

# Stehkraft

ZENO KOLLER – STANDING BY

**No, this article is not about certain kinds of spam mail. I'm talking about the literal meaning of this German term: "Standing Power".**

In recent years, standing desks have gained quite a following among people working with computers. In the same vein as healthy diets and self-tracking, it is a result of society becoming more health-conscious. The claimed risks of a sedentary lifestyle push people out of their seats. The Apple Watch keeps tabs on one's sitting and standing intervals and uses badges to nudge achievement-hungry users into reaching their daily goals. Many computer scientists have also jumped on the bandwagon: Gone are the times of the cliché programmer – a desk-bound,

Jabba-the-Hutt-like creature, feeding on coffee and pizza. Now, more and more tech companies provide standing desks for their employees. While they may seem like a fad, standing desks have been around for several centuries! Famous historical standing desk users include Benjamin Franklin, Winston Churchill and Ernest Hemingway<sup>[1]</sup>.

## Pros and Cons

Now, what are the apparent benefits of a standing desk? First off, standing burns more calories than sitting, so you can eat more cake. Studies have also shown that sitting for prolonged periods throughout the day is correlated with diabetes and heart disease. These studies, however, do not state that just standing up while doing office work is the solution.<sup>[1]</sup> Standing all the time comes with its own set of problems: It increases the load on the circulatory system, which can cause varicose veins. Also, not having your keyboard and monitor set up correctly will cause posture-related problems.<sup>[2]</sup> The bottom line is that too much of anything is bad for you. Ideally, a workplace should let you alternate between sitting and standing. And if you're concerned about your health, you should just engage in regular movement.

As for myself, I've started doing assignments and such in a standing position about two



The VIS Büro could use some standing desks as well...



An Apple Watch (not mine) giving orders.

years ago. My goal was not to reap any health benefits, but I felt I could concentrate better for prolonged periods while standing. My initial experiences were positive: I felt that I was more productive. Also, I did not suffer from back or leg pain, which many complain about.<sup>[3]</sup> Initially, I would stand for up to three hours at a time. Meanwhile, my habits have shifted a bit, such that I now regularly switch positions and walk around a bit in between.

### The Standing Guinea Pig

My interest in standing desks has recently led to me participating in a study at ETH's Sensory-Motor Systems Lab <sup>[4]</sup>, which explores muscle fatigue related to prolonged standing. This research is more concerned with occupations where workers have to stand, not choose to stand: think waiters, shop clerks or security guards. The SUVA (Swiss work safety agency &

insurance) has some rules about how regularly workers should take breaks, but they have no scientific basis. Establishing this basis is the goal of this experiment. The two days of the study consisted of cycles of standing for either 30 or 45 minutes followed by short sitting breaks. In order to measure muscle fatigue, my blood oxygenation was measured regularly. I also received some electric shocks and had to perform a task in which I had to control a cursor on a screen with a gas-pedal-like assembly. Apart from the electric shocks, participating in the experiment was a lot of fun: I could work in an office full of intriguing, custom-made machinery – including an indoor rowing simulator. The results of the study are not published yet, but my objective experience was that taking breaks after the 30-minute mark was a lot more sustainable than doing so after 45 minutes. After the shorter standing periods, the break felt not yet needed but pleasant; after the longer ones, sit-



My custom setup using an Errex Shelf



Coke-can standing desk

ting down was a relief. Having had this lab experience, I now pay attention to taking breaks more regularly.

### Want to get your own?

If you're in the market for a standing desk, there's plenty of choices. The top end features designer tables that have a motor for adjusting height. You'll find out online how these compare, for example at <sup>[5]</sup>. If you're not keen on shelling out heaps of money, IKEA also has affordable electrical options. Mid-tier models have a crank for changing the height manually. Building your own setup is even cheaper. Be creative! My current "standing desk", for example, is an industrial shelf assembled such that the top shelf is at an elbow height. A wooden crate elevates my laptop to screen height. Or how about repurposing your pile of ETH textbooks? You can look online for even more inspiration. Notable is the "Stand-desk 2200" <sup>[6]</sup>, a quite sturdy solution using \$22

in IKEA parts. In any case, before investing in any furniture, you should first build and test such a budget solution to see whether standing is for you.

