

# Wellness Corner Connection

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## Are You Sleep Deprived? Effect on Cognitive Performance

We are all familiar with the recurring pattern of the sleep-wake cycle, comprising of cycles of alternating sleep and wake over a period of 24 hours (in normal circumstances).

Sleep pressure and sleepiness, however, often vary during this 24-hour cycle. Sometimes we feel sleepy during the day, sometimes we have trouble falling asleep at night, sometimes we wake up too early and can't get back to sleep afterwards.

Such fluctuations can be explained by the interaction between the homeostatic and the circadian rhythm.

**Homeostatic Process:** is simple, the longer you are awake the higher the sleep demand will become.

However, just because the body demands sleep, it requires **the circadian rhythm** to actually allow us to fall asleep. Often referred to as the "body clock", the circadian rhythm is a cycle that tells our bodies when to sleep, rise, & eat, regulating many physiological processes. This "clock" is also affected by environmental cues like sunlight, and temperature.



With the many demands we place on ourselves to *get it all done in a day*, we are experiencing "prolonged wakefulness" according to studies done by NCBI (National Center for Biotechnology Information). Sleep deprivation (SD) can have a huge impact on our attention span and working memory, but it also impedes our long-term memory and decision-making skills. For those professions (Police, Fire, EMS) requiring working at night, SD is crucial. The need for sleep varies significantly based on the individual. The average sleep length is between 7 and 8.5 hours. Sleep is necessary for body restoration. Sleep loss activates the sympathetic nervous system which is the same response developed during "Fight or Flight". This increased level of the stress hormone, cortisol, can lead to a rise in blood pressure, can impair our immune responses as well as our metabolism which can cause insulin resistance (an extreme condition in which cells fail to respond normally to insulin in our bodies which could lead to high levels of blood sugar and diabetes).

According to the MayoClinic, there are a few things you can do to improve your chances of a good night sleep:

- Stick to a sleep schedule—Go to bed and get up the same time every day, even on the weekends. I know it's tempting to "sleep in" on your day off but staying consistent will reinforce the sleep-wake cycle (see side bar for more details) and help promote better sleep at night.
- Pay attention to what you eat and drink—Don't go to bed hungry or stuffed. Limit how much you drink to minimize the middle of the night trips to the toilet. Avoid nicotine, caffeine and alcohol (at first you may feel sleepy from the alcohol, but it can disrupt your sleep later in the night.)
- Create a bedtime pattern—which will alert your body it's time for bed. Maybe a warm bath or shower, reading a book, or listening to soothing music. Beware of watching TV or electronic devices which stimulates your brain to be alert. Plus you probably have been on your computer all day...give yourself (and your eyes) a break.
- Create a comfortable room for sleep—Keep it cool, dark and quiet. Consider room-darkening shades, earplugs, a fan, eye mask, especially if you are on shift work.
- Include some physical activity in your day—30 minutes most days of the week is recommended by the AHA.
- Try to manage stress—Get organized, try meditation, write down your "to-do" list so you can get tomorrow off your mind.

Block your clock so you don't keep glancing at it and cause your mind to race with thoughts.

Sleep with a pillow between your legs to minimize back pain

Seal your mattress from allergy causing triggers. Air-tight, plastic, dust-proof covers work best.

Get out in bright light for 5 to 30 minutes as soon as you get out of bed to help get your body ready to go!

Warm milk or chamomile tea really does help you sleep.

Sources: Alhala, P. and Polo-Kantola, P. (2007) Sleep Deprivation: Impact on cognitive performance. NCBI. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2656292/>

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## Unplug From The Dangers of Technology

Too much screen time can hurt your health! More than 87 percent of Americans report using digital devices for more than two hours per day, and 52.2 percent report using two digital devices simultaneously. Here are a few tips to avoid letting your gadgets get the best of you.

### Desktop and Laptop Computers:

Hunching over a computer monitor for extended periods can result in eye and vision problems, like eyestrain, blurred vision and dry eyes. It can also cause headaches, and neck and shoulder pain.

#### What to do?

- 1. Set up your workstation properly.** Adjust your chair, monitor and keyboard for your height and optimal viewing distance. When you sit at your computer, your eyes should either gaze at the top of the screen or directly in the center.
- 2. Reduce glare.** Adjust your monitor to avoid glare from windows or overhead lighting.
- 3. Practice good posture.** Don't hunch your shoulders or cradle a phone in your neck while typing. Practice sitting up straight, stretching your shoulders and back at least every hour, and use a phone support or headset to avoid neck strain.
- 4. Take regular breaks.** Try the 20-20-20 rule. Take a 20-second break every 20 minutes to focus your eyes on an object at least 20 feet away.

## THE 20-20-20 RULE

Reducing the effects of Computer Vision Syndrome

EVERY  
20 MINUTES...

