ELECTRONIC SCREEN SYNDROME

An Unrecognized Disorder

In diagnosis, think of the easy first.

— Martin H. Fischer

Consider the following questions:

- Does your child seem revved up a lot of the time?
- Does your child have meltdowns over minor frustrations?
- Does your child have full-blown rages?
- Has your child become increasingly oppositional, defiant, or disorganized?
- Does your child become irritable when told it's time to stop playing video games or to get off the computer?
- Do you ever notice your child's pupils are dilated after using electronics?
- Does your child have a hard time making eye contact after screentime or in general?
- Would you describe your child as being attracted to screens "like a moth to a flame"?
- Do you ever feel your child is not as happy as he or she should be, or that your child is not enjoying activities like he or she used to?

- Does your child have trouble making or keeping friends because of immature behavior?
- Do you worry your child's interests have narrowed recently, or that these interests mostly revolve around screens? Do you feel his or her thirst for knowledge and natural curiosity has been dampened?
- Are your child's grades falling, or is he or she not performing academically up to his or her potential — and no one is certain why?
- Have teachers, pediatricians, or therapists suggested your child might have bipolar disorder, depression, ADHD, an anxiety disorder, or even psychosis, and there's no family history of the disorder?
- Have multiple practitioners given your child differing or conflicting diagnoses? Have you been told your child needs medication, but this doesn't feel right to you?
- Does your child have a preexisting condition, like autism or ADHD, whose symptoms seem to be getting worse?
- Does your child seem "wired and tired," like they're exhausted but can't sleep, or they sleep but don't feel rested?
- Does your child seem lazy or unmotivated and have poor attention to detail?
- Would you describe your child as being stressed, despite few or no stressors you can clearly point to?
- Is your child receiving services in school that don't seem to be helping?

If these questions strike a familiar chord, like many other parents you may be confronted with difficulties all too common in today's electronically saturated world. These days, parenting a child who is struggling with behavior, mood, or cognitive issues is fraught with confusion and frustration: What's causing the problem? Where do we focus our resources? Does my child need formal testing? Should we get a second opinion, and from whom — a neurologist? A psychiatrist? A psychologist or educational specialist? And so on. Many parents feel lost; they are unsure of what's going on and often receive conflicting advice, leading them to feel pulled in different directions. They seek multiple opinions, scour the Internet for information, ask other parents what's worked for them, and agonize over whether to try medication. Parents often report that the process winds up feeling like they're simply going in circles. This paralysis of analysis is costly — in terms of time, money, resources, and a child's self-esteem.

You might notice that the quiz questions above cover a wide variety of dysfunction, but they all represent scenarios — related to symptoms, functioning, or treatment effectiveness — that can occur when a child starts operating from a more primitive part of the brain. During this state, two things tend to happen: 1) symptoms and functioning worsen, and 2) interventions don't work very well. Thus, the goal is to find out what's causing this state. Regardless of what your child's particular issues are, if they're not being managed adequately, it's safe to assume that *something is being missed*. Wouldn't it be nice if that *some*thing could be the *same* thing for each and all of these issues? If addressing one thing improved functioning across the board, whether your child carried multiple diagnoses or none at all?

To see how this might be possible, consider the following three cases:

Diagnosed with autism, six-year-old Michael was receiving in-home behavioral services. When he suddenly developed severe obsessive-compulsive symptoms, his treatment team called me for a consult. Upon learning he was earning video game time daily as a reward, I convinced the family and treatment team to try the Reset Program before initiating any medication. Four weeks later his obsessive-compulsive symptoms had diminished substantially, and as an added bonus he made better eye contact and displayed a brighter mood.

