

# Reset your Circadian Rhythms for Optimal Youthful Wellness

by

Jayne Goddard MSc, FCMA, FRSM

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Circadian Rhythms – how your body clock works and how to re-set it for optimal health, happiness, youthful vitality and performance.

The 2017 Nobel prize in Physiology or Medicine was awarded to a team of researchers who elicited the molecular mechanisms that control our circadian rhythms – our ‘body clock’ – for want of a better term.

The word ‘circadian’ comes from the Latin; circum means “around” and dies, “day”. This internal clock – seated deep in our brain – and also within every cell of our body, is now viewed as a key feature of life on Earth. It has hard-wired the rotation of the Earth into the very fabric of our cells over countless millennia.

We all aware of the temporal ebb and flow of the rhythms that shape our days. The most basic of these that we live by is the sleep-wake cycle, which should naturally be related to the cycle of the sun.

As our internal clocks sense evening hours coming on, a signal is sent out to increase melatonin levels and sleep ensues. Then, just before dawn, another array of hormonal messengers will begin to surge, readying us for wakefulness and the beginning of the day.

Aside from our sleep/wake cycles, other systems, including our appetite, stress, mental alertness, mood, heart function, and immunity also operate on a daily rhythm.

Jet lag and shift work can throw our normal healthy patterns out and are hugely detrimental to our physical and mental and emotional health. Even shifting the clock an hour forward or backward, to adjust for daylight savings time, considerably disrupts our biological clocks.

Traffic accidents and workplace injuries are far more frequent when we ‘spring forward’ and lose an hour of sleep. Heart patients are at greater risk for myocardial infarction in the week following the Daylight Savings time shift.

Very recent research has even shown that heart patients who are operated on in the afternoon fare better than those operated on in the morning. Furthermore, chronic health issues - diabetes, heart disease, cognitive decline – are all negatively affected by time shifts.



Thankfully, we are making huge advances in ascertaining more about how our body’s constellation of internal timekeepers interact with, and help govern, the function of our body systems and how this impacts our health - overall.

Keeping your body’s daily cycle balanced may be one of the best things you can do for your health. Hormones and our body clocks

As mentioned above, melatonin is just one hormone responsible for our modulating our body’s daily cycle. It is secreted in response to our environment getting darker – and this is one of the reasons why it is vital to sleep in total darkness – as, if any light intrudes, melatonin production stops and this disrupts our entire sleep cycle. ‘Sleep and Circadian Rhythm Disruption’ (SCRD) occurs when our natural circadian rhythms are pushed out of sync.

Even small changes in brain function have a big impact on sleep, and disrupted sleep leads to health problems ranging across increased stress hormones, heart disease, reduced immunity, increased risk of cancer, and emotional and cognitive problems. Severe SCRD is a feature shared by some of the most challenging diseases of our time – from serious eye disorders,

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schizophrenia and bipolar disorder to Alzheimer's and stroke.

Furthermore, lack of sleep is associated with an increase in the hunger signalling hormone 'ghrelin' which is why we often over-eat if we have missed sleep and this can rapidly lead to obesity.

Compounds that encourage the inflammatory response rise at night, (which is why we often feel worse in the evening if we are ill), and those that inhibit it rise during the day.

This is likely to be because our body is better at combatting infection while it is at rest and thus, energy can be recruited for healing, rather than into other functions.

Furthermore, activity of our stress response system - particularly the secretion of the stress hormone, cortisol, is reduced during night-time hours, and heightened in the early morning.

This is one of the reasons why people with the excruciatingly painful condition, rheumatoid arthritis, feel so much worse in the morning as excessively elevated cortisol causes their joints to be more painful and stiff.

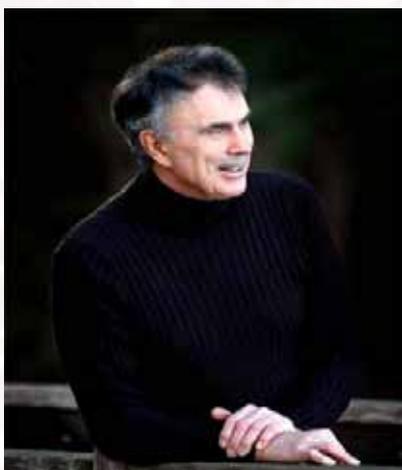
How to manage your body-clock for optimum health

If you have to undertake shift work and need to fly to different time zones as so many of us do, there is hope.

Dr Ernest Rossi, the respected psychologist, wrote an outstanding book called "The 20

Minute Break".

In this book, Dr Rossi explains exactly how to recognise and reorganise your natural rhythms, learning how to maximise your performance and health and become more resilient when faced with stressors.



Dr Ernest Rossi

Rossi's idea is that every 90 minutes or so you need to take a rest break - if you don't you may be well on your way to the Ultradian (rhythms that occur throughout the day) Stress Syndrome: you get tired and lose your mental focus, you tend to make mistakes, get irritable and have accidents.

If you continue to ignore your need to take a break you can experience more and more stress until you actually get sick. When you learn how to recognise your need to take a 20 minute break you can convert your stress into what Rossi calls "The Ultradian Healing Response".

Other proven ways of promoting circadian balance include; keeping your schedule on track as much as possible, try to avoid disruptions to your eat-sleep cycles, practice

good sleep hygiene, and stick to a sleep schedule that works well for your body.

Going to bed a little earlier, and cutting back - or ideally eliminating - caffeine after lunch time and avoiding alcohol - a known sleep disruptor - will all help to dramatically improve your natural balance and always try to save that last bit of work for the morning rather than staying late up to finish it.

All these adjustments will make a big difference to how your internal clock functions and in how you both look and feel - and may well protect you from serious chronic disease.

About the Author:

Jayne Goddard MSc, FCMA, FRSM is one of the world's leading natural youthfulness and rejuvenation authorities.

Jayne specialises in helping women regain their natural energy, zest for life, inner glow and outer beauty.

She is a respected and popular journalist and TV personality.

What makes Jayne unique in her field is that everything she shares about natural health is evidence-based, so that you can be certain that what she shares with you is safe, accurate and properly researched.

Read more of Jayne's fascinating articles on her blog at

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