

COMPUTER ERGONOMICS FOR KIDS

- Technology supports learning, communication, creativity, and play, making it an important part of children's daily lives (Straker et al., 2009).
- Children's bodies are still growing. Healthy screen habits developed during childhood can carry into adulthood (Straker et al., 2009).
- Poor screen habits and prolonged screen use may contribute to:
 - Digital eye strain
 - Poor posture
 - Neck and back discomfort
 - Musculoskeletal pain (Straker et al., 2009; Ciccarelli et al., 2015).
- Children often use laptops and tablets in different locations around the home, such as couches, beds, and floors, where they commonly adopt slouched, twisted, or unsupported postures that **increase strain on the neck, shoulders, back, and arms** (Ciccarelli et al., 2015).
- Teaching healthy screen habits: including **proper posture, correct screen positioning, regular movement breaks, and responding to discomfort**—can help reduce physical strain while promoting lifelong healthy technology use (Ciccarelli et al., 2015; Straker et al., 2009).

01 SCREEN AT EYE LEVEL

Keep computers and laptops about 18–24 inches away, and tablets at least 12–16 inches from your eyes whenever possible.

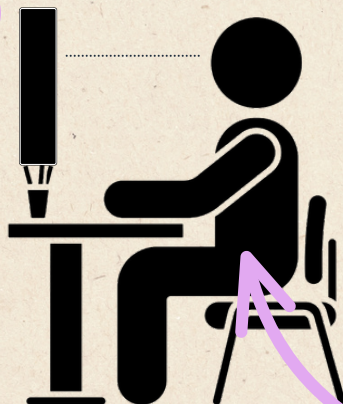
02 SIT SMART

Keep feet flat on the floor (or on a footrest), knees and hips at about 90°, and sit with your back supported by the chair.

03 ARMS RELAXED

Keep shoulders relaxed, elbows close to your sides at about 90°, and wrists straight while typing or using a mouse.

IDEAL SET UP



AVOID SLOUCHING WITH TABLETS

- Avoid using tablets while slouching on the couch, lying in bed, or sitting with feet tucked up.
- These positions can place extra strain on the neck, shoulders, and back.
- Sit upright with your back supported by the chair.
- Keep both feet flat on the floor or supported on a footrest.
- Prop the tablet on a stand or other stable surface to bring the screen closer to eye level and reduce neck bending.
- Maintaining good posture helps reduce discomfort and supports healthy body alignment during screen use.

REDUCING EYE STRAIN



- **Take Eye Breaks:** Follow the 20-20-20 Rule, every 20 minutes, look at something 20 feet away for 20 seconds to relax the eye muscles and reduce strain (Alghamdi & Alrasheed, 2020).
- **Use Reminders:** Children often become absorbed in games, videos, or schoolwork. Set timers, watch alarms, visual cues, or parent reminders to encourage regular eye breaks.
- **Blink Often:** Encourage children to blink regularly to help prevent dry, irritated eyes.
- **Reduce Glare:** Adjust screen brightness to match the room and minimize glare from windows or overhead lights.
- **Pair with Movement:** Combine eye breaks with a quick stretch or movement activity to rest both the eyes and body.
- **Know the Signs:** Watch for symptoms of digital eye strain, including tired or dry eyes, blurry vision, headaches, and difficulty focusing.

Movement breaks help children recharge their bodies and brains during screen time. They provide important **proprioceptive (heavy work)** and **vestibular (movement)** input, which can improve attention, regulation, body awareness, and readiness to learn.

Try these 1–2 minute movement breaks:

- **10–20 Jumping Jacks** – Boosts alertness and coordination.
- **Animal Walks** – Bear walk, crab walk, frog jumps, or bunny hops provide heavy work and strengthen the core.
- **Wall Push-Ups (10–15 reps)** – Provides calming proprioceptive input through the upper body.
- **Chair Push-Ups (5–10 reps)** – Push up through the armrests or seat to activate the shoulders and arms.
- **Stretch Break** – Reach to the sky, touch your toes, and gently twist side to side.
- **Balance Challenge** – Stand on one foot for 10–20 seconds or walk heel-to-toe across the room.
- **Dance Party** – Turn on a favorite song and dance for 1–2 minutes.
- **Walk Around the House** – Take a quick lap or climb the stairs if available.

MOVEMENT BREAKS FOR SENSORY INPUT



WHAT'S WRONG?

- Leaning forward with the neck bent toward the screen, increasing strain on the neck and shoulders.
- Laptop screen is too low, encouraging a slouched posture.
- Arms are resting on the table without proper support, which may increase shoulder and wrist fatigue.
- Screen appears closer than an arm's length.



