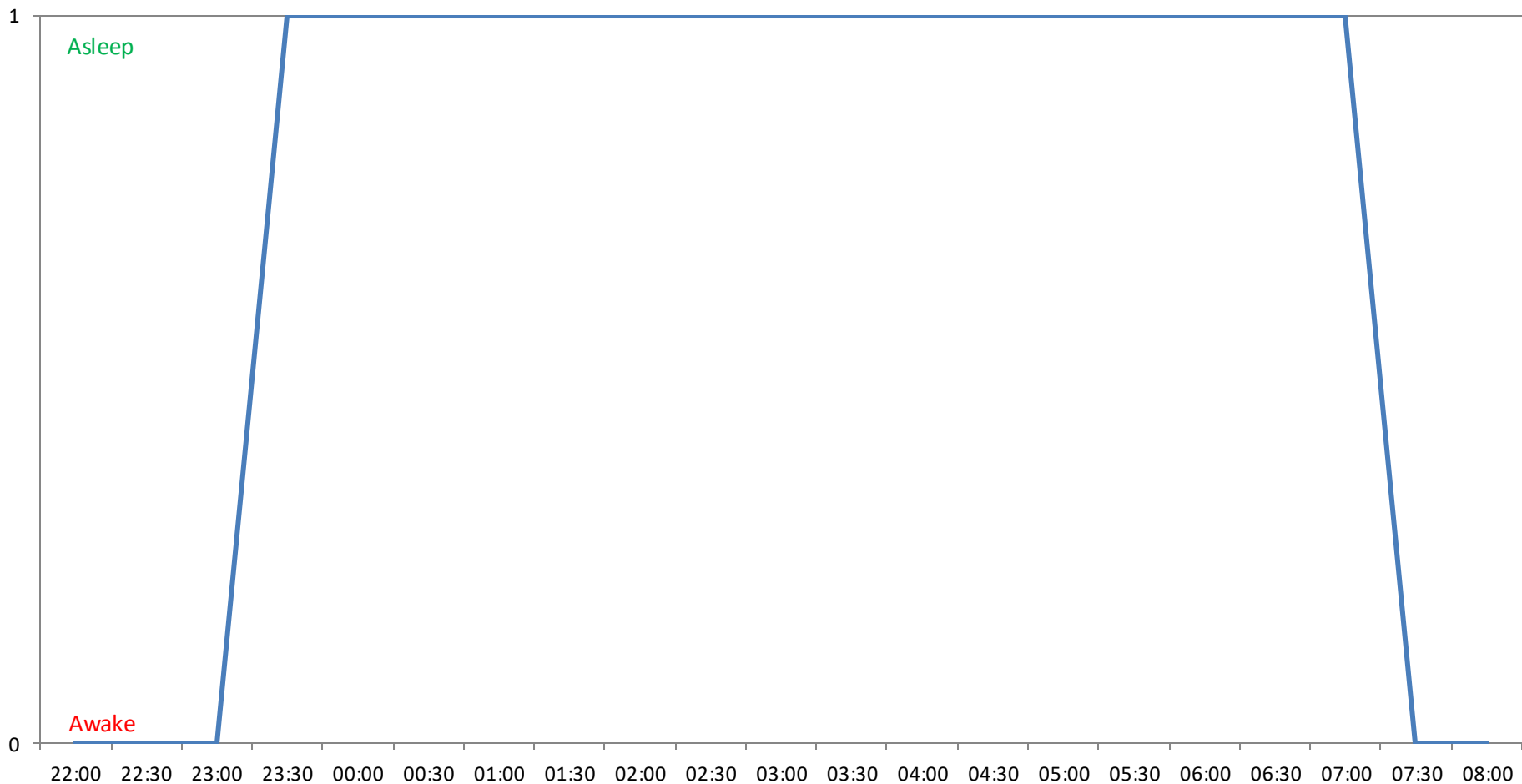
Dancing To Our Own Tune

19/11/2020 - 20/11/2020 (22:00 - 08:00) XX Time Asleep



Dancing To Our Own Tune

20/11/2020 - 21/11/2020 (22:00 - 08:00) XX Time Asleep