Calla was a high school junior who struggled with severe mood swings and insomnia. Calla's treatment providers suspected she was bipolar, and her defiant attitude and dramatic displays of emotion had recently landed her in a class reserved for kids with emotional problems, which only made things worse. Frustrated after a particular medication trial caused a rapid weight gain, Calla and her mother wound up in my office. After much discussion, they agreed to try the electronic fast as part of an overall treatment plan. Six weeks later, the sweet girl underneath all that turmoil resurfaced. Within six months, Calla was sleeping soundly, following the rules at home and school, and had lost ten pounds. By the end of the school year, she was back in mainstream classes.

Eight-year-old Sam was a typical kid with no formal diagnosis who had always enjoyed learning. But in third grade, Sam's math and reading achievement scores dropped inexplicably, and he began to dread going to school. He was nearly constantly in trouble for being disruptive, and both his teacher and the school psychologist suggested to his mother that Sam might have ADHD. Yet within two months of completing the Reset Program, Sam was turning in

more assignments, getting glowing reports from his teacher about his "attitude change," and making steady progress in math and reading.

Though their individual presentations varied, each child was essentially in a state of *dysregulation* — that is, they lacked the ability to modulate mood, attention, and/or level of arousal in a manner appropriate to the given environment or stimulus. Something was irritating these kids' nervous systems, making it difficult to handle everyday life. All three kids felt miserable and out of control, their families felt taken hostage by whatever had taken hold of their child, and their support teams struggled to identify what was being missed. Yet all three children responded to the same simple intervention. The fact that each child's nervous system renormalized with an electronic fast suggests that screen-time played a role in the development of each child's decline.

The Dawn of a New Disorder

Like many other aspects of our fast-paced but often sedentary lifestyle, screen-time is introducing new variables into the health equation. Screen-time affects our brains and bodies at multiple levels, manifesting in various mental health symptoms related to mood, anxiety, cognition, and behavior. Because the effects of screen-time are complicated and diverse, I've found it helpful to conceptualize the constellation of common phenomena as a syndrome — what I call *Electronic Screen Syndrome* (ESS). Importantly, ESS can occur in the absence of a psychiatric disorder and yet mimic one, or it can occur in the face of an underlying disorder and exacerbate it.

ESS is essentially a disorder of dysregulation. Because it's so stimulating, interactive screen-time shifts the nervous system into fight-or-flight mode, which leads to dysregulation and disorganization of various biological systems. Sometimes this stress response is immediate and obvious, such as while playing a video game. At other times the stress response is more subtle, taking place gradually from repetitive screen interaction, such as frequent texting or social media use. Or it may be delayed, brewing under the surface but managed well enough, then erupting once years of screen-time have accumulated. Regardless, over time, repeated fight-or-flight and overstimulation of the nervous system from electronics will often eventually culminate in a dysregulated child. The sidebar "Characteristics of Electronic Screen Syndrome in Children" (page 17) provides a good idea of what ESS looks like.

One way to think about the syndrome is to view electronics as a stimulant

(in essence, not unlike caffeine, amphetamines, or cocaine): electronic screen device use puts the body into a state of high arousal and hyperfocus, followed by a "crash." This overstimulation of the nervous system is capable of causing a variety of chemical, hormonal, and sleep disturbances in the same way other stimulants can. And just as drug use can affect a user long after all traces of the drug are out of the body, electronic media use can affect the central nervous system long after the offending device is actually used. Furthermore, also like drug use, functioning may not be impaired immediately, and in some cases it may even *improve* initially, but then become worse. In fact, abuse and addiction of stimulant drugs such as cocaine and methamphetamine have a very similar presentation to that of ESS, including mood swings, concentration problems, and restricted interests outside of the substance or activity of choice.

Characteristics of
Electronic Screen Syndrome in Children

1. The child exhibits symptoms related to mood, anxiety, cognition, behavior, or social interaction due to *hyperarousal* (an overly aroused nervous system) that cause significant dysfunction in school, at home, or with peers. Typical signs and symptoms mimic chronic stress or sleep deprivation and can include irritable, depressed, or rapidly changing moods, excessive or age-inappropriate tantrums, low frustration tolerance, poor self-regulation, disorganized behavior, oppositional-defiant behaviors, poor sportsmanship, social immaturity, poor eye contact, insomnia/non-restorative sleep, learning difficulties, and poor short-term memory. Tics, stuttering, hallucinations, and subtle or overt seizure activity may also occur. Irritability and poor executive functioning[*] occur in most cases and are hallmarks of the disorder.

