

## WHAT ARE THE EFFECTS OF ELECTRONIC MEDIA USE ON TEENS?

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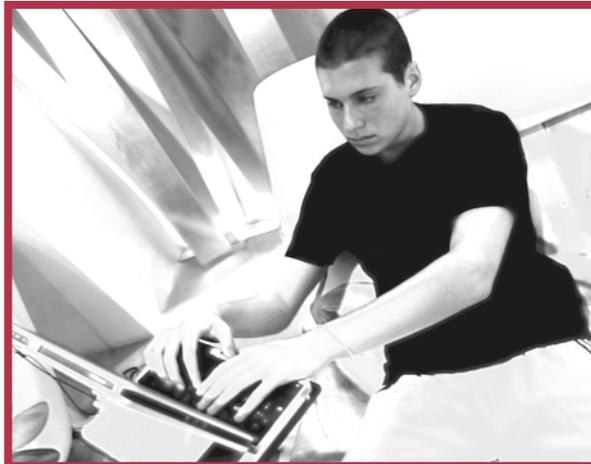
Recently, I went with a friend and her 16 year old daughter to see the Broadway show *Chicago* here in Atlanta. As we waited in line I noticed two young women, perhaps in their early twenties, standing behind us, talking excitedly, dressed in their best outfits. This was clearly a big event for them. We were silent for a minute or so. I turned my head and saw that they both had cell phones out, scrolling through the menus, not speaking to each other. What has happened to having conversations, I wondered. Could they not think of anything to say to each other? They were there physically with each other at an important event, yet they were “not there,” they were somewhere else, in their own separate worlds.

Many articles have been written in the last few years about the effect of electronic media on adolescents and young adults. By electronic media we mean: smartphones, Facebook, the internet, iPods, and video games. A Kaiser Family Foundation released in 2010 found that children ages 8 to 18, on average, spent 7 hours 38 minutes a day using electronic media. Often, they are multitasking—flipping back and forth between Facebook and texting, for example. If you count these separately, the total amount of time on electronic media comes to an average of about 11 hours a day. That’s a great deal of time. It is likely to be more time than they spend interacting with family members or with friends or doing anything else (attending school lasts about 7 hours a day). Do you wonder if your teen is using Facebook excessively? A poll conducted in 2011 by Common Sense Media found that 51% of American teens log on to a social network site more than once a day. Twenty two per cent log on more than 10 times a day.

I recall years past when families in my practice argued about the teenager in the family hogging the phone, now known as a “landline.” No longer. Kids between 11 and 17 spend on average 73 minutes a day texting. For older teens, the average is more like 2 hours. The number of texts sent per day averages about 50. If you think your teen has an addiction to her/his phone, you may not be far off. I see teens who absolutely refuse to give up their phone to their parents in the waiting room when I see them in a therapy session. They do not want to be “so far away” from their phone and miss a text. Some insist they cannot sleep unless the phone is next to their pillow. “When you get an unexpected text, the dopamine cells in the brain light up,” says Dr. Nora Volkow, director of the National Institute on Drug Abuse. Dopamine is a chemical messenger in the brain which is involved in the perception of pleasure. It is released when we

taste a piece of chocolate, or drink alcohol, and is involved in the process of addiction. Among teens in the Common Sense survey who own cell phones, 41% answered “yes” when asked if they were “addicted” to their phones. Forty three per cent said they wished they could “unplug” from their phones.

What do other parents think about the effects of electronic media on their teens? Here is an excerpt of a poll taken in 2011 by *Parade Magazine*.



### The Benefits

**79%** say they communicate more often with their kids, thanks to cell phones.

**66%** say that they and their kids feel safer knowing they can always reach each other.

**87%** of parents say the internet helps their kids perform better in school.

### The Downside

**67%** of parents say the internet is hurting their kids’ school performance.

**46%** are very or somewhat concerned that being constantly plugged in has lowered their kids’ attention spans.

**40%** say their kids Facebook, text, and chat while doing their homework.

**83%** are somewhat or very concerned about their children’s privacy and security online.

What are scientists finding out about the effect of electronic media on teens and young adults?

### Relationships with Peers

Social psychologist Sherry Turkle, Ph.D., of MIT, says that while people are more plugged in to each other electronically in their online lives, they are more alone than ever when they are not plugged in. Thus the title of her book, *Alone Together*. Turkle bases her findings on interviews with 300 adults and 150 children over a span of many years. She says that the biggest change in the way we relate to each other is how we can be “elsewhere” at any point in time, how we can sidestep interaction and go to another place where we don’t have to communicate with each other. She gives the example of a birthday party of 15 year olds. There inevitably arrives a moment when things get a big awkward, no one knows what to do or what to say. In the past the teen might want to leave the party. Now, they just pull out their cell phones and go to Facebook. They have “left” the party.

This reminds me of many disagreements I had with my daughter when she was in high school. I might be driving her to soccer practice, and if the conversation lulled, she got on her phone. She could not understand why I felt it was rude. “Well, you weren’t talking,” was her reply. As Turkle would say, “she left me.” (Blessedly, she is a college student now and rarely pulls out the phone when we are in the car together).