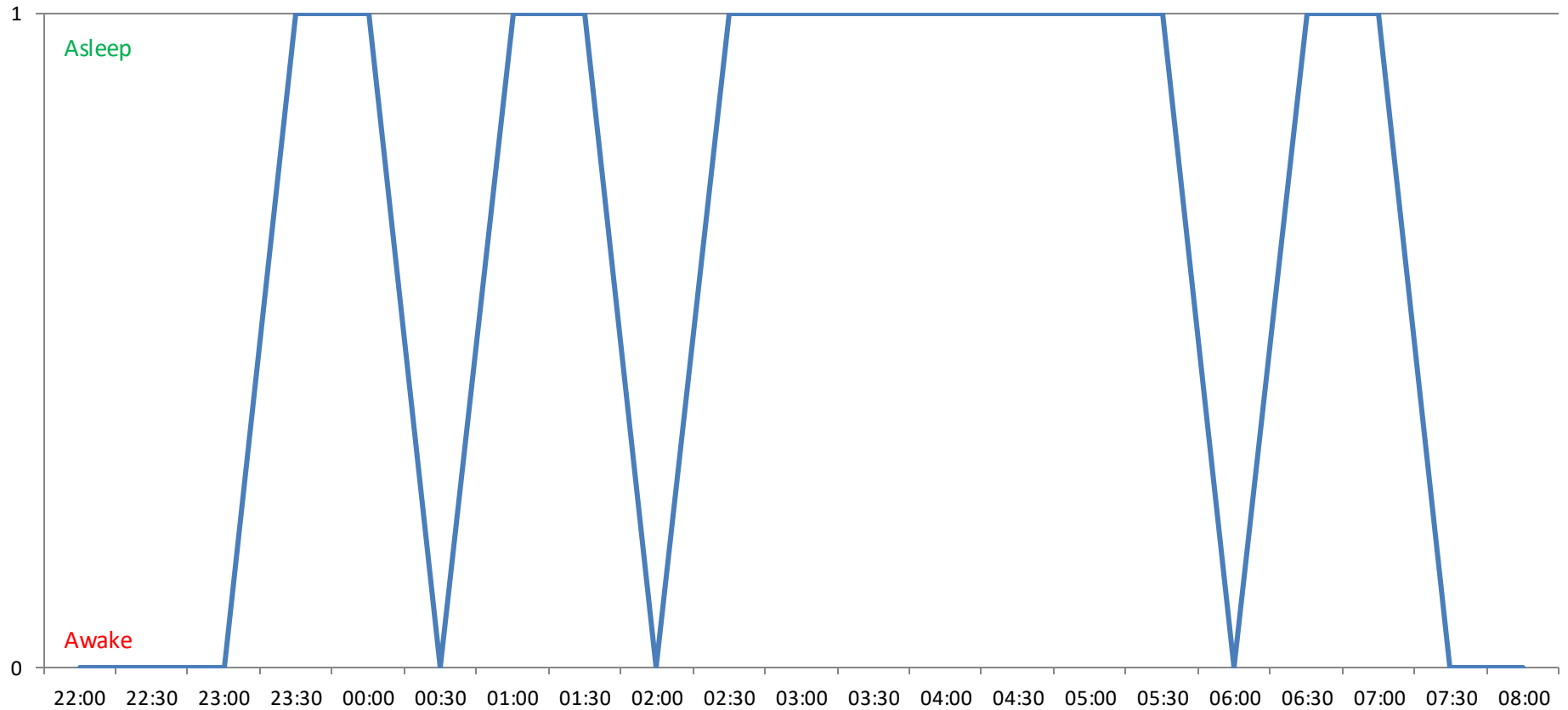


Dancing To Our Own Tune

21/11/2020 - 22/11/2020 (22:00 - 08:00) XX Time Asleep

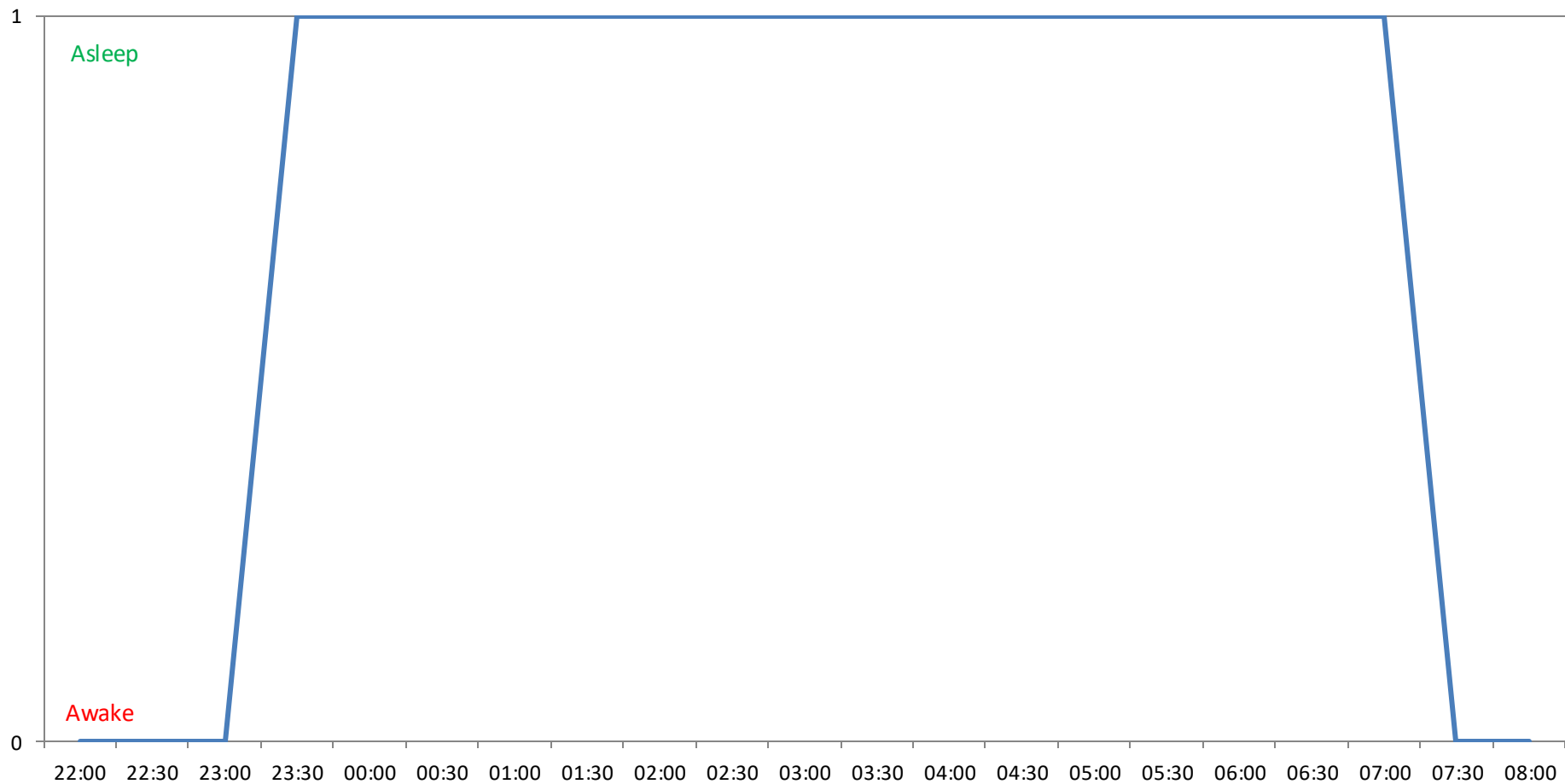
Drinking tea after 15:00

Napping at 21:30



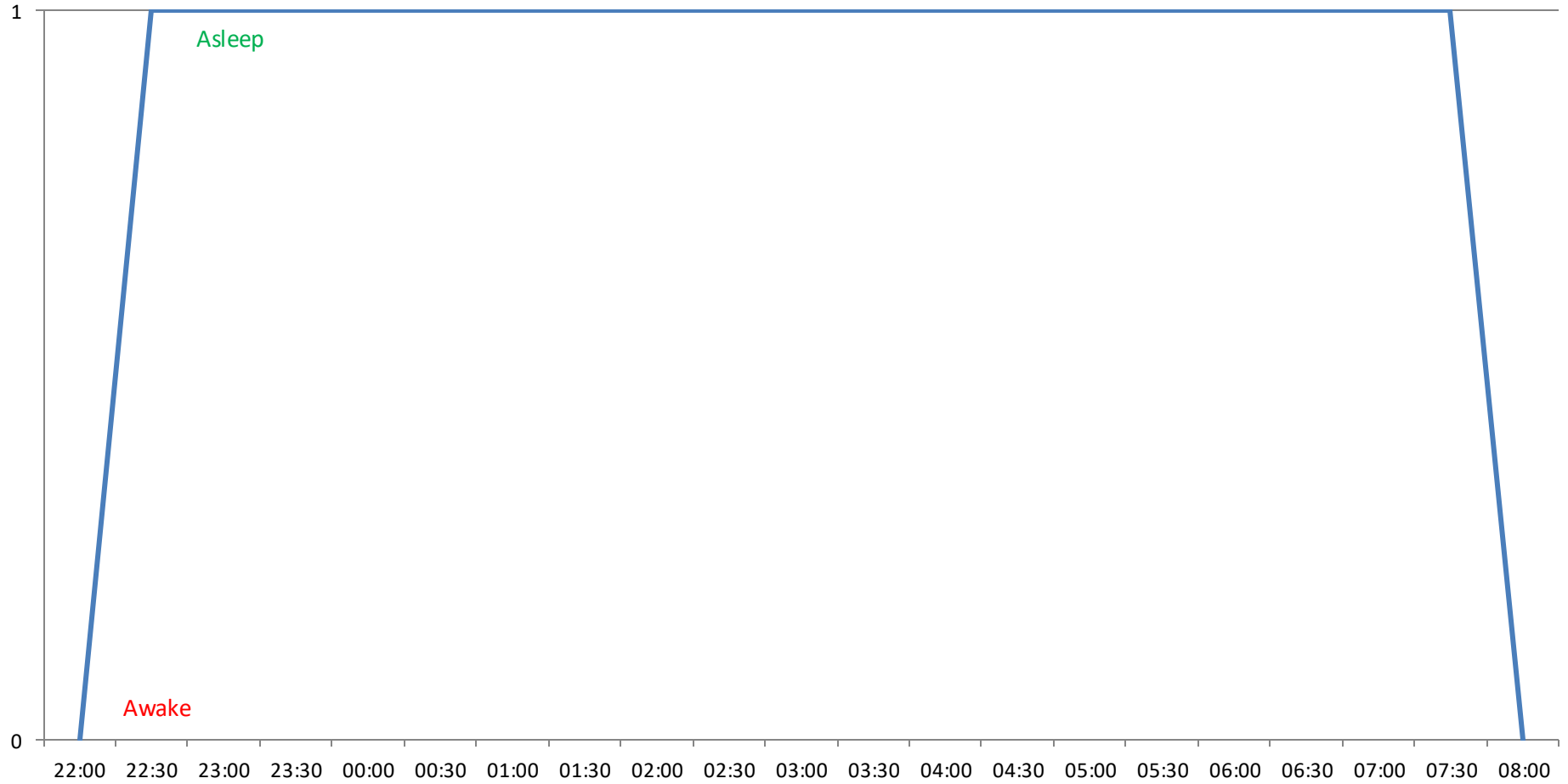
