

# Mental Health

## Youth, Teens, the next generation



Myths, data, &  
the Unknown

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“Researchers found when young people talk about mental health, they focus less on their individual thoughts and feelings and more on relationships, as well as the overall complexity of mental health.”

—Caroline Fenkel, DSW, LCSW

# INTRODUCTION

What is impacting our youth in a negative way

Each generation has quoted or coined the phrase, “We didn’t have this in my day, I don’t know the first thing about...”

Social Media –

A positive or negative for today’s youth and teens?

If a positive, like all things in life, what is considered moderation with social media?

What data is out there on this?

Moreover – what data can you trust?

# Data

For the first time in human history the youngest of our cultures has access to information from all over the world.

## 217 Records analyzed re: social media effects on youth

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“In examining ill-being, social media use was associated with higher levels of depression, anxiety, mental health problems more often. Particularly in groups using social media more than THREE hours per day.”

## In conclusion of a recent research project on Social Media effects on youth's depression.

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“Although overall digital media use was related to lower adolescent's well-being during the pandemic, some kind of social media use improved social and mental well-being.. The evidence highlights the need for quality over quantity.”

## Biological effects of screen time

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“Youth who spent more than THREE hours in front of screens reported trouble sleeping, feelings of depression, anxiety, loneliness, and low self-esteem along with body-related concerns such as increases in eating disorders and addiction to other substances.”



Content is not ever  
really deleted!

What can recovered

What should America's youth know about their "Profile"

A real story of a real individual impacted by social media posting history – (Story)

**Law Enforcement Perspective:**

**Anything can be recovered if it was posted online.**

**No one under 18 can consent to anything of a sexual nature.**

**Lewd content shared amongst teens can hold the parents liable**

**Psychological perspective:**

**Comparing to others online does not generate a positive self concept**

**Facts posted by others can negatively impact youth and not be actual facts at all.**

## Educate versus Restrict

### Health over quantity

**Social Media shows no signs of going away. Educating todays youth on what is on social media and how to use it in a healthy way can set them up for success.**

**Great psychiatric health is shown in youth spending less than 3 hours a day in front of any screens**

**Greater test scores and overall academic achievement is seen in youth achieving more than 7 hours a sleep a day**

**Emotional intelligence is higher in children who socialize in person through extra-curricular activities than online**

## TIP

High Definition does a lot more “To you” than for you.



# What you should know about Blue Light and HD

Chris Aiken, MD and Kellie Newsome, PMH-NP are only a fraction of medical professionals endeavoring to educate America on the effects of HD screens and Blue Light.

# Let's start with the data

**1**

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In 2016  
Melatonin was  
sold in the U.S.  
at a rate of \$285  
million

**2**

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By 2020 (year  
end) it was \$821  
million

**3**

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According to  
U.S. industry  
stats, HD TV  
sales increased  
from 2016 to  
2020 (year end)  
by 2,000%

**4**

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According to the  
FDA's stats at the  
end of 2021, "The  
US is the leading  
country in terms  
of sales in SLEEP  
AIDS followed  
by Germany,  
then the U.K."

**5**

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Per the DEA – "The  
U.S. is the leader  
in all  
pharmacological  
sales and Rx drugs  
globally. More  
meds are sold to  
patients here than  
anywhere else  
globally."

# Explain

Light suppresses melatonin, not just any light. According to Dr. Aiken and NP Newsome, It is the color of the light that has the greatest impact. “Blue light in the 460–480 nm range is particularly good at suppressing melatonin and promoting wakefulness. In the 1990s a new photoreceptor called melanopsin was discovered that only responds to blue light. This regulates melatonin production in the brain. Your internal clock depends on strong shifts in blue-spectrum light at the bookends of the day (morning & night)...disrupting this also disrupts the genes correlated to bi-polar disorder and other psychiatric disorders”

Dr. Aiken further explains – excessive amounts of blue light (quantified to be more than 1 hour before bed or over 2 hours a day – less than a normal movie length) is now being associated with physical health risks including obesity, diabetes, cancer, cardiovascular and neurologic diseases, gastrointestinal ulcers, and adverse reproductive outcomes”.