...TAKE A BREAK  
FOR 20 SECONDS...

...AND LOOK AT AN  
OBJECT 20 FEET AWAY.

### Smartphone or tablet

Frequent use can lead to throbbing hand, finger and thumb pain. It can also cause text neck, an injury that's caused by constantly looking down at your device.

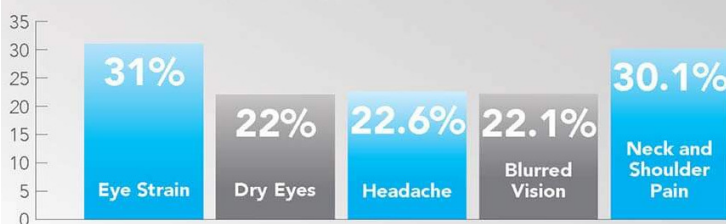
#### What to do?

- 1. Raise up your device.** Keep devices at a comfortable distance just below eye level to avoid putting pressure on your neck.
- 2. Stretch it out.** Relieve muscle tightness by looking up and arching your upper back.
- 3. Flex your fingers.** Try these exercises (hold each position for 5 to 10 seconds and repeat 10 times).

- Extend and flex wrists forward and backward
- Rotate forearms so palms face up and then down
- Make a fist, then spread your fingers out

### What Is the Impact?

Americans report experiencing the following symptoms of digital eye strain:



### Video gaming

Too much video gaming can lead to repetitive stress injuries in your wrist, hand and thumb that can make it difficult to grasp objects. It can also cause headaches and eyestrain, back pain and sleep disturbances.

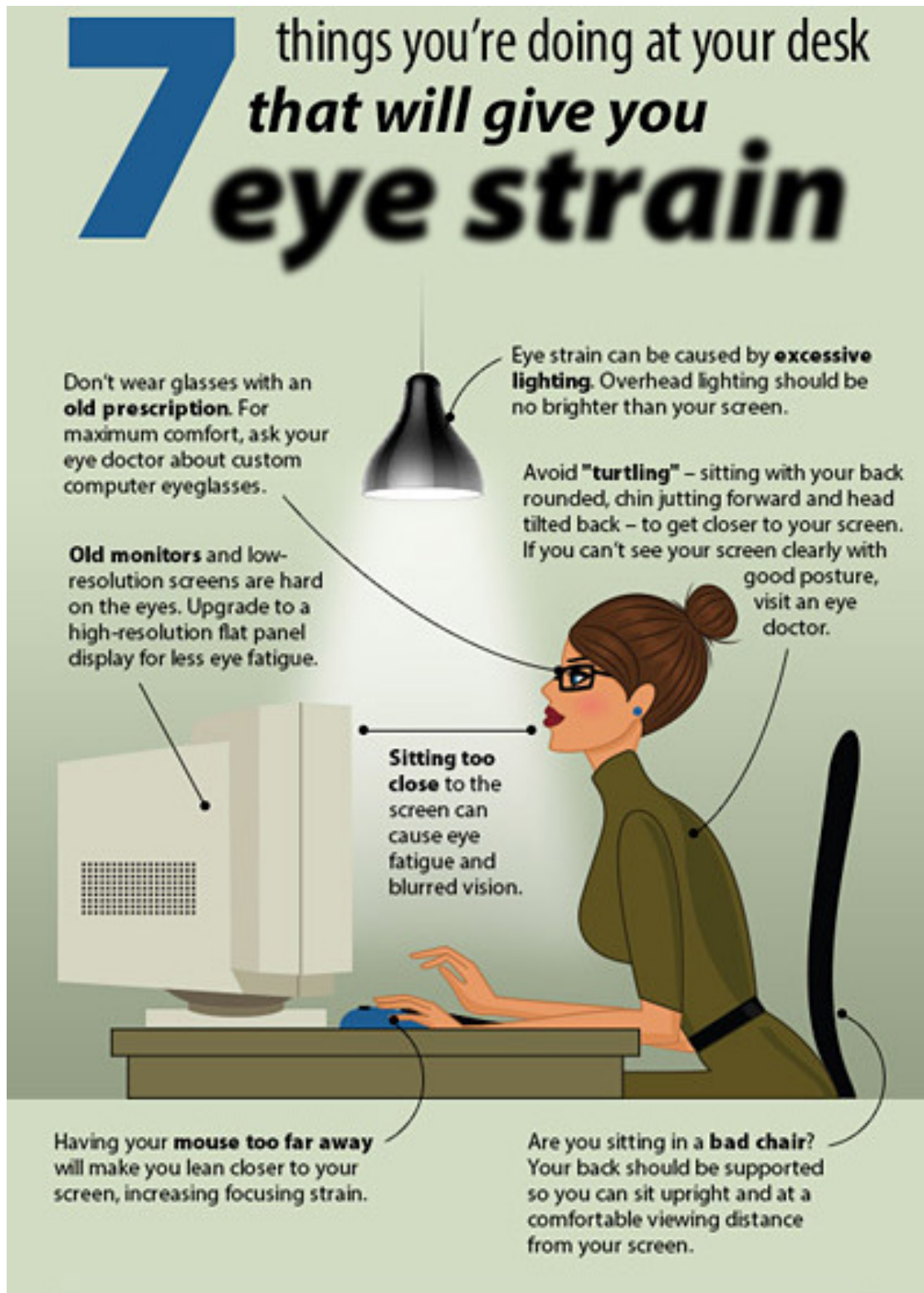
#### What to do?

