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# DIGITEYES

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CARE : 20 | 20 : LIFE™

# LIVING IN A DIGITAL WORLD

Ubiquitous computing is on the rise, fueled by the fast paced development of mobile devices. According to the Pew Research Center, 91% of American adults own a mobile phone, allowing connections to happen anywhere, anytime, as long as there is service. With the rapid growth of the mobile device industry, Americans now own more electronics than ever before- from TV's and laptop computers, to the newest tablet computer and smartphone..

This rise in ownership means we are spending more time in front of electronic screens every day. According to eMarketer's latest survey of media consumption habits among adults, that number will be on track to reach over 12 hours on average each day. Digital media (internet, phone, tablet, etc) is the leading form of media consumed at 40% of the time, and TV is in second at 38%. This level of media consumption also means that more and more people are multitasking when it comes to their electronic device usage as 86% of mobile device owners report using these devices while watching TV.







**2.4**

The average  
number of TVs  
per American  
household

**12**

Hours spent per  
day in front of  
electronic  
screens

**86%**

of mobile device  
users report using  
their device while  
watching TV



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# MOBILE EYES

Cell phones are the most prevalent of all electronic devices with 91% of American Adults owning one, according to Pew Research Center. Americans spend over 2.7 hours socializing on their mobile phone, including phone calls, text messaging, and social media. This figure was even further broken down with American smartphone internet users spending over one hour on non-voice mobile activities such as internet browsing, social media, navigation, and reading emails.

With the increasing ownership of smartphones, new phenomena have come to light, such as sleep texting. Sleep texting is when a person sends a text message in the middle of the night with little or no recollection of doing so. This is not a surprising phenomenon when we look at the facts: 65.2% of cell phone owners report keeping their phone within reach while sleeping and this figure skyrockets to nearly 75% of individuals ages 18-44.

So what are we using our smartphones for? Well, according to Pew Research Center, most smartphone owners use their phone for checking the weather forecast and social networking, and according to PC World Magazine, 43% of readers use their phone as their main camera.

Social networking users and the increasing prevalence of smartphones are huge indicators to user's habits. The Facebook mobile application boasts 1.3 billion users and the Twitter mobile application has 500 million monthly users. Of those using social media on their mobile device, women ages 35-54 are the most active.



*Left: Outside the Vatican after Pope John Paul passed away and Pope Benedict was announced.*

*Right: Outside the Vatican after the announcement of Pope Francis.*

**56%**

of American  
adults own a  
smartphone as  
of May 2013.

**65.2%**

of cell phone  
owners sleep with  
their phone within  
reach

**95%**

of people use  
their phone right  
before going to  
bed

**1/2**

of people check  
their phone  
immediately if they  
wake in the middle  
of the night



# TABLETS, iPADS, AND EREADERS, OH MY!

**94%**

of tablet owners  
use the tablet in  
the bedroom

**254 million**

The number of  
tablets expected to  
be purchased in  
2013

In 2010, the world of personal computing changed forever with the release of the first iPad. Since then, tablet computer purchases have grown exponentially with Pew Research Center reporting that 35% of American adults now own a tablet computer and 23% owning an e-reader. Tablets often have the same mobile apps that smartphones do.

Most tablet owners use their device for reading news and books, social media, checking emails, and watching videos including YouTube, Netflix, and Hulu Plus. Tablets have also proven to be a powerful shopping tool, with a study by Google reporting that 57.6% of tablet owners they surveyed used their tablet to browse for purchases.

Most tablet use is done at home and as many as 94% of tablet owners admit to using their tablet in the bedroom.



# ELECTRONICS AND EYE CARE

The adverse effects of being in front of a computer all day and the pressures to have 24/7 availability have been well documented when it comes to body weight, stamina, and anxiety levels, but the long term effects that electronic devices have on the eye are only beginning to be uncovered.

Most digital information is presented in a pixelated form, causing the eye to work harder to see the images when compared with print media. Electronic device users also blink less. This can contribute to what is known as digital eye strain or computer vision syndrome (CVS). Symptoms of these conditions include dry, irritated eyes; headaches; blurred vision; and neck and back pain. A recent study conducted by The Vision Council found that nearly 70% of electronic device users reported experiencing CVS with 60% spending six hours or more in front of computer screens.

Damaging, high-energy UV light, known as blue light, from backlit devices (most TVs, computers, smartphones and tablets) has been linked to age-related macular degeneration and cataract formation as well



as eye fatigue and the disruption of the body's natural sleep/wake cycle known as the circadian rhythm. A two hour exposure to blue light can decrease melatonin production up to 35%. Melatonin is the hormone that lets the body know when it is time to sleep and when it is time to wake up and this disruption causes poor sleep quality and even insomnia.

There are a few things that experts recommend to limit exposure to blue light and decrease the occurrence of digital eye strain:

- Ask your eye care professional about a pair of glasses specifically designed for computer use. Computer lenses target the

mid-range of vision that is largely ignored by traditional single vision and bifocal lenses. Computer lenses may help to reduce headaches, eye strain, and neck pain.

- Consider purchasing blue light-filtering glasses. Recharge, an antireflective coating that filters out 10% more blue light emissions compared with other traditional blue light-blocking lenses, is an option for many lens materials and styles that are offered at Rinkov Eyecare Centers.
- Unplug 2-3 hours before going to bed. This means no checking email, no watching TV, and no surfing the web.
- Find a spot in your home other than your bedroom to charge your electronic devices. 65.2% of cell phone owners report keeping their phone within reach while sleeping and as many as half of those people admit to immediately checking their phone if they wake up in the middle of the night.



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