What is being lost when your teen “leaves?” Turkle points out that a lot is lost. It is the ability to start a conversation, to maintain a conversation, to keep it going. Face to face communication involves reading the other person’s facial expression, their tone of voice, their mood. A heartfelt “I’m sorry,” with downcast eyes, and a hesitancy that conveys regret, is vastly different from texting “I’m sorry” and hitting Send.

Teens often say they don’t like direct communication because they don’t know what to say. They want to take their time and craft the right response in a text. Turkle found that what gets texted is often short and witty. It is lacking in depth and genuineness. Texting allows us to hide our feelings, to say what we want the other person to hear. We can use texting to hide behind our real feelings.

Sometimes texting and Facebooking can be a good thing. In a 2006 study with 626 children and teens, researchers at the Queensland University in Australia found that lonely adolescents tended to use the internet to make new friends. They communicated more often about personal problems online than did their peers who were not lonely. They reported that online they didn’t feel as shy, they were able to talk more comfortably, and to open up more.



Another subtle effect of social networking that has been reported is that when we use social media a lot, we tend to overestimate how happy every one else is, and we tend to compare ourselves unfavorably to them. This is because teens (and adults) who post on Facebook tend to share only positive information about themselves. In one study by Dartmouth researcher Alexander Jordan, Ph.D., college freshmen were asked how often they thought other students had negative experiences (being dumped, getting a bad grade, or being overwhelmed with work), and how often they thought other teens were having good experiences (going out with friends, acing a test). They found that the students over estimated their peers’ positive experiences by 18 per cent and underestimated their negative experiences by 6 per cent. This kind of experience tends to make adolescents feel that they are alone in their own struggles.

Developmental psychologists such as Niobe Way, Ph.D., at New York University have found that validation from one’s peers is a major source of self esteem for adolescents. This has always occurred through face to face interactions in the past. Now

that interactions between teens tend to be electronic in nature, very brief, scripted, often lacking in honesty and depth, the quality of peer relationships may not be sufficiently robust to help teens feel truly connected to each other.

## Health, Well Being, Grades

Here is one of my favorite pieces from the cartoon, Zits. Dad says, “So you actually wake yourself up at night to check your text messages?” Son replies, “Sure. I couldn’t sleep if I didn’t.”

For teens, (as well as adults), there can be no question that access to the internet opens up new windows of learning about the world around them and the chance to connect with people who live and work outside their home communities. With Wikipedia and Google just a click away, adolescents can ask a question and find an instant answer—an answer that in the past would have had to wait to Saturday when the teen could get a ride to a library and spend an hour searching through the *Encyclopedia Britannica* for the information.

Can use of the internet also be bad for adolescents? Larry Rosen, Ph.D., professor psychology at Cal. State University, conducted a study in which he observed the study habits of 279 middle school, high school, and university students. He recorded how often the students flipped back and forth between studying and texting and checking Facebook. Those who flipped back and forth got worse grades than those who gave studying their full concentration. He also found that those who used more electronic media were less healthy across the board. They reported more stomachaches, more sick days, were more depressed, and had worse behavior in school. A 2010 study of 99 college undergraduates by Holly Schiffrin, Ph.D., at the University of Mary Washington, found that those who spent more time on the internet reported a decreased sense of well being.

What is the connection between internet use and well being? One of the cases that most moved Turkle was an interview with a 16 year old named Sanjay. During the hour Sanjay met with Turkle, he put away his cell phone and laptop. After the hour was over, he took out his phone and found that he had over 100 new messages, most of them texts. He was clearly overwhelmed. As he collected his technology and began to respond to all this, he commented, “How long am I going to have to do this?”

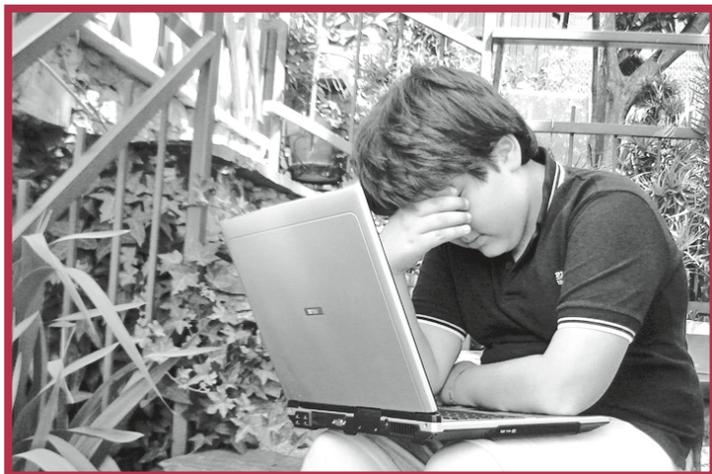
I think that the distress that comes with high use of social media for teens is the constant state of tension that is created by always being alert to the next incoming message, worrying about when they will get a response to their last message, wondering why someone did not return their message. One adolescent girl I saw recently had become withdrawn and moody over a constant barrage of messages from a friend who said he was suicidal. When the parents took away her phone, her mood improved. Teens worry about what someone said about them on Facebook, they worry about whether their Facebook “friends” are really their friends, they spend much emotional energy working through the emotions that were evoked by something they read on Facebook. They seem to have little time to detach from the constant stimuli. Anyone who has tried to watch a movie with a teenager has observed that it is difficult for them to get through a two hour movie without checking for, and returning, messages.