- 1. Set time limits.** Take a break every 30 minutes to get up and move around.
- 2. Stop playing** if you're experiencing pain in your hands or thumbs.
- 3. Unplug for a good night's sleep.** Turn off video games at least one hour before bedtime.

Americans are becoming increasingly digitized, with more of our daily tasks moving online. For example:



Sources: The Vision Council



#### What is Blue Light Exposure?

Aside from sunlight, digital screens – like those of TVs, computer or laptops, smart phones and tablets – are the most common source of individuals' blue light exposure. Blue light can penetrate deep into the eye and studies suggest that there may be a connection between exposure to blue light and:

- Damage to the retina
- Long-term vision problems such as age-related macular degeneration (AMD) and cataracts
- Suppressing the natural release of melatonin and increasing alertness to the brain, disrupting sleep (More than 80 percent of Americans report using digital devices in the hour before going to sleep)

**Avoid "computer stare":** It's easy to forget to blink when looking at a computer screen. Remember to blink often and fully to keep your eyes moist and comfortable.





## A Body of Water

Next to air and a nerve supply, water is probably the single most important thing that you can put into your body. Every system in the body uses water to function properly, and a lack of water can show itself in a variety of ways.

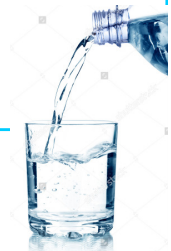
Many conditions that afflict the body are aggravated by lack of sufficient water intake, including headaches and migraines, fatigue, muscle spasm, digestive disorders, mood swings, and generalized pain.

Our bodies have been referred to as "hairy bags of water" for good reason. On average water comprises about 60% of our bodyweight and a reduction in water volume can throw the body out of its delicate balance. We continually lose water through several processes; primarily breathing, sweating, and urination. Therefore, in order to maintain sufficient water levels it is essential that we replenish what is lost.

Although there is some debate as to how much water we should ingest, a good general rule of thumb is to drink eight 8 ounce glasses per day. This will vary depending upon factors such as your activity level, the temperature, and your level of health, but on average is enough to keep most of us hydrated. Another mention is to drink half of your weight in ounces. For example, if you weigh 150lbs, you should drink 75oz. of water a day. For many that might be difficult to achieve.

### Follow these tips to keep you healthy and hydrated:

- Keep a water bottle with you at all times. A good quality stainless steel bottle can be used indefinitely.
- Filter your water. To reap the healthy benefits of water, it is essential to filter out the chlorine, heavy metals, harmful microorganisms and other contaminants.
- Take frequent sips. To avoid dehydration drink frequently through the day rather than wait until you are overwhelmed by thirst.
- Eat plenty of foods that are high in water content, such as fresh fruits and vegetables.
- Increase your water intake during exercise, especially in hot weather.
- Try to drink two glasses between each meal and one during your meal if possible.



Water slows down the aging process and makes skin smooth

## The Miracle That Is **WATER**

What does water do for the human body?

**75%**  
of Americans are chronically dehydrated!

Dehydration taxes the heart by causing it to pump faster to get sufficient oxygen to your muscles.

Water lessens addictive urges, including caffeine, alcohol and certain drugs

Water prevents loss of memory as you age

Water is essential for the body to sweat and release toxins.

Water allows red blood cells to carry oxygen more efficiently, resulting in better muscular function and increased mental acuity

Without the flow of water, there is insufficient water to remove waste and toxins through your stool

Water allows for efficient cell repair

Water lubricates joints and lessens discomfort from arthritis or back pain

A University of Washington study discovered that one glass of water stopped hunger pangs for almost **100%** of studied dieters



Visit <http://dish.allrecipes.com/fresh-ideas-for-making-infused-water/> for ideas on infused water!