Dancing To Our Own Tune

22/11/2020 - 23/11/2020 (22:00 - 08:00) XX Time Asleep



Dancing To Our Own Tune

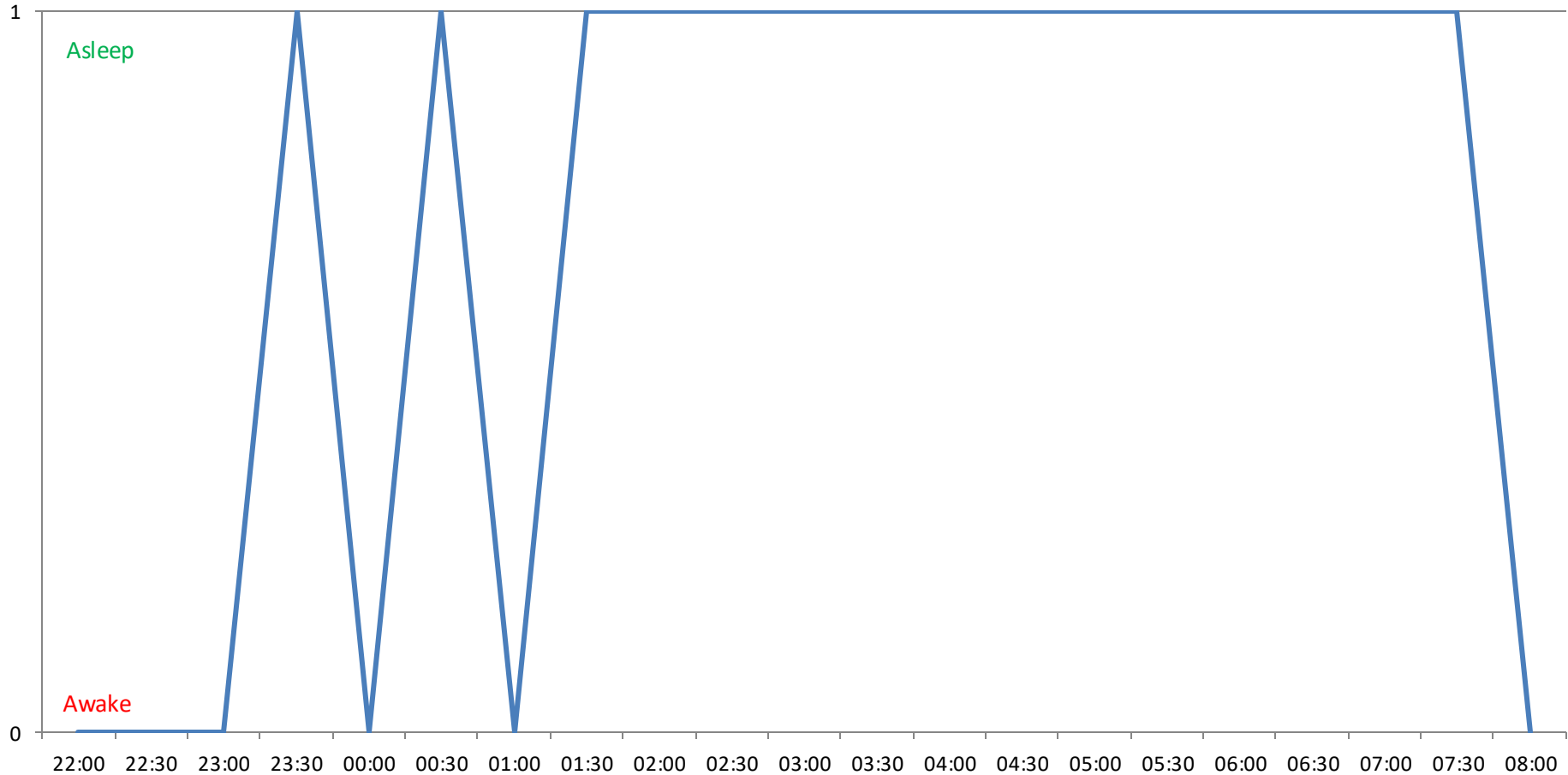
23/11/2020 - 24/11/2020 (22:00 - 08:00) XX Time Asleep