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[*] Executive functions include reasoning, judgment, task completion, planning, problem solving, and critical thinking; they take place primarily in the brain's *frontal lobe*.

2. The symptoms of ESS may occur in the absence or the presence of other psychiatric, neurological, behavioral, or learning disorders, and they can mimic or exacerbate virtually any mental health–related disorder.

3. A child with ESS is often described by parents and teachers as "stressed out," "revved up," "wired," or "out of it." Family members often remark that they "have to walk on eggshells" around the child.

4. Symptoms markedly improve or resolve with an electronic fast; that is, the strict removal of interactive electronic screen media for several weeks. To have a lasting impact, a three-week fast is typically necessary, but it may not be sufficient in some cases.

5. Symptoms often recur with the reintroduction of electronic media following a fast, particularly if screen-time exposure returns to previous levels. After a fast, some children can tolerate small amounts of screen-time with strict moderation, while others seem to relapse immediately if reexposed.

6. Frequently, the child will be intensely drawn to screen devices and will have difficulty pulling away from them.

7. Certain factors increase risk for ESS. These include male gender; younger age; preexisting psychiatric, neurodevelopmental, learning, or behavior disorders; concurrent or past psychosocial stressors; addiction tendencies or family history of addiction; younger age when first exposed to screen-time; and higher amounts of total lifetime exposure. Possible risk factors include environmentally sensitive medical conditions like asthma, food or chemical sensitivities, and sensory dysfunction. Generally speaking, boys with ADHD and/or autism spectrum disorders are at particularly high risk.

It's the Medium, Not the Message

Now that ESS has been broadly defined, let me clarify some terms and address some questions readers may have at this point.

For instance, if mental health issues arise because of screen-time, the first question is often: Is it because of the sheer *amount* of screen-time, because of the *type of activity*, or because of the *nature* of what's seen? The truth is, research suggests that *all* screen activities provide unnatural simulation to the nervous system and can cause adverse effects. But contrary to popular belief, content isn't as important as amount, and interactive screen-time causes more dysfunction than passive.

Strictly speaking, the term *screen-time* refers to any and all time spent in front of any device with an electronic screen, such as computers, televisions, video games, smartphones, iPads, tablets, laptops, digital cameras, e-readers, and so on. It includes any screen-related activity, whether for work, school, or pleasure. This includes time spent texting, video chatting, surfing the Internet, gaming, emailing, engaging in social media, using apps, shopping online, writing and word processing, reading from a device, and even scrolling through pictures on a phone.* It includes activities like playing electronic Scrabble or solitaire, "educational" electronic games or apps, and reading from a Kindle.

Interactive vs. Passive Screen-Time

In terms of impact, perhaps the most important distinction is between interactive and passive screen-time. *Interactive screen-time* refers to screen activities in which the user regularly interfaces with a device, be it a touch screen, keyboard, console, motion sensor, and so on. *Passive screen-time* refers to watching movies or television programs on a TV set from across the room. Nowadays parents often let their children watch TV shows or movies on an iPad, laptop, or handheld device, but because viewing media this way is more stimulating and dysregulating (for reasons I'll get into later), I consider this to be interactive screen-time.