## The Developing Brain

To understand what the constant exposure to electronic media is doing to the adolescent brain, we need a brief lesson in neuroanatomy. The prefrontal cortex is the part of the brain which is just behind our forehead. This section is called the “executive skills” area because it is where we organize our ac-

tivities—guiding our behavior, planning ahead, exercising good judgment, controlling our impulses, observing carefully, and concentrating deeply. It is not fully formed until the early 20's. The neurons are like muscles—the more they are used, the stronger they get. The ones that aren't used get "pruned." We know that what teenagers are doing is actually changing brain tissue in the prefrontal cortex.

When teens are multitasking, scanning text messages, or flipping back and forth between different media, they are developing particular skills such as faster response time, peripheral vision, and an ability to skim over the highlights of information in front of them. Some researchers call this *continuous partial attention*. "You get better at the physical and visual motor parameters of what you're doing, but not the deeper, thoughtful aspects" says Jordan Grafman, Ph.D., of the Kessler Research Foundation.



In 2006 scientists at UCLA found that when they are learning, multi-taskers are using different parts of the brain than focused learners. Multi-taskers fire up their *striatum*, an area which encodes the learning of habits. This is called *procedural memory*. On the other hand, focused learners (those who focus deeply on a task) are using the *hippocampus*. This part of the brain is at the heart of the memory circuit. It comes into play when, for example, we are using a math formula to solve a novel problem. Multitasking would be a good skill to learn if we want all of our offspring to work on assembly lines. But it is the ability to do *higher level thinking* that is involved in getting high paying jobs. We are using this kind of cognitive skill when we are conducting scientific experiments, preparing a legal brief, analyzing data, or developing new software.

### Isolation, Parent Child Connections

Sherry Turkle observed, "Kids have told me that they almost don't know what they are feeling unless they put it in a text." The heavy use of social media may prevent children and teens from learning how to be alone. "Technology encourages this fantasy that adolescents grow up with that they will never have to be alone," writes Turkle. "that they will never have to separate from parents or peers. But, if you don't learn to be alone, you will only know how to be lonely."

Turkle noted, parenthetically, that parents who constantly text their children, further compound the problem. And what about parents' use of electronic media? I have become adamant that parents not use their cell phones when they are engaged with their children, or should be. I have passed by shoppers in the grocery store who are talking on a cell phone while mindlessly

pushing a cart with a small child in the seat, ignoring the child's effort to get their attention. I see parents in the waiting room who are on their phones and not talking to their teens. I listen to kids in therapy sessions who complain that mom "doesn't pay attention to me because she's always on her phone," and one little boy who was afraid mom would wreck the car because "she's always driving and talking or texting on her phone." The Common Sense Media survey found that 28% of teens felt their parents were "addicted" to their cell phones, and 21% said they wished their parents would spend less time on their phones and more time with their children.

Turkle listened to young men who said their dads used to watch Sunday sports with them, and during the station breaks they would comment on the game and joke around. Now, their fathers are often checking their email during a break. The young men she interviewed called it "the Blackberry zone."

### What To Do

Most parents I see in my practice are concerned about the heavy use of electronic media by their teenagers and have already put some boundaries in place. They do so often amidst intense protest. But then, raising teenagers has never been easy. Here are some good ideas:

Get them busy in other activities that don't involve computers, video games, and cell phones, preferably the kinds of activities that build character, connect them to social groups, and teach them about the world around them—church youth group, Scouting, violin lessons, volunteering, part time jobs, going to museums, art shows, and traveling, etc.

Draw a circle around cell phone free zones—in the car with you, at the dinner table with you, at a restaurant with you, shopping with you, cooking with you, etc.—and hold fast to it. Make sure that you have your cell phone off as well. Talk to them. As ironic as it may seem, teenagers routinely tell me that their parents don't talk to them very much. They say their parents yell at them and criticize them and lecture them, but they would like to have more conversations. They like to learn new things, hear interesting stories, and share positive comments with each other.

Make a rule that the phone and the internet go off at a certain time at night—like 9:00 p.m. The phone must go in the charger in the kitchen, so they don't have access to it. This will give them time to de-stress from the bombardment and just be alone with themselves—to think, read, write poetry, draw, design a house, and to get some much needed, uninterrupted sleep.

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Dr. Ellis has been in practice in the Atlanta area since 1977. She works primarily with children, adolescents and families and has specialized in child and family forensic evaluations since 1986.

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## Coming Soon...

Sexual harassment of teens by other teens is a growing national problem that schools are taking seriously.

But did you know that results of a major national study found that the psychological effects of sexual harassment on teens are more serious than the effects of bullying?

Did you know that sexual harassment is illegal but bullying is not? We'll review this topic in the Fall 2013 issue.

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