



## Smartphone Ergonomics: Risks and How to Reduce Them

On average, people spend approximately three hours per day on their smartphone. This adds up to 1,095 hours per year or a continuous 1.5 months! Maintaining correct postures and making health-based choices can significantly help to bring down the risk of injury.

### General Ergo Tips

- Change how you sit and hold positions and take breaks frequently.
- Keep the volume at a lower decibel to decrease the risk of tinnitus and hearing loss.
- Use “digital assistants” (e.g. Siri, Cortana, etc.) to prevent unnecessary typing.

### Risks of Improper Neck Posture

When you tilt your head downwards to the chest, you affect your entire spine alignment. You also [increase the effective weight on the spine](#), increasing strain and risk of neck pain or injury.

#### Tips to avoid “tech neck”:

- Limit the amount of time you spend on your smartphone to decrease the strain on your entire body.
- Hold your smartphone at about chest level; this allows the neck to remain neutral and relaxed.

### The burden of staring at a smartphone

Effective weight on the spine as forward tilt increases

0° 12lb	15° 27lb	30° 40lb	45° 49lb	60° 60lb
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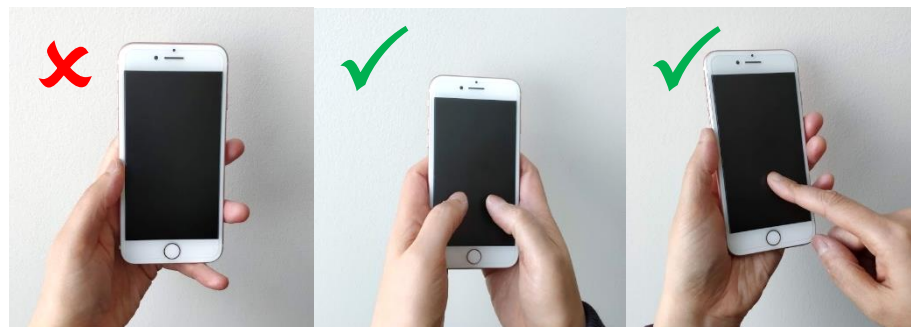


GUARDIAN GRAPHIC

SOURCE: SURGICAL TECHNOLOGY INTERNATIONAL

### Risks of Improper Wrist and Hand Posture

When you focus on your smartphone screen, you contort your body to become “more comfortable”; however this can cause awkward wrist and hand postures, making it more painful in the long term. For example, compression of the carpal tunnel in the wrist commonly causes severe pain and numbness in the fingers and hand if left untreated.





### Tips to avoid wrist and hand injuries:

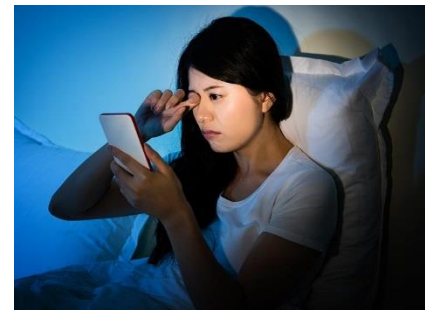


- Keep your hands and wrists as neutral and relaxed as possible.
- Use two hands to hold your phone; this reduces strain and gives you more support and greater reach.
- Alternate hand positions often to decrease the strain on your wrist, thumb and fingers and to avoid shifting strain elsewhere.
- Be aware of how you support the weight of the phone on your pinky finger; this can strain your wrist and pinky.
- Limit the amount of typing you do on a smartphone to decrease strain on your thumb and wrist.
- Support your phone on an external object to reduce the weight of holding it and to keep the screen angled (e.g. rest phone on a level surface when possible).
- Consider adding a phone holder attachment to reduce pressure and strain (e.g. [G-Hold](#), [PopSocket](#), [Ringke](#)).

### Eye Strain

Severe eye strain occurs in 63% of people who look down at a device compared to only 21% of people who keep the device at eye level ([Mowatt et al](#), 2017).

Blue light exposure from smartphone screens in the evening and night can interfere with the circadian rhythm, which has been linked to sleep disturbances and other health disorders ([Lifealth](#)).



### Tips to avoid eye strain:

- Hold device at about chest level.
- Adjust your screen's brightness to match the environment and zoom in rather than bringing the screen closer.
- Give your eyes a break: look 20 feet away from the screen every 20 minutes for 20 seconds.

### Helpful Apps and Settings

The following apps are free to download and use. Some (\*) may require an in-app purchase for premium features.

App Type	Android	iPhone
Break Reminder	<a href="#">Your Hour*</a> , <a href="#">20 twenty 20</a>	<a href="#">Moment*</a>
Time Tracker	<a href="#">My Phone Time*</a>	<a href="#">Screen Time</a>
Blue Light Filter	<a href="#">Night Light</a> , <a href="#">Twilight*</a>	<a href="#">Night Shift</a>