Productivity Action Plan for the Digital Entrepreneur
Volume One: Head and Neck

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Chapter 1:
COMBATTING SCREEN FATIGUE

In this technology-driven world, you may often find yourself facing a digital screen. Perhaps you awaken each morning to your phone glowing as its alarm sounds. You could then go on to work in front of a computer for much of the day. When you do have a break, you may turn your attention to yet another screen such as a smartphone or television.

When you have excessive screen exposure, you can develop symptoms like headache, blurry vision, and eye irritation. The condition has been termed screen fatigue, but it goes by a few other names like digital eye strain and computer vision syndrome.

There are several signs and symptoms of screen fatigue:

- Dry or watery eyes.
- Blurred or double vision.
- Eye irritation like soreness, burning, or itching.
- Headache.
- Neck, back, or shoulder pain.
- Increased sensitivity to light.
- Difficulty concentrating.
- Difficulty keeping eyes open.

Because so many people are technology users, whether at work or at home, screen fatigue is a common syndrome. After the coronavirus pandemic emerged, however, screen fatigue became even more prevalent owing to the spike in the use of video chat.

How to avoid screen fatigue

1. Adopt the "20-20-20" technique.

Follow this simple rule recommended by the American Optometric Association (AOA) and the American Academy of Ophthalmology (AAO). For every 20 minutes you spend looking at the same screen, take a 20-second break to look at something 20 feet away. It may be helpful to set a 20-minute timer on your phone to remind you about your screen break.

2. Reduce glare and bright light.

Bright lighting and excessive glare on your screen can cause you to strain your eyes. Adjust the computer settings or use a matte filter over your screen to decrease glare.

Check the light sources above and behind you. Sunlight and fluorescent lighting tend to be the most problematic. Avoid placing your computer monitor directly in front of a window. Close blinds or window shades if necessary.

If you need a light source to do work, then use an adjustable desk lamp with a dimmer. This allows you to position the direction of the light and modify the intensity as needed.

3. Choose screen settings that are comfortable for your eyes.

Check the contrast and brightness of your computer screen. Also, select a text size that is easy for you to read.

4. Position your computer monitor appropriately.

Adjust your monitor so that it sits 24 to 26 inches (about an arm's length) away from your face. The top of the monitor should be right at or just below eye level so that your eyes point slightly down when you are looking at the screen. Having an adjustable chair is helpful as well.

5. Blink often to keep your eyes moist.

Many people tend to blink less often when performing computer work compared to doing offscreen activity. This can result in the development of dry eyes. When you blink, you produce tears that refresh your eyes. So when you're spending a lot of time looking at a screen, be intentional about blinking frequently.

6. For screen use at night, wear glasses that block blue light.

Blue light is part of the visible light spectrum. Thus, it is light that the human eye can see. The sun emits blue light. Light-emitting diode (LED) technology has a fair amount of blue light, too. LED screens are used on TVs, tablets, computers, and smartphones.

If you are looking at an LED screen at night, the blue light may interfere with your body's natural melatonin production. Melatonin helps your body relax and fall asleep. So you may experience sleep disruption due to blue light exposure at night. Daytime fatigue resulting from poor sleep makes eyestrain problems even worse.

In this case, blue light blocking glasses may prove helpful to you. Studies have shown that such glasses may increase sleep quality and duration.

7. Consider supplementation: Lutein, zeaxanthin, and bilberry.

Lutein and zeaxanthin are antioxidant nutrients that accumulate in the lens and retina of the human eye, so they are important for healthy vision. Food sources are mainly green and yellow fruits and vegetables like corn, kale, and spinach.

Research has shown that lutein and zeaxanthin supplementation may improve sleep quality, visual performance, and alleviate the negative effects associated with prolonged digital screen time. According to the National Institutes of Health's (NIH) Age-Related Eye Disease Study 2 (AREDS 2) study, the typical recommended daily dosage is 10 mg lutein and 2 mg zeaxanthin.