While make and model of your standing working area are a matter of your personal taste, keyboard and screen position are important for ensuring correct posture. The rule of thumb is quite simple: The screen should be at eye level so that you don't hunch over it. The keyboard should be placed to allow your elbows to rest while bent to 90 degrees. Apart from that, take breaks and get moving regularly. While long-term health benefits are not really a motivator, the short-term gain is that it's just refreshing to do so!

A small gripe of mine is that ETH, despite its many study spaces, is not an ideal environment for students that would like to do some of their work standing. To be fair, acquiring and maintaining a collection of height-adjustable

desks is not exactly cheap. In the CAB, there are some hints of possible places for doing standing work: the tables in the former chemistry lab and the red and yellow tables below the stairs on the G level. Both are not really intended to be used as such, and ergonomically, they present a compromise as they're a bit too low. The HG building has white bar tables scattered around, but they just serve as places to quickly answer some e-mail. The same applies to the Z-shaped tables that can be found in many of ETH's buildings. If anyone finds more options, please contact me... ”

### Quellenangaben

- [1] [https://en.wikipedia.org/wiki/Standing\\_desk](https://en.wikipedia.org/wiki/Standing_desk)
- [2] <http://healthland.time.com/2011/04/13/the-dangers-of-sitting-at-work—and-standing/>
- [3] <http://blog.crew.co/why-i-killed-my-standing-desk/>
- [4] <http://www.sms.hest.ethz.ch>
- [5] <http://thewirecutter.com/reviews/best-standing-desk/>
- [6] <http://iamnotaprogrammer.com/ikea-standing-desk-for-22-dollars.html>

ANZEIGE

## ATEGRA: An vorderster Front dabei.



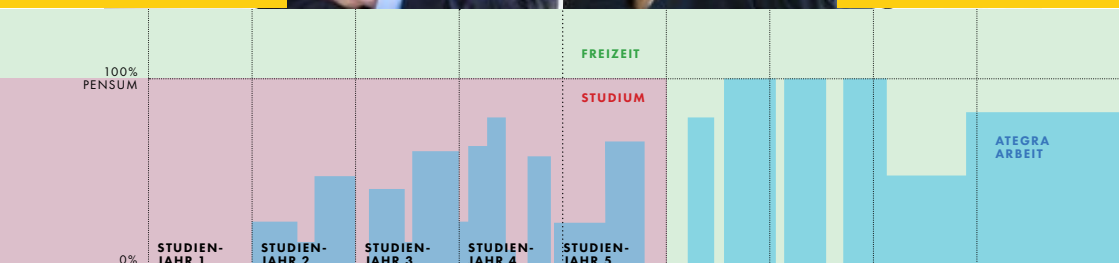
«Die Arbeit als Werkstudent bei der ATEGRA ist für mich eine ideale Gelegenheit, um neben dem Studium bereits Berufserfahrung zu sammeln und mein Studentenbudget aufzubessern. Da ich sehr flexibel wählen kann wann, wo und wieviel ich arbeiten will, lässt sich die Arbeit bei der ATEGRA auch problemlos mit dem Studium unter einen Hut bringen.»

Roland B.



«Im Jahr 1998 habe ich als Werkstudent bei der ATEGRA angefangen, mit dem Ziel das Studium zu finanzieren. Heute arbeite ich immer noch für die ATEGRA. Nach all dieser Zeit und vielen nationalen und internationalen Projekten bin ich noch immer der Meinung, dass die ATEGRA mir das optimale Arbeitsumfeld bietet.»

Michael, dipl. Informatik-Ing  
ATEGRAner seit 15 Jahren



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