Water cleanses toxic waste from various parts of the body and carries it to the liver and kidney for removal

**The Lesson to be Learned? Drink More WATER!**

## Avocado As A Healthy Substitute

Try using avocados as a healthy alternative to butter, mayonnaise, sour cream, cream cheese, cheese, onion dip, etc! Add a twist and nutritional boost to your eating routine by substituting avocado for popular ingredients that you use in your daily meals. Avocados are loaded with nutrients and healthy fats, and there are many ways to work them into your diet or use them as a substitute while cooking. Consider using avocados instead of mayonnaise in your tuna fish, in your brownies instead of butter, and tossed in your salads as an alternative to heavy dressing. There are many benefits to using avocado as a healthy substitute for butter, mayonnaise and many other ingredients. These benefit include adding 20 vitamins and minerals to your diet and boosting the nutrition uptake of other foods eaten along with avocado.

Here's the skinny—take a look at how avocados compare to common ingredients:

SPREAD AND DIP		NUTRITIONAL COMPARISON			
	Fresh Avocado	Butter, Salted	Sour Cream, Cultured	Cheddar Cheese	Mayonnaise, with salt
Portion (1-ounce)	2 Tbsp. or 2-3 thin slices	2 Tbsp.	2 Tbsp.	1 slice	2 Tbsp.
Calories	50	204	60	114	109
Total Fat (g)	4.5	23	6	9.4	9.4
Sat Fat (g)	0.5	14.6	3.7	6	1.4
Cholesterol (mg)	0	61	13	30	7
Sodium (mg)	0	164	15	176	199

Avocados are a great way to lower calories in baked goods when substituted for butter. When you bake, substitute half the amount of butter in your recipe for mashed avocado. This will not only lower the calorie content, but also yield a softer, chewier final product, where the taste of avocado is indistinguishable.

### Ribboned Asparagus and Quinoa Salad

Recipe Corner



Recipe from cookieandkate.com

1. Cook the quinoa (I like to make extra for more salads and for breakfast, 1 cup of dry quinoa yields over 3 cups cooked quinoa). Combine rinsed quinoa with twice as much water in a saucepan. Bring to a boil, cover and reduce heat to a simmer. Cook for 15 minutes or until water is absorbed, remove from heat and fluff with a fork.
2. Shave the asparagus with a vegetable peeler. To do so, hold the tough end of the asparagus against a cutting board, and peel from the tough end toward the tip. (See tips above)
3. Toast the pine nuts. I prefer to do this in a skillet over medium heat, stirring often, but you may get more even results by baking at 350 degrees for 5 to 10 minutes (stirring often). I use the skillet method because I tend to get distracted and forget about them in the oven! You want the pine nuts well toasted, meaning golden but not burnt.
4. Zest the lemon (if desired) and slice it in half.
5. In a bowl, combine cooked quinoa and shaved asparagus. Squeeze in most of the juice of half a lemon (add more to taste later) and a good drizzle of olive oil. Sprinkle with sea salt and ground black pepper and toss to coat. Sprinkle with pine nuts. Use your vegetable peeler to shave Parmesan directly onto the salad. Don't skimp on the cheese! Top with lemon zest. If necessary, add more lemon juice, olive oil, or salt and pepper to taste.

### INGREDIENTS

- 3/4 to 1 cup cooked quinoa (see step 1 below)
- 6 to 7 stalks of asparagus (almost a handful)
- 1 small lemon
- olive oil (the good stuff), to taste
- Sea salt, to taste
- Black pepper, to taste
- 2 tablespoons pine nuts
- 1 to 2 ounces Parmesan, shaved

### CHOCOLATE AVOCADO PUDDING/MOUSSE

This recipe was given to me to try. I have since made it over and over again and absolutely LOVE it!! If you like pudding or mousse, you will enjoy this! And it's so simple! Top with sliced banana or drizzle of peanut butter.

Blend all ingredients together in a food processor or blender.

- 2 small/medium very ripe bananas
- 1 avocado
- 6 pitted medjool dates
- 2 heaping Tablespoons almond or peanut butter
- 2 Tablespoons cocoa powder
- 1/2 teaspoon vanilla
- 4 Tablespoons of water

I put mine in the freezer just to give it a jump start on getting cold. It's fine to keep in the refrigerator.

### Top 5 Reasons To Substitute With Avocados:

1. Avocados are packed with vitamins and minerals.
2. Avocado oils help reduce cholesterol and fight against heart disease.
3. Avocados contain heart-healthy monounsaturated fat. This kind of fat can lower LDL (bad) cholesterol and maintain HDL (good) cholesterol, while decreasing belly fat.
4. Avocados reduce your intake of unhealthy calories. For example, a 3.5 oz. serving of avocado contains 14.66 g of fat, while the same size serving of butter contains 81 g of fat. By substituting avocado for butter in your baking you are greatly reducing your calorie intake.
5. Convenient availability of hand-picked fruit available in stores and produce vendors.

### Other Seasonal Veggies in May:

Okra  
Zucchini  
Rhubarb  
Artichokes  
**Asparagus**  
Spring peas  
Broccoli  
Lettuce