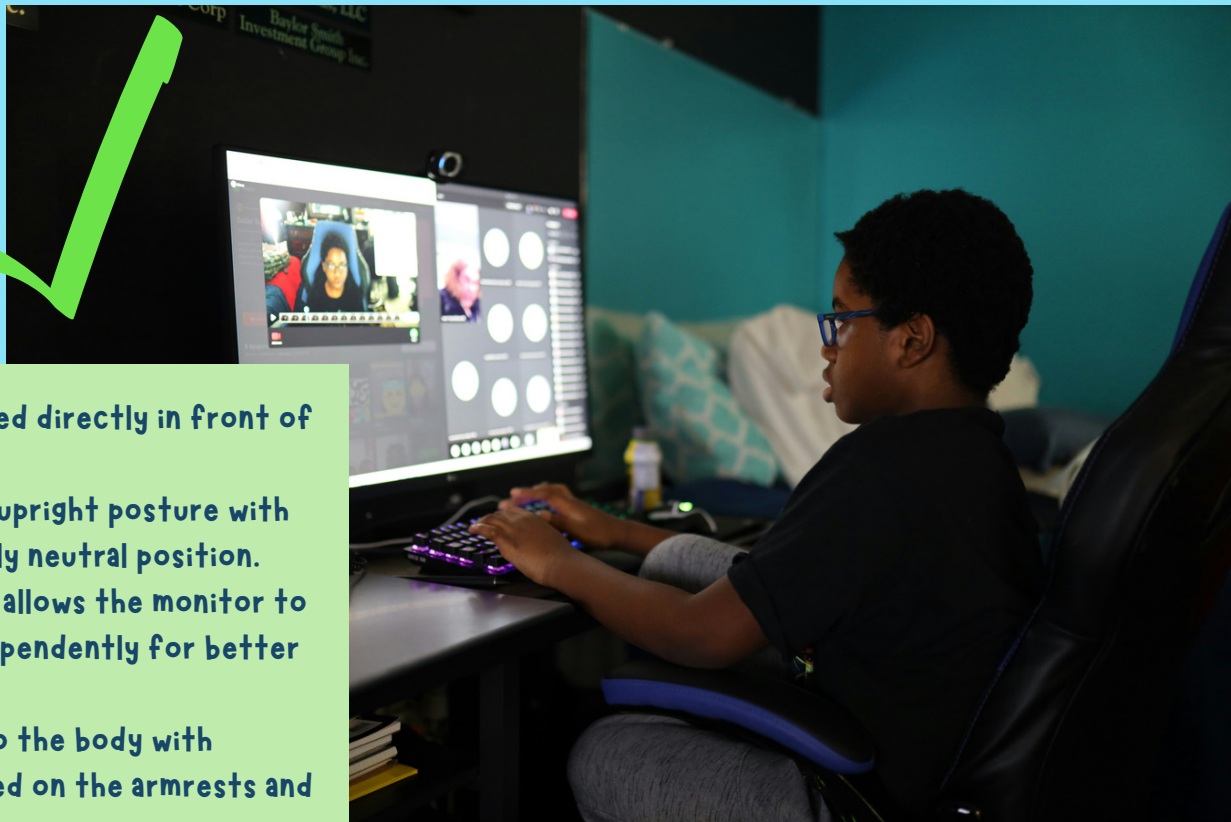
HOW TO FIX IT!

- Raise the laptop using a stand or books so the top of the screen is at or just below eye level.
- Sit back in the chair with the back supported and shoulders relaxed.
- Keep the screen about an arm's length away.
- Use an external keyboard and mouse if the laptop is elevated.

- The monitor is slightly too high, causing the child to extend their neck upward rather than keeping it in a neutral position.
- The chair too low relative to the monitor, contributing to the upward gaze.



- Lower the monitor or raise the chair so the child's eyes are level with the top third of the screen, allowing the head and neck to remain in a neutral position.
- Ensure the child sits back in the chair with feet flat on the floor or on a footrest.
- Keep the monitor about an arm's length away and encourage movement and eye breaks every 20 minutes.



- Screen is positioned directly in front of the child.
- Child maintains an upright posture with the head in a mostly neutral position.
- External keyboard allows the monitor to be positioned independently for better neck alignment.
- Elbows are close to the body with forearms supported on the armrests and desk.
- Screen is approximately an arm's length away.



- Child is sitting upright while facing the screen directly.
- Head and neck are in a neutral position with minimal forward bending.
- Monitor is positioned at an appropriate height and distance.
- Arms are comfortably supported while using the mouse and keyboard.
- The child is not leaning forward or twisting the body.

Resource:

https://youtu.be/eraHCZ_n5pw?is=8X5UvW3gQMORGZW

REFERENCES

- Alghamdi, W. M., & Alrasheed, S. H. (2020). Impact of an educational intervention using the 20/20/20 rule on Computer Vision Syndrome. *African Vision and Eye Health*, 79(1). <https://doi.org/10.4102/aveh.v79i1.554>
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- Straker, L., Pollock, C., & Maslen, B. (2009). *Principles for the wise use of computers by children*. *Ergonomics*, 52(11), 1386–1401.