

There is only one way to drink coffee!

Medium Lifestyle

Till Daling

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Photo by BRUNO CERVERA on Unsplash

Do you ever drink coffee and feel like it just didn't work?

If so, you're not alone. The way most people drink coffee, being right after waking up, is not optimal.

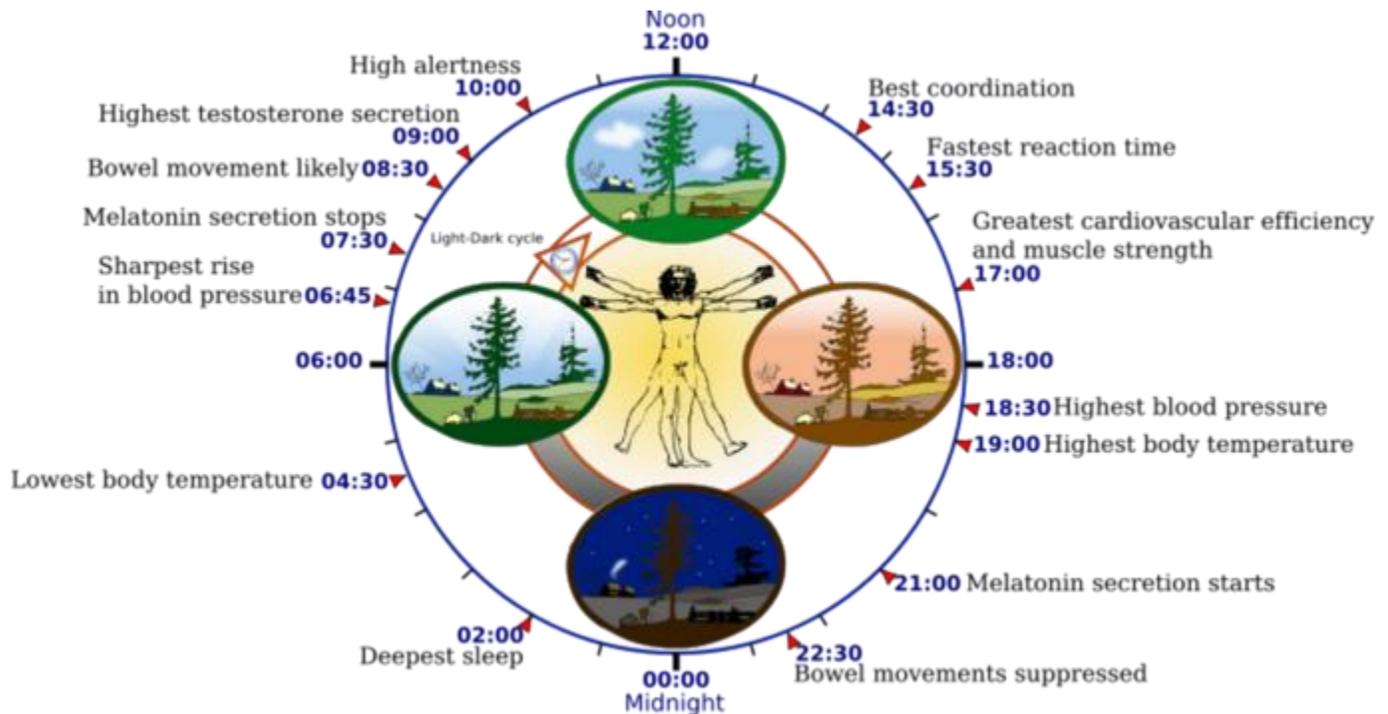
But we've got you covered. We've researched and experimented and found out the best times to drink coffee.

So without further ado, let's get into it.

Chronopharmacology

We're all different. But there are a few things we all have in common. One of these things is a *circadian rhythm* –our 24-hour hormonal cycle which dictates a host of bodily processes. It's mainly genetically programmed but is also influenced by external and internal environmental stimuli, also known as a *zeitgeber* (1) –light, temperature, drugs, etc.

Here's a graphical overview of our circadian clock, taken from wikipedia.



Chronopharmacology describes the interplay of biological rhythms (i. e. circadian rhythm) and drug action (e. g. pharmacokinetics, drug efficacy, tolerance, etc.). This is important to keep in mind as we'll look at the interaction of *cortisol* and *caffeine* later.

The thing with cortisol

We all know cortisol as the *stress hormone* –acute and transient rises promoting alertness and vigilance while chronic overproduction leads to high blood pressure, insulin resistance, adiposity among others things.

The production of cortisol is controlled by the *suprachiasmatic nucleus* (SCN) in the hypothalamus which is also known as the *master clock* of the circadian rhythm as it regulates the secretion of hormones responsible for the sleep/wake-cycle, blood sugar control, and many other things. The SCN is strongly regulated by the previously discussed zeitgebers.

Two more important points on cortisol:

1. You have three different time spans in which cortisol generally peaks: 8:00–9:00am, 12:00–1:00pm, 5:30–6:30pm (2).
2. Waking up is accompanied by the so called *Cortisol-Awakening-Response* (CAR) which results in an approximate 50% increase in cortisol upon awakening (3).

Think of the morning cortisol rise as a natural way to wake you up.

Cortisol and Caffeine



“A barista pouring coffee into a mug that says ugh on it at Bar Nine” by Nathan Dumlao on Unsplash

When cortisol levels are naturally high, it’s not a good time to drink your coffee.

You might think that the cortisol peak and additional caffeine potentiate each other leading to an increase in alertness and wakefulness but this doesn’t happen.

In fact, the exact opposite happens.

But why is that?

The reason is twofold:

1. Caffeine tends to interfere with the production of cortisol. Over the time, the body then produces less of the hormone and relies more on the caffeine (4). Furthermore, caffeine consumption during peak hours of cortisol greatly diminishes caffeine’s effects.
2. Drinking coffee while cortisol levels are high leads you to develop long-term tolerances for caffeine. Caffeine is a drug after all and a principle of chronopharmacology is that a drug should only be taken when needed or otherwise tolerance sets in and the effects stay out.

What most people (unknowingly) are referring to when they say that they've built up a tolerance for caffeine is that caffeine replaces the boost they would ordinarily get from cortisol rather than supplementing it.

The Best Time To Drink Your Coffee

Therefore, the best time to drink your coffee is in between cortisol peaks –i. e. 9:30–11:30am and 1:30–5:00pm.

I don't recommend drinking coffee 6–8 hours before bed time, as it can disrupt your sleep (5).

Nowadays, I wake up at around 7am or 8am and drink my coffee around 9:30–10:00. And you know what? I can “feel” the coffee again –the buzz, the warmth, the increase in wakefulness and focus, and no jitters which I'd get if I drink coffee immediately upon waking.

And all without ever discontinuing caffeine consumption for decreasing tolerance.

The second time slot is also convenient for me as I train in the late afternoon/ early evening.

The Takeaway

In the morning, let your body wake up naturally first. Then drink your coffee.

Use coffee as an optimization tool and not for compensation.

A few words for early risers: If you wake up very early, like at 5:00am, and feel that you need a coffee wait about an hour or so before consuming it because independent of the time that you'll wake up your body will initiate the CAR and cortisol will peak to some degree.