Generally speaking, both interactive and passive screen-time are associated with health issues. Research indicates both types are involved in obesity,

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* I note this particular activity because many of my adolescent female patients spend substantial time scrolling through pictures or filming short segments of things around them, and then view them throughout the day; using a phone or camera for this purpose represents a source of screen-time that may be overlooked.

attention problems, slower reading development, depression, sleep problems, diminished creativity, and irritability, to name a few.[1] What is somewhat counterintuitive with ESS, however, is that interactive screen-time is much worse than passive. Many families I work with already limit passive screen-time (such as television) but not interactive. This is because we associate passive viewing with inactivity, apathy, and laziness. In fact, parents are often encouraged to provide interactive screen-time (particularly in favor of passive screen-time), with the rationale that surely this type of activity engages the child's brain. Children are forced to think and puzzle rather than just watch, so it must be better, right? But interaction is in and of itself one of the major factors that contributes to hyperarousal,[2] so sooner or later, any potential benefit of interactivity is overridden by stress-related reactions. Furthermore, interactivity is what keeps the user engaged by providing a sense of control, choices, and immediate gratification, but unfortunately these attributes are the same ones that activate reward circuits and lead to prolonged, compulsive, and even addictive use.[3]

Burgeoning research comparing the two supports this theory that interactive screen-time is more dysregulating to the nervous system than passive. A 2012 study surveying the habits of over two thousand kindergarten, elementary, and junior high school children found that the minimum amount of screen-time associated with sleep disturbance was just thirty minutes for interactive (computer or video game use) compared to two hours for passive (television use).[4] A 2007 study demonstrated that sleep and memory were significantly impaired following a single session of excessive computer game playing, while a single session of excessive television viewing produced only mild sleep impairment and had no effect on memory.[5] And a large 2011 survey of American adolescents and adults demonstrated that interactive device use before bedtime was strongly associated with trouble falling asleep and staying asleep while passive media use was not.[6] Notably, this study also revealed that adolescents and young adults under thirty were the age group most likely to use interactive devices before bedtime, and they also reported the most sleep disturbance. Moreover, of those experiencing sleep problems, 94 percent also reported an impact on at least one area of functioning: mood (85 percent), school/work (83 percent), home/family life (72 percent), and social life/relationships (68 percent). Not coincidentally, these are the very

areas of functioning the Reset Program addresses! And finally, we know that actual *brain damage* occurs from excessive Internet and video game use that looks remarkably similar to that from drug and alcohol abuse,[7] so something about the interactive nature either directly (through hyperarousal) or indirectly (through addiction processes) makes interactive screen-time more potent as well as distinct.

When implementing the electronic fast in the Reset Program, I typically allow small amounts of television or movies under certain conditions (as discussed in chapter 5). If these conditions are met, the fast is still highly effective. On the other hand, allowing even small amounts of gaming or computer play often renders the Reset useless. Thus, for the Reset Program, we are primarily concerned with eliminating *interactive* screen-time. Additionally, most parents become overwhelmed at the thought of taking away all electronics, so allowing a small amount of passive viewing of appropriate, calm content provides parents with a bit of a respite. That said, I do not take television's effects lightly, especially on the very young,* and I applaud anyone who removes *all* passive screen-time in addition to the other requirements of the fast. Regarding computer use for school purposes, I typically allow it during the Reset, but certain exceptions and rules apply (as discussed in chapters 5 and 10).

Common Misconceptions about Problematic Screen-Time

Misconceptions abound when it comes to screen-time, even among mental health professionals. For starters, it's not just violent video games that can cause dysregulation, but *any* video game — including educational or seemingly benign games, like puzzles or building games. Another myth is that it's only children who are "addicted" to gaming, Internet use, or social media who experience issues, or that screen-time only becomes a problem when parents don't restrict it. In fact, many children display symptoms from screen-time without being addicted per se, and some children become overstimulated and dysregulated with only minimal amounts of screen exposure. I see many families in which the parents limit usage to levels at or below what

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* The American Academy of Pediatrics recommends that children under the age of three be screen-free (of both passive and interactive screen activities).

the American Academy of Pediatrics recommends (no more than one to two hours total screen-time daily),[8] but if some or most of that time is interactive, it can easily create a problem.