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The amount of time in front of an HD screen directly links to so many other illnesses.

## What's in our control

Though we started talking about social media and have now covered the effects of the screens we all sit in front of, we can see a path to change.

Steps to improve overall health in ourselves and our youth –

- Direct social media – Remove accounts and friends focused on self image and poor health
- Focus on motivational quotes, educational resources, and entertainment which is values focused.
- Limit number of friends and followers – reassess constantly.
- Limit all social media to less than 3 hours a day as a standard “Maximum”
- Remove anything HD or blue light based on your eyes more than one hour before sleep and later than one hour after waking.
- Limit screens which are HD/Blue light based in general from your eyes by either using blue light filtering glasses or to less than 4 hours of use a day.

# Let's Talk about Hormones

Matthew Walker, PhD

Is known as an expert in  
Neuroscience and  
psychology  
Walker, PhD and his team  
have studied the effects of  
sleep on hormones. Most  
Teenagers either sleep too  
little or too much.



<https://www.sleepdiplomat.com/>

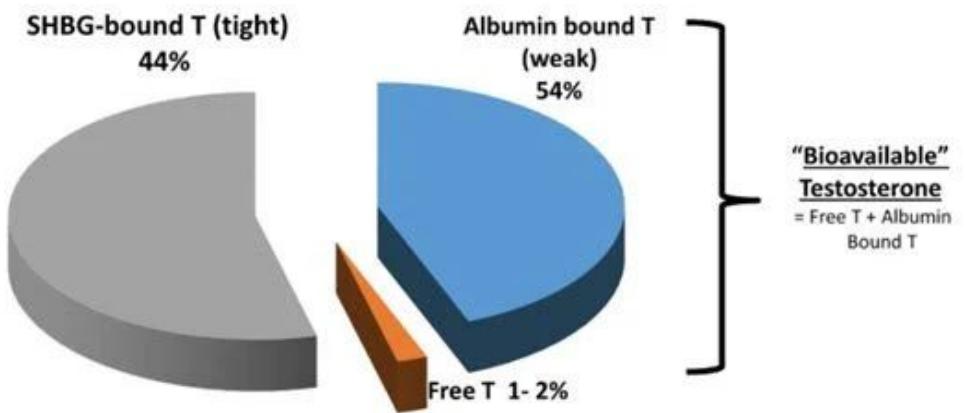
# Effects

“Lack of proper sleep in both teens and adults reduces the bodies Natural Killer Cells thus weakening your immune system.” Walker, PhD

## Testosterone & Estrogen

Your teen may not be “Moody” just because. They may be significantly deficient in metals and vitamins. They could also be struggling with low hormone levels.

### Circulating Testosterone Fractions



#### Testosterone

- Total 350-1000 ng/dL
- Free 50-210 pg/dL (1-2%)
- 98% of Testosterone is protein-bound

Dunn JF. et al, *JCEM* 1981

#### Sex Hormone Binding Globulin (SHBG)

- Strong binding 50-60% of total testosterone
- No dissociation during tissue transit time (inactive)

#### Albumin

- Loose binding 40-50% of total testosterone (active).  
Releases T as needed by the body.

# Metals?

It's not always Mono...

So often parents have told me, I think my kid has Mono, does this explain why they sleep so much? Or why they are not social?

It is not something we think of normally. We do not generally sit around work wondering what our Zinc, Iron, or Magnesium levels are.