Bilberry is a small type of blueberry native to Northern Europe. There is research showing that bilberry extract can decrease eye muscle strain for people working on computer screens. Bilberry may interact with some medications. For example, there's a possible risk of increased bleeding if you are taking a blood thinner. So it is wise to consult your healthcare practitioner before starting supplementation.

8. Manage Zoom fatigue (or videoconference fatigue).

"Zoom fatigue" is a term that health experts have coined to describe the worry, burnout, or tiredness associated with the overuse of virtual platforms for communication. It is not the same thing as screen fatigue. However, many of the things that are helpful in preventing Zoom fatigue either reduce the work your eyes are doing or they improve the physical exhaustion that makes eyestrain worse.

Here are some ideas to help you avoid Zoom fatigue:

A. Switch from gallery view to speaker view.

The amount of eye contact during a videoconference can be significantly higher compared to an in-person encounter. When sitting amongst others in a live meeting, people will vary the direction of their gaze. They look at whoever is speaking. Then, they may glance down to take notes. Here and there, they may take a glimpse out the window or randomly survey the people seated with them.

Conversely, in a videoconference, you often find yourself looking at a screen with several faces staring back at you. Even if you're not the speaker, it can feel like you are "on stage." If you get even a little bit anxious about speaking in public, having so many eyes on you can be quite a stressful experience whether or not you say anything.

B. Reduce the size of your videoconference window relative to your monitor.

When you leave the full-screen mode, you are able to minimize the face size on your computer screen. The size of the face that you view on a screen is relevant because of how your brain perceives it.

When a face occupies a large portion of the screen, it simulates what you would experience if you were in a live conversation with a person whose face was in close proximity to yours. This type of intimate situation can put your body in an overstressed or hyperstimulated state that you must manage for the duration of the video chat.

Another option is to position yourself further away from your computer monitor. The goal is to increase the perceived personal space between yourself and the other videoconference participants.

C. Reduce the number of images and information that you see on your screen.

In a standard live face-to-face conversation, your brain picks up and interprets the non-verbal cues coming from the person with whom you are speaking. This helps you form an overall impression of the interaction.

It is more challenging, however, for your brain to process several faces at the same time. Often times, a videoconference actually presents multiple "boxes" for your brain to decipher – each featuring different faces, gestures, expressions, and backgrounds.

When your brain spends prolonged periods of time splitting its attention amongst the many variables on the screen, it can leave you feeling very exhausted.

To prevent mental fatigue, consider asking participants to use a plain background or the same virtual background (perhaps a serene ocean view). Your group could also agree that anyone not talking should turn off their camera.

D. Remove your own camera view (i.e. your image) from the screen.

Staring at yourself for long periods of time can be distracting causing further stress for your mind and body to manage. Studies have showed that when people see a reflection of themselves, they go into self-evaluation mode and can even be negatively critical. To remove your own image from your screen, you may select the “hide self-view” option or you can simply turn off your camera.

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Chapter 2:
TOP TIPS FOR EYE HEALTH

Good vision can play an important role in your function, mobility and overall enjoyment of life. While many accept worsening eyesight as a common occurrence with aging, there are actually several lifestyle tips you can implement you can implement to help you maintain visual health.

Decrease screen time. Technology has become such an integral part of life, both personal and professional, for so many people. You may find that you are spending more and more time with your eyes focused on an electronic screen, be it a smartphone or a computer. Adverse effects of staring at a screen for long periods of time have actually become so prevalent that the condition has been termed computer vision syndrome (also known as visual fatigue or digital eye strain). Symptoms can include dryness, burning, headache, tearing, irritation, blurred vision, and sensitivity to light.

Consider the following strategies for cutting down screen time at work and home:

1. Follow the 20-20-20 rule. Look away from the screen every 20 minutes and set your gaze on an object at least 20 feet away from you for about 20 seconds.
2. Track how much time you're spending on a smartphone or computer. You can't manage your screen time until you measure it. You may find that you can cut back on screen activities like social media, playing games, or watching videos.
3. Remove notifications for things you don't absolutely need to know immediately as they happen. Getting notified for every news story, email message, or social media post only gives you more excuses to look a digital screen.
4. Schedule your email management. Designate certain times for checking and responding to emails, maybe for 30 minutes after breakfast, lunch, and dinner. When you put yourself in control of your email correspondence, it is less likely that you will let it consume so much of your day.