Dancing To Our Own Tune

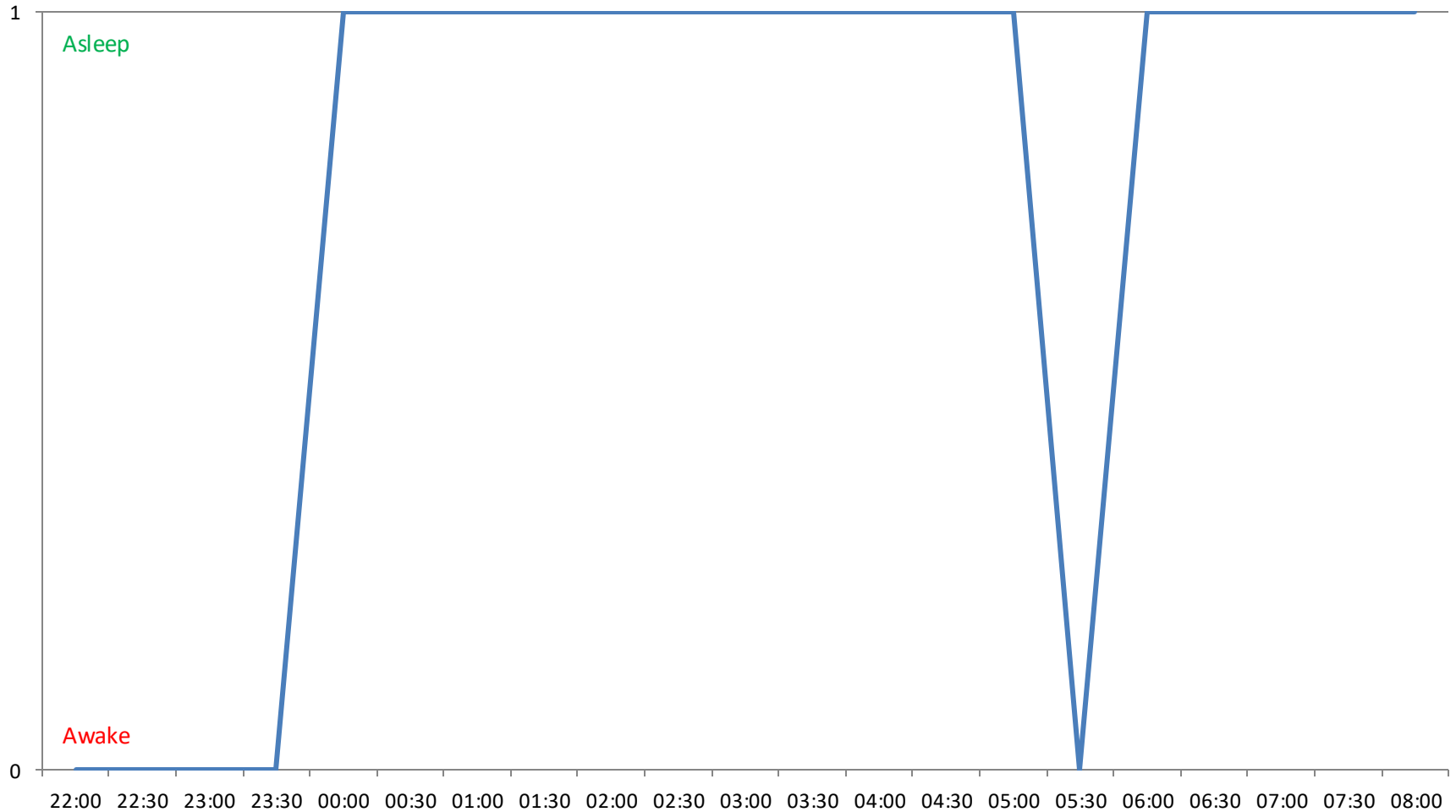
24/11/2020 - 25/11/2020 (22:00 - 08:00) XX Time Asleep