*We actually have:*

*Metalloids, Cadmium, Chromium, Maganese, Copper, Thallium, Mercury, zinc and several more in our bodies all day.*

*Think of the light socket in your house – It has a charges side, a negative side, and a ground.*

*Our bodies have a charge though also don't they? We have to shock a body to get it restarted correct?*

*YES – We use metals in our blood to create a ground for the current in our bodies and much more.*

# Facts

Metals ( $\mu\text{g}\cdot\text{L}^{-1}$ )	Elderly (n = 50)		Young (n = 20)		LOD ( $\mu\text{g}\cdot\text{L}^{-1}$ )	Reference * ( $\mu\text{g}\cdot\text{L}^{-1}$ )
	Mean $\pm$ SEM	Min-Max	Mean $\pm$ SEM	Min-Max		
<i>Essential</i>						
Fe	1902.40 $\pm$ 121.29	840.0–4680.0	1857.00 $\pm$ 222.52	540.0–4180.0	108.00	800–1200
Zn	976.20 $\pm$ 34.13	590.0–1800.0	964.50 $\pm$ 74.37	470.0–1850.0	9.34	800–1100
Cu	1125.00 $\pm$ 28.15	650.0–1640.0	1263.00 $\pm$ 107.06	620.0–2190.0	2.45	800–1400
Se	116.20 $\pm$ 8.50	49.0–410.0	100.90 $\pm$ 5.02	65.0–140.0	8.20	75–120
<i>Non-Essential</i>						
Pb	62.06 $\pm$ 8.91 <sup>a</sup>	12.0–280.0	41.90 $\pm$ 10.32	9.0–160.0	4.90	50–150
Cd	25.18 $\pm$ 19.58	0.9–180.0	8.52 $\pm$ 5.40	0.9–100.0	0.24	0.3–1.2
Hg	78.54 $\pm$ 49.14	2.0–480.0	57.30 $\pm$ 20.64	8.0–420.0	0.13	2.0–20.0
As	17.98 $\pm$ 1.05	8.0–38.0	16.20 $\pm$ 1.79	7.0–31.0	1.58	2.0–20.0
Cr	18.08 $\pm$ 1.60	7.0–63.0	19.88 $\pm$ 4.09	6.0–69.0	4.80	<5.0
Ni	2.38 $\pm$ 0.23	0.9–9.0	2.15 $\pm$ 0.31	1.0–7.0	0.66	1.0–5.0
V	24.44 $\pm$ 2.38	6.0–63.0	22.80 $\pm$ 3.60	6.0–49.0	0.10	0.1–0.5

Notes: <sup>a</sup>  $p < 0.05$  compared to young group. \* World Health Organization (WHO); Essential metals were measured in serum and non-essential in whole blood; LOD: Limit of Detection; Max: maximum; Min: minimum; SEM: standard error mean.

Not having the correct levels of metals in the blood can cause:  
Fatigue, lethargy, depression, low testosterone and estrogen, heightened psychiatric symptoms, decreased vision, and more

# Get you and your families blood tested

## Read versus screen time

## Supplements & healthy eating habits

## What you can control

- Children tend to model what we do. Get your blood tested for overall wellness to include hormones and metals, etc. Take your adolescents with you. Based on the results consult your MD for the lifestyle and diet changes needed to balance your levels.
- If you want your child to read more than use technology, set aside time at night and read a book yourself. Set a book out you think they will like. It will likely be a short period of time before they are reading with you.
- We do not eat enough of the right foods often enough to supply us what we need. Even if your blood is very healthy, incorporating some supplements to your daily routine after consulting a physician will generally increase your focus, productivity and overall vitality.



Stats that make this worth it:

1. Half or more of young people 18-24 are experiencing moderate to severe depression in the U.S. while another 23 percent have mild symptoms. (Fenkel, 2022)
2. Teens are heavily affected by what they eat and how much they sleep. Estrogen, Progesterone and Cortisol are all shifted prior to and during female puberty causing significant shifts in their immune system, mood, self-esteem, and weight. Testosterone should be at all time high for young men however, in 2021 physicians documented more than 30% of male patients ages 14 to 19 were at all time low levels of this critical hormone.
3. Increases in stimulant use (caffeine along with other sources) and increases in soy-based foods increased the amount of estrogen in teens due to adrenal fatigue and suppression of testosterone production.

When you take in account all the data, our youth has a great deal stacking against them. Though so much of it is within our control.

Questions?

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