Reduce glare and ambient light when viewing a screen. Eye strain can result from excessive lighting as well as from reflections on your screen. Try installing an anti-glare screen on your monitor. Eliminate sunlight coming through a window with drapes or blinds. Reduce bright interior lighting by using fewer light bulbs or switching to lower intensity bulbs.

Blink more often. It's been discovered that people tend to blink less often when they use a computer – about one-third less often than they normally do. During these longer periods of non-blinking, tears that coat the eye evaporate more quickly, causing dry eyes. Blinking frequently will keep your eyes moist to avoid dryness and irritation.

Position your screen correctly. Your eyes should be 20 to 24 inches away from a computer screen to reduce eyestrain. Keep the center of the computer screen at a position about 4 to 8 inches lower than eye level.

Wear eye protection. Use sunglasses when you go outside. Not only can they can help block the sun's potentially harmful UV rays, but they can also shield your eyes from the drying effects

of wind. Use goggles when swimming in a pool to protect your eyes from chlorine. Goggles when handling hazardous chemicals or using machinery to cut, sand, grind, or weld can also keep debris and spatter from causing corneal abrasions or other eye trauma. Using eye protection when playing sports involving high-speed balls or players in close contact with each other can guard against eye injury. It's also a good idea to shield your eyes from road debris when riding a bicycle.

Exercise regularly. It is believed that consistent exercise reduces intraocular pressure (which is the fluid pressure inside the eye). In fact, one study found that participants with glaucoma who engaged in a brisk 40-minute walk, four times per week, were able to reduce their intraocular pressure enough that they no longer had to take medication for their condition.

Get routine eye exams. Regular testing may help detect problems at an early stage. According to the National Institute of Occupational Safety and Health (NIOSH), computer users should have an eye exam once per year.

Eat a healthy diet that includes the nutrients important for eye health. When unable to eat enough of the foods containing these nutrients, many choose to take supplements to fulfill that need. When selecting a vision health product, look for the following nutrients:

- **Omega-3 fatty acids** have been found to reduce the risk of dry eye syndrome. Fish oils are the primary source of Omega-3's. Specific fish include salmon, sardines, and mackerel.
- **Beta-carotene** is a precursor to Vitamin A and plays an essential role in night vision. If you have smoked, check with your doctor before supplementing because the supplement form has been linked to an increased risk for cancer. Food sources include kale, carrots, pumpkins, apricots, and sweet potatoes.
- **Vitamin C** has been shown to reduce the risk of developing cataracts. Vitamin C is found in berries, citrus fruit, broccoli, and tomatoes.
- **Vitamin E** can delay cataract formation. Nuts, legumes, and wheat germ are food sources of Vitamin E.
- **Lutein and Zeaxanthin** are plant pigments that play a role in preventing cataracts and reducing the risk for age-related macular degeneration. Major food sources are kale, peas, spinach, broccoli, and brussels sprouts.

Chapter 3:
PREVENTING TECH NECK

Technology has changed the way we live. But this same technology has also changed the way we hurt.

In our efforts to stay connected, we spend a lot of time looking down at our devices – tablets, laptops, and smartphones. As a result, our necks are literally feeling the strain of our dependence on these devices. This neck strain has been appropriately dubbed “tech neck.”

What Are The Symptoms?

The most common sign is neck pain. This can be directly attributed to the added weight put on the spine when the neck bends forward so one can look down at a device screen. The average human head weighs 10 to 12 pounds. Depending on the degree of the head tilt, the amount of pressure on the spine can increase up to 60 pounds. Continually stressing your spine in this manner could lead to early wear and tear, a degeneration of the spine known as osteoarthritis.

The symptoms of “tech neck” may actually be subtle at first. There might be some tension in the shoulders, mild ache or stiffness in the neck, or general soreness in the upper body. The syndrome can also progress to development of headache, eye strain, or numbness, tingling, and even weakness of the hands.

Prevention and Correction.