<morning dose *medication* increased>



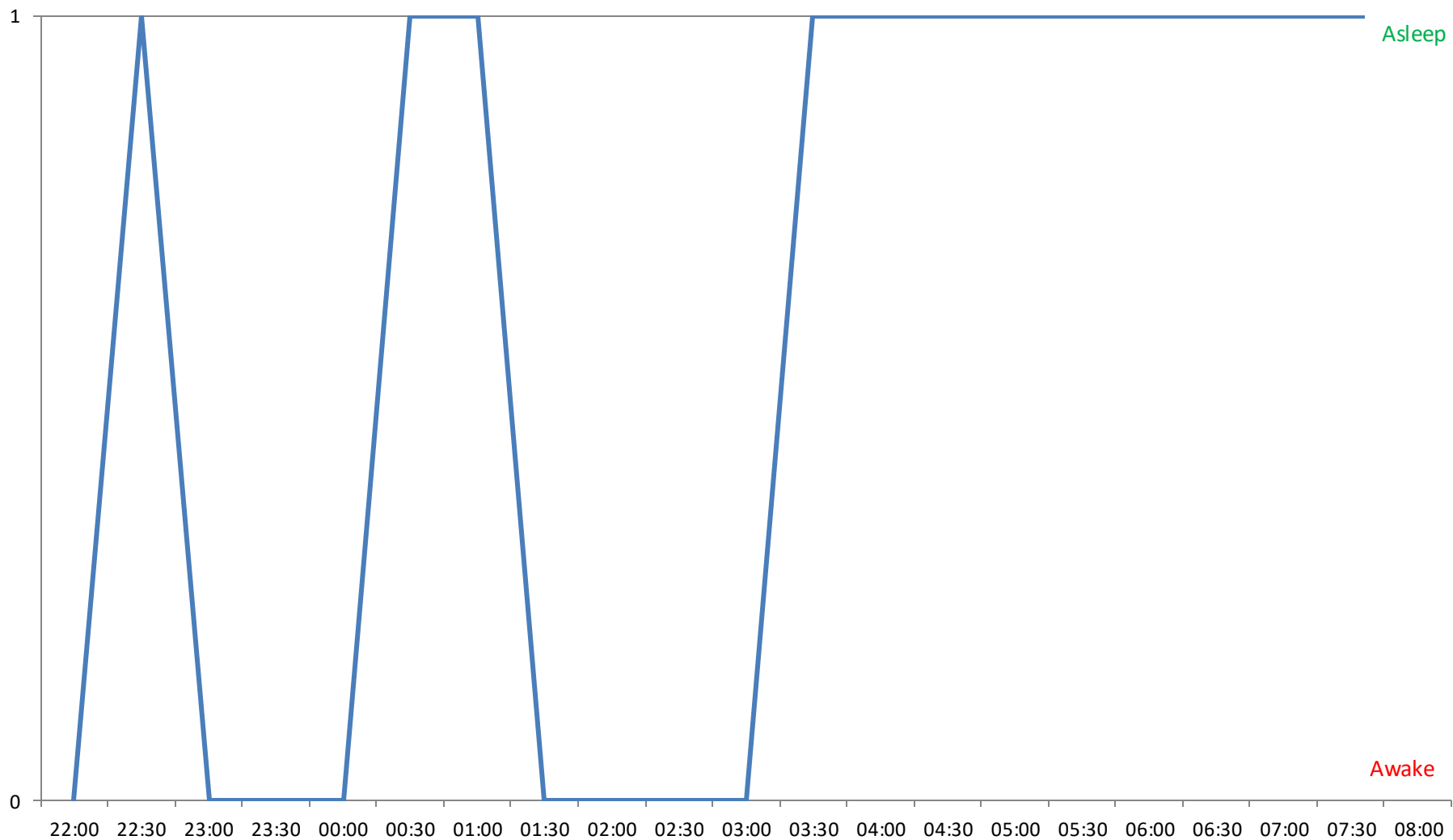
Dancing To Our Own Tune

25/11/2020 - 26/11/2020 (22:00 - 08:00) XX Time Asleep



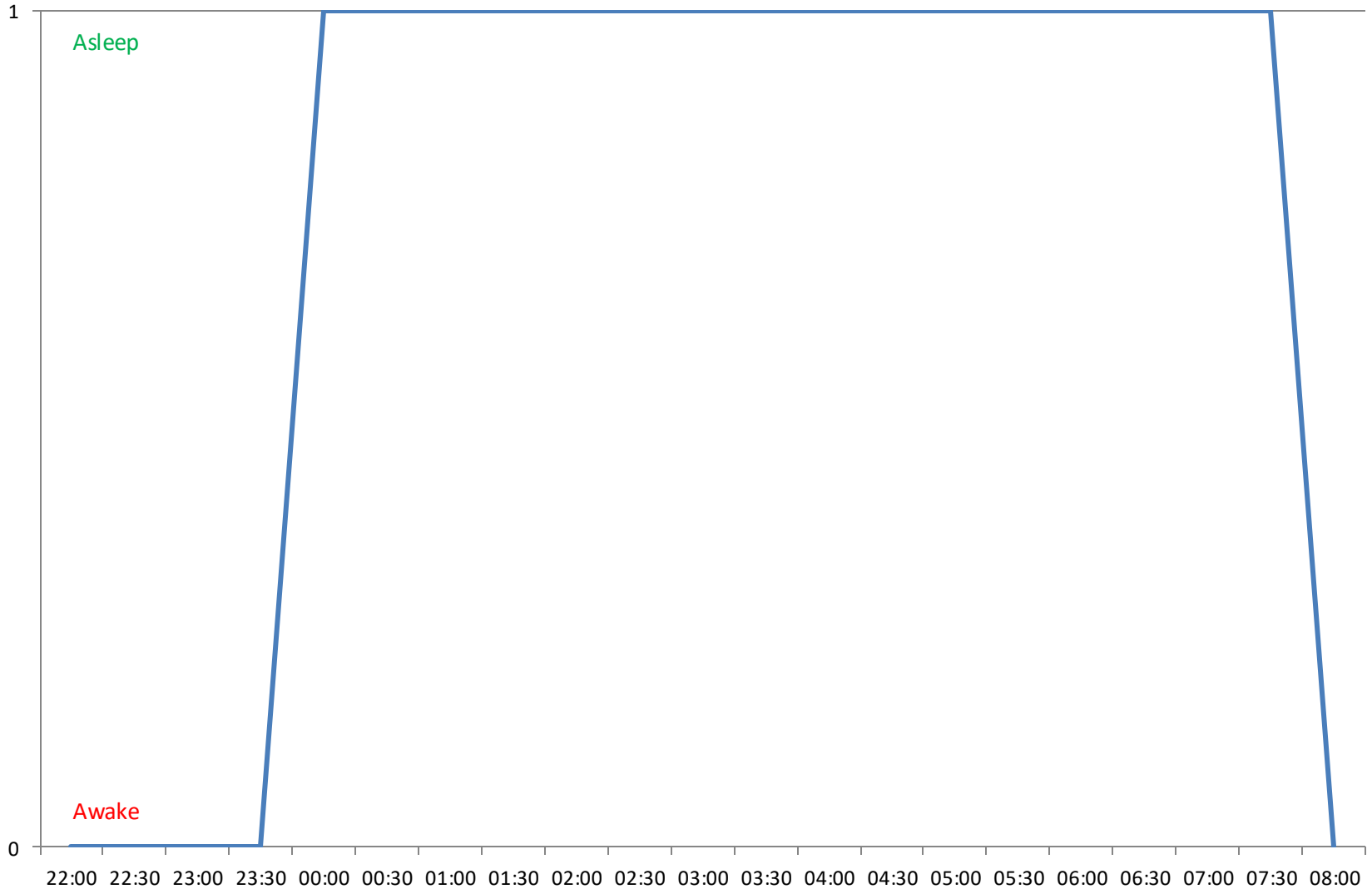
Dancing To Our Own Tune

26/11/2020 - 27/11/2020 (22:00 - 08:00) XX Time Asleep