The truth is, every child is affected differently. Comparing your child's screen-time to his or her peers isn't helpful either, as it doesn't necessarily provide protection if it's less than others'. The average child is exposed to several fold–higher levels of electronic screen media compared to just one generation ago — not to mention the constant bombardment of wireless communication that often accompanies it.

This fact bears emphasizing: "moderate use" today amounts to exposing your child to levels of electronics use never before seen in history.

This is why I caution parents against trying to distinguish between "good" and "bad" screen-time or between "too much" and "only a little." Though understandable, this mind-set is risky. The purpose of the Reset is to provide the brain with a clean break and adequate rest to return to its natural state. The reality is that there are likely many variables — too many to sort out — between various screen activities and each individual child's makeup and vulnerabilities. But even if we could distinguish them all, these differences would likely be meaningless in the larger picture. Among all the various kinds of problematic screen-time, research is uncovering more similarities than differences. Thus, when approaching a Reset, the easiest and most productive thing to do is to lump all interactive screen-time together.

Kindle, Cartoons, and Cognitive Load

So why is it that reading a book before bed is soothing, while viewing an e-reader can be just the opposite? In either case, we are reading the same content, whether that be an adventure story or an historical account. It's that the medium itself affects the amount of energy needed to process and synthesize information, a factor researchers call *cognitive load*. Parents often ask if e-readers like the Kindle or Nook "count" as interactive devices. After all, these particular devices do not emit light, they use electronic "ink," and they are supposed to read like a regular paper book. Only they don't. Studies show that reading is slower and that recall and comprehension is impaired when using an e-reader, suggesting that the brain doesn't process the information as easily.[9] Conversely, research suggests that the sensory feedback of a real

book helps us incorporate information: the weight, texture, and pressure felt from holding a book; the cracking of its spine and flipping of its pages; the buildup of turned pages that provides a sense of how far along you are in the story — all reduce the cognitive load needed to absorb the information. Finally, while e-ink displays are less visually fatiguing than LCD screens, they are still hard to visually and cognitively process because they are pixelated, display a "flash" when refreshing between pages, and don't provide 3-D input.

High cognitive load is also the reason I eliminate fast-paced cartoons for the Reset. If some TV is allowed, what's watched should be, above all, slow-paced. Cartoons of all kinds are typically much more rapidly paced today. Scene changes, movement within scenes, and plot points unfold very quickly, and all of this the brain must digest. A recent study demonstrated that just nine minutes of viewing a fast-paced cartoon impaired memory, the ability to follow direction, and the ability to delay gratification in toddlers compared to viewing a slower-paced cartoon.[10] It's not just pace, either. Intense color, fantastical events, and sudden or loud noises also contribute to sensory and cognitive overload.

The Controversy Over Electromagnetic Fields and Health

Do manmade electromagnetic fields (EMFs) play a role in ESS or other health conditions? No one denies that manmade EMFs — which arise from electronic devices themselves as well as from wireless communication (such as WiFi or mobile phone frequencies) — have biological effects. It is a basic tenet of physics that nearby electromagnetic fields influence one another. The question is whether those biological effects are meaningful. In other words, do higher levels of everyday EMF exposure translate into health issues the average person wouldn't have experienced otherwise?

At present, research on the kinds of fields produced by wireless communication is still relatively "young," and the findings are not always consistent. However, there is a growing body of objective, non-industry-funded research — that includes studies from highly respected institutions such as Columbia, Yale, and Harvard — that suggests these fields may be harmful.[11] Some of the research is highly technical and difficult to grasp; for example, some evidence suggests that extremely weak fields may be more harmful than stronger ones. Interestingly, some of the findings are strikingly similar to

those found in screen-time studies, so there may be synergistic mechanisms occurring, particularly for individuals with sensitive constitutions. Personally, I feel there's fairly strong evidence that, at a minimum, manmade EMFs cause inflammation. I also think appreciating how they can interact with the nervous system (which is, after all, electrical, and thus produces an electromagnetic field itself) adds to our understanding of how electronics impact us. My best guess is that EMFs are a portion of the stress from electronics, and that proportion varies widely depending on the individual's chemical and electrical makeup.