Since the position of the neck and head is directly related to the occurrence of “tech neck,” the most logical first step to prevent and correct the problem is to change the aggravating position. There are a couple of ways to do this.

First, try changing the position of the device. Set your computer screen at eye level. Hold your mobile phone up in front of your face. Next, change the position of your body by taking frequent breaks. Step away from the device and move around a bit. Try taking a 3-5 minute rest break for every 20-30 minutes of staring at a screen.

Another type of rest break you should also consider is a visual one. When you’re focused on digital work your eye muscles tend to blink less and contract more. This leads to blurry vision which exacerbates the problem as you lean further forward to see more clearly. As you scrunch your eyes to maintain focus, muscle tension can develop in your head, neck, and shoulders.

Give your eyes a much-needed break by following the “20-20-20” rule recommended by the American Optometric Association. For every 20 minutes you spend staring at a screen, change your gaze to look at an object that is 20 feet away for 20 seconds.

Exercises You Can Do.

There are several exercises that can help counteract the strain of hunching over your devices.

1. Range of motion: Sit up straight. Then gently move your head into the following positions, holding each stretch for 20 seconds. Repeat 5 times.
    a. Lower your chin down toward your chest.
    b. Tilt your head backward to look up toward the sky (or ceiling).
    c. Tilt your head so that your right ear moves down toward your right shoulder. Then do the same to the left side.
    d. Keeping your head level, turn your head to the right to look over your shoulder. Then do the same to the left side.

    Avoid tensing your neck and shoulders. Move as far as you comfortably can into each position without forcing it.

2. Isometric strengthening: Sit up straight. Use the fingertips of one hand to apply light pressure against your head in the following positions. Resist that pressure with your neck muscles, keeping your head in its upright position. Hold the resistance for 10 seconds, then relax. Repeat 3 times.
    a. Place fingertips at forehead and apply light pressure against your head.
    b. Place fingertips at right side of head and apply light pressure against your head side-bending. Then do the same on the left side.
    c. Place fingertips at the right side of head and apply light pressure against your heading rotating. Then do the same on the left side.

    Remember to continue breathing in and out during this strengthening exercise.

3. YWTL exercise: Stand up straight with feet about hip-width apart. Hold each of the following positions for 30 seconds.
    a. Y: Reach both arms up straight with palms facing each other and fingers extending up toward the sky (ceiling).
    b. W: Then drop both upper arms so that they are parallel to the ground and your elbows are positioned at 90 degrees. Fingers continue to point up as palms face toward each other.
    c. T: Bring your lower arms down so that your elbows are straight (but not locked out) and palms are faced up..
    d. L: Drop your upper arms to your sides and position your elbows at 90 degrees. Squeeze your shoulder blades together as your palms remain facing up.

Supplementation.
There are several natural supplements that can help prevent and reduce the symptoms of “tech neck.”

MSM (Methyl Sulfonyl Methane) is an organic form of sulfur that the body can easily absorb and utilize. It has the ability to reduce pain and inflammation because it can restore flexibility and permeability to the walls of your body’s cells. Pressure and pain result when rigid fibrous tissue cells swell and become inflamed. With increased permeability, fluids can pass through tissues more easily, reducing pressure buildup and decreasing pain.

Tumeric is a plant often used as a spice. It has great anti-inflammatory properties because it contains the powerful anti-oxidant known as curcumin. When supplementing with turmeric, it is important to note that the body has difficulty absorbing curcumin. Studies have found that taking

freshly ground black pepper with tumeric can help. Piperine is the key active ingredient in black pepper which increases the absorbability of curcumin.

Magnesium is essential for muscle function. So if your regular diet does not have enough whole grains, nuts and seeds, and green leafy vegetables to provide an adequate amount of magnesium, then you may need to supplement it. Magnesium has the ability to relax muscles and reduce muscle fatigue.

Collagen can help minimize the resulting symptoms when stress is placed on the tendons, ligaments, and cartilage involved in “tech neck.” Many clinical studies have shown that collagen supplementation decreases joint pain, stiffness, and inflammation while improving mobility and flexibility.