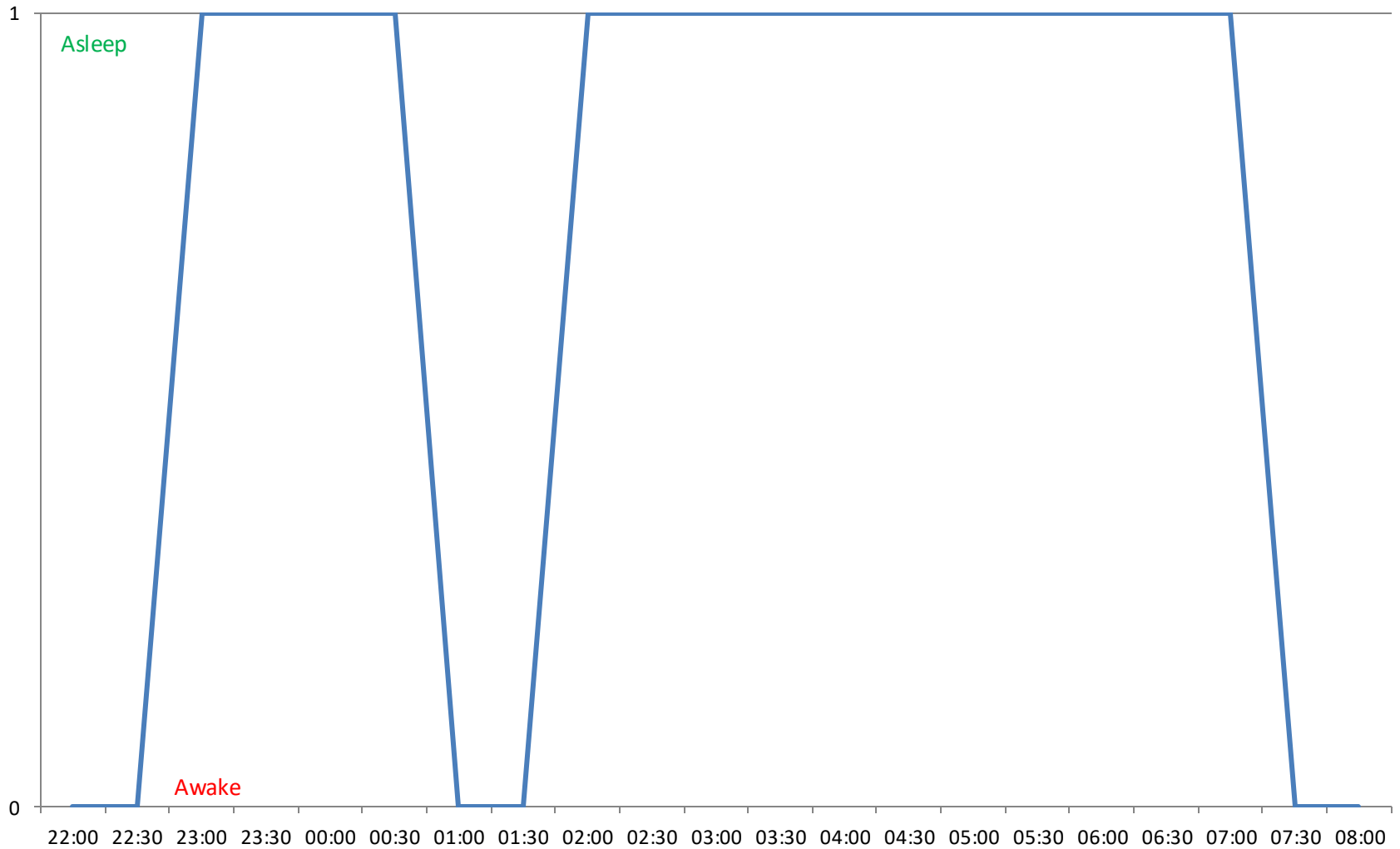
Dancing To Our Own Tune

27/11/2020 - 28/11/2020 (22:00 - 08:00) XX Time Asleep



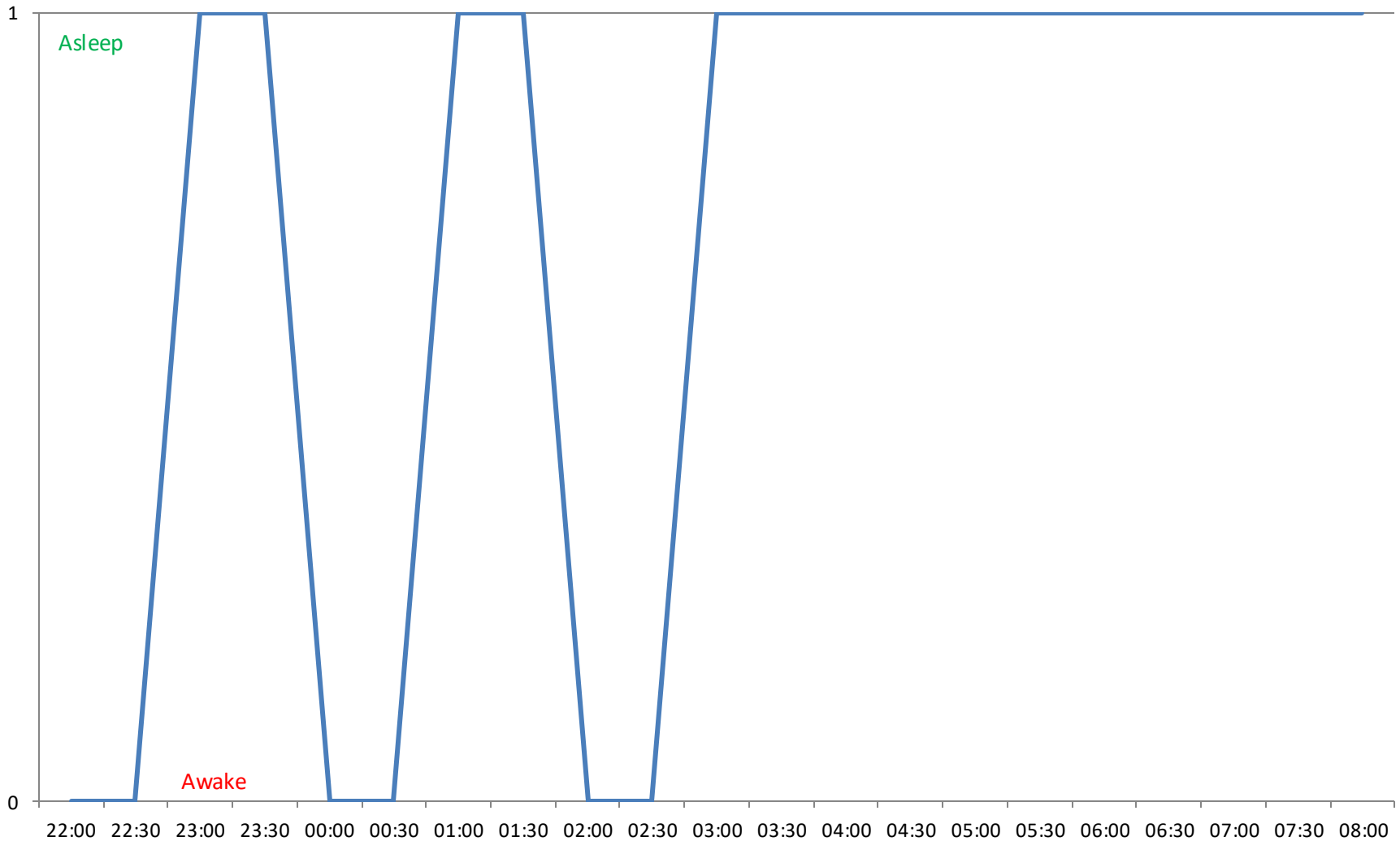
Dancing To Our Own Tune

28/11/2020 - 29/11/2020 (22:00 - 08:00) XX Time Asleep



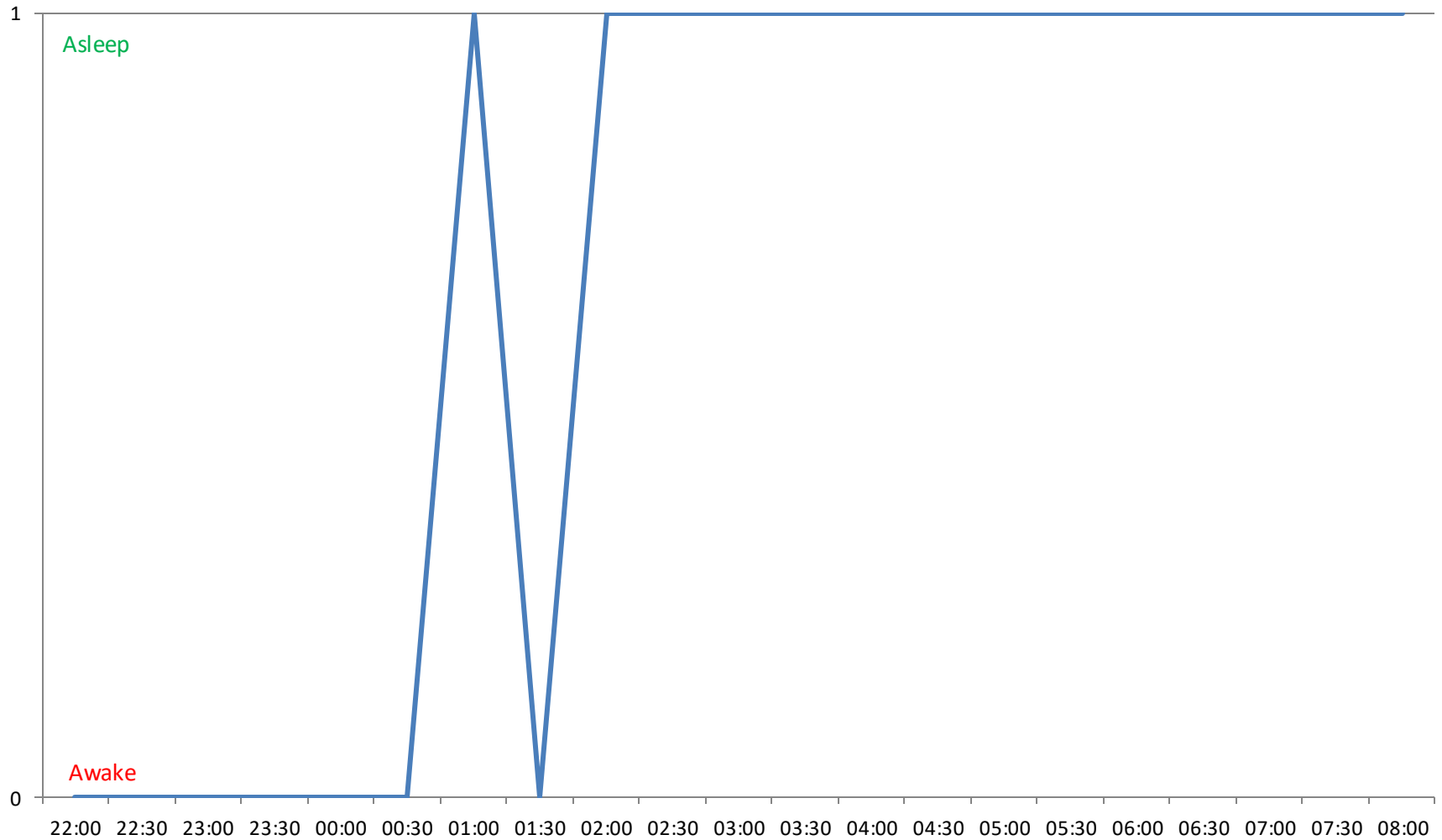
Dancing To Our Own Tune

29/11/2020 - 30/11/2020 (22:00 - 08:00) XX Time Asleep



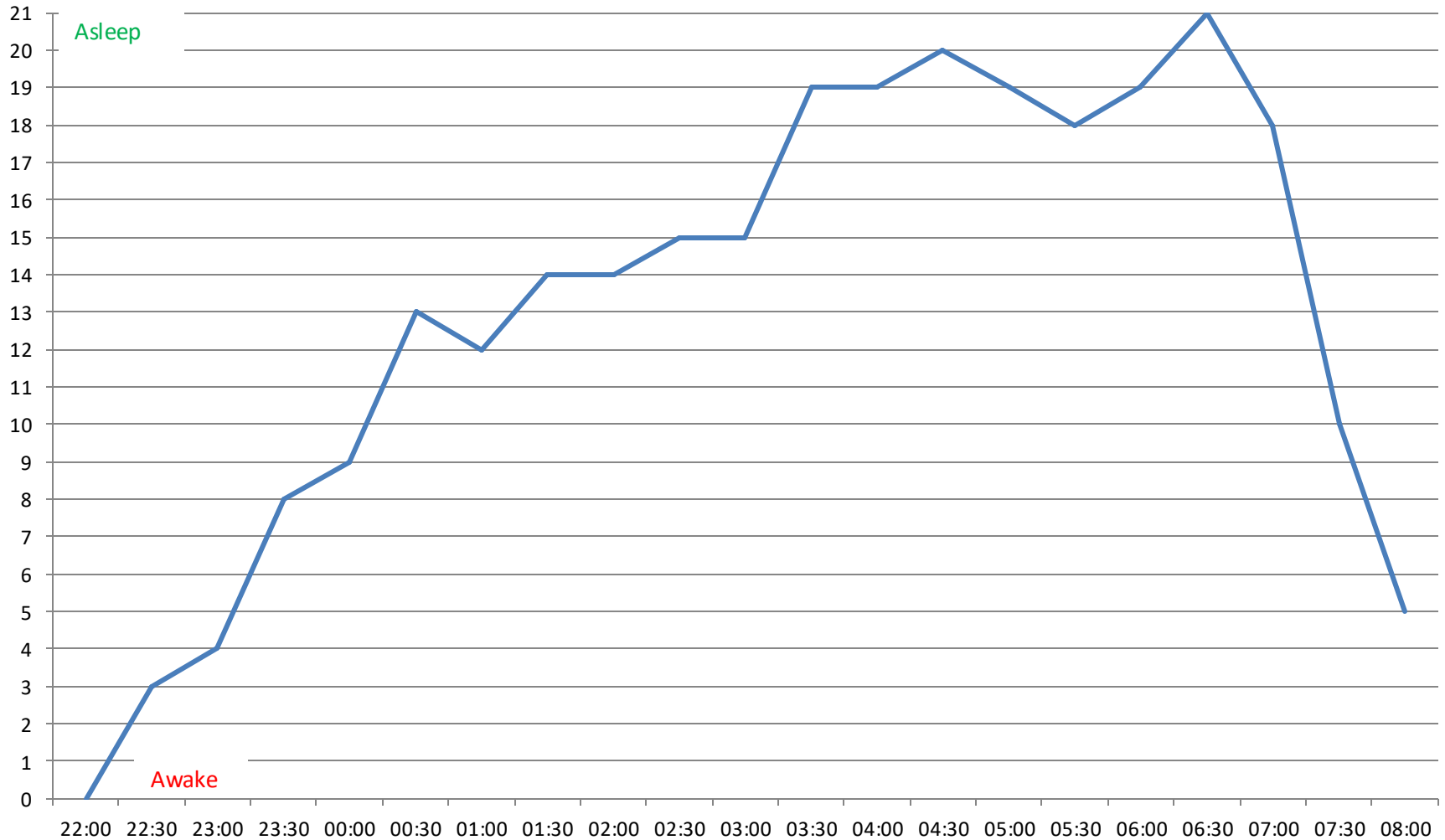
Dancing To Our Own Tune

30/11/2020 - 01/12/2020 (22:00 - 08:00) XX Time Asleep



Dancing To Our Own Tune

10th - 30th November 2020 (XX Time Asleep)



Sleep Better, Feel Better



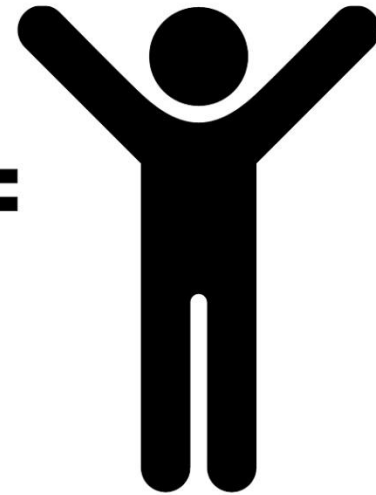
Healthy Body

+



Healthy Mind

=



Happy Human

Sleep Better, Feel Better

- Every major organ in the body is enhanced by sleep (and detrimentally affected when we don't sleep well)
- It is the single most effective thing you can do to reset your brain and body health each day and should be considered as a 'universal healthcare provider'
- Sleep enhances our ability to learn, memorise and make logical decisions
- It services our emotional circuits allowing us to better manage social and psychological challenges
- It provides a consoling neurochemical bath that reduces the severity of painful memories
- It provides a virtual reality space to meld together past and present experiences, inspiring creativity

Sleep Better, Feel Better

It also:

- Boosts our immune system
- Helps fight malignancy
- Prevents infection
- Fine tunes the balance of insulin and circulating glucose
- Regulates appetite (controlling weight)
- Aids nutritional health
- Lowers blood pressure while keeping the heart in good condition

A person with long dark hair is lying in bed, covered with a white sheet. They have their hands pressed against their eyes, suggesting they are trying to block out light or are distressed. In the foreground, on a bedside table, is a silver and gold alarm clock. The scene is dimly lit, creating a somber and unsettling atmosphere.

Waking Nightmare

Waking Nightmare

- Two thirds of adults in industrialised nations fail to get recommended amount of sleep
- Humans are the only species that will deliberately deprive themselves of sleep with no legitimate gain
- WHO have declared a sleep loss epidemic through industrialised nations
- People acclimatise to impaired performance, lower alertness and reduced energy levels – becoming the ‘norm’ or baseline

Waking Nightmare

- Sleep loss inflicts devastating effects on the brain and is linked to numerous neurological and psychiatric conditions, there are no major psychiatric conditions where sleep is normal
- The prevailing view in psychiatry has always been that conditions cause sleep disturbance but it's actually a two way street – many of the brains regions commonly impacted on by psychiatric mood disorders are the same regions involved in sleep regulation and impacted on by sleep loss
- *Alzheimer's – sleep disturbance precedes onset by several years (early indicator), onset can be delayed by 5-10 years but sleep is not a magic bullet*
- Suicidal Ideation
- PTSD
- Depression
- Bipolar Disorder
- Stroke
- Chronic Pain

Waking Nightmare

- The part of our brain responsible for triggering strong emotions (accelerator) such as rage which is also linked with the flight or fight response can suffer from a 60% amplification in emotional reactivity where there poor sleep
- The logical part of the brain (the brake) becomes uncoupled and so you end up with too much acceleration and not enough brake
- Rather than being constant, this is more like a pendulum swinging back and forth between the extremes

Waking Nightmare

- Sleep loss also impacts on the physiological system contributing to countless disorders and diseases
- Cancer
- Diabetes
- Heart Failure
- Weight gain / obesity
- Immune deficiency
- Overactive nervous system (flight or fight stuck in 'on' position), increases core temperature when we need to drop core temperature at night
- Routinely having less than 6-7 hours per night demolishes the immune system and doubles the risk of cancer

Waking Nightmare

- Having too little sleep swells concentrations of a hormone that makes you feel hungry
- It also suppresses a companion hormone that signals food satisfaction (despite being full you want to eat more)
- Attempting to diet without sleeping adequately won't be effective as most of the weight you'll lose will be lean body mass and not fat

Waking Nightmare

Other terrible truths:

- In the US, one person dies every hour from a fatigue related road traffic accident, vastly exceeding those caused by alcohol and drugs (developed countries spend a mere 1% of their budget on informing public about dangers of drowsy driving)
- Sleep disturbance is a hallmark of addictive substance abuse, relapse rates affected due to logical part of brain (the brake) being uncoupled
- Sleep disruption almost always precedes the shift from stable to unstable manic depressive state in those with bipolar
- Difficulty with sleep is highly prevalent in autistic individuals (40-80% prevalence in autistic individuals compared to 20-40% prevalence in neurotypicals)
- Deprived of REM sleep, you cannot accurately decode facial expressions, you mistake friends for foes and the outside world becomes a more threatening place and you start making inappropriate decisions
- Our nearest sleep clinic is 200 miles away, we do not have access to sleep specialists (apart from private specialists)

A photograph of a man sleeping peacefully in a bed. He is lying on his back with his arms raised above his head, resting on a white pillow. He is wearing a light blue t-shirt. The bed is covered with white linens, and a wooden headboard is visible at the top. The text "Sweet Dreams" is overlaid in the center of the image in a blue, rounded font with a white outline.

Sweet Dreams

Sweet Dreams

- <https://www.newdirectionsupport.com/improving-sleep-top-tips/>
- Stick to sleep schedule (set an alarm or another cue for bedtime)
- Exercise but not too late in the day and definitely not 2-3 hours before bedtime
- Avoid caffeine (takes as long as 8 hours to wear off) and nicotine (smokers sleep more lightly)
- Avoid alcoholic drinks before bed (robs you of REM sleep)
- Avoid large meals and beverages at night but you can snack (going to bed hungry will also cause disruption of sleep)
- Avoid medicines that delay or disrupt sleep
- Don't take naps after 3pm
- Relax before bed
- Warm bath / shower before bed
- Dark bedroom, cool bedroom, gadget free bedroom
- Sunlight exposure in mornings and turn down lights before bed
- CBT-I