Regardless, the *precautionary principle* dictates that when the science regarding the risks of a new technology is not yet fully conclusive — and in this case it won't be for decades — that we should proceed with caution and minimize exposure wherever possible, particularly when it comes to children. At the same time, when one fully understands the EMF science and believes there is even possible risk to the developing child, it opens a whole new can of worms — especially considering the explosive growth of wireless communications in public places, like schools.

Because this is such a complicated and emotionally charged topic, the bulk of relevant EMF information is presented in appendix B, "Electromagnetic Fields (EMFs) and Health: A 'Charged' Issue." Additionally, since it's not totally necessary to appreciate or accept the role of EMFs to address Electronic Screen Syndrome, "carving it out" reduces the amount of information you'll need to process in order to take action. You can think of the EMF appendix as an additional layer to digest whenever you're ready.

An Inconvenient Truth

Let's face it. Hearing that video games, texting, and the iPad might need to be banned from your child's life does not fill one with glorious joy. Rather, for many, it creates an immediate urge to find a way either to discredit the information or to work around it. Sometimes when I tell parents what they need to do in order to turn things around, I sense that I am losing them... their eyes shift away, they squirm, and they look like they're in the hot seat. This is not what they want to hear. It's as though I'm telling them they need to live without electricity — that is how ingrained screens are in our lives. The inconvenience of what I'm proposing can seem overwhelming. Aside

from dreading the inconvenience, though, discussing ESS and the Reset often produces other negative feelings. Some folks feel as though their parenting skills are being judged, or that their efforts or level of exhaustion are under-appreciated. Other parents feel guilty or irresponsible for not setting health-ier screen-time limits to begin with, or they become acutely aware that their own screen-time use is out of balance.

Let's dig a little deeper into some other negative reactions parents experi-ence upon hearing about the effects of electronics or the fast itself. These are feelings that are sometimes pushed outside of everyday awareness, and these same feelings, when left unacknowledged, can undermine your success. Conversely, getting in touch with where any resistance is coming from will help you work through it, and it will help you understand others' resistance, too. These challenges are discussed throughout the book, but because these concerns can be preoccupying, I'd like to acknowledge them here. Below are some of the reactions parents commonly experience:

- Parents feel overwhelmed by the sheer pervasiveness of screens and are convinced that removing them all will be "way too hard."
- Parents fear the child's reaction and worry that a fast will be met with rage, despair, and tantrums.
- Parents feel guilty about taking away a pleasurable activity, and/or they are concerned the child will no longer fit in with peers.
- Parents worry about, and even resent, losing their "electronic babysitter," and they wonder how they will get household tasks done without it.
- Parents doubt that electronics are the problem, or they don't believe removing them will solve their child's problems.
- Parents worry about what others (in their family or community) will think. Will others undermine their efforts to limit screens, or view them as extremist or alarmist — and therefore not take their con-cerns seriously?
- Parents are annoyed by the inconvenience of removing or restricting laptops, iPads, and mobile devices they themselves use.

Of all the reactions, perhaps the hardest to deal with is guilt. No par-ent wants to feel they have unwittingly contributed to their child's difficul-ties. And many parents already harbor guilt regarding the use of electronics.

Whatever rules they have set or usage they allow, they often already feel that they are allowing "too much" and that their own use does not set the good example they'd like it to. Nor do any parents want to do something they know will put their child into a genuine state of despair; for some parents, even the *thought* of removing electronics causes them to feel tortured.

Guilt is an exquisitely uncomfortable emotion, and, as such, it is human nature to avoid feeling it. When it comes to electronics, one way parents assuage guilt is to rationalize its use: "Screen-time is the only time my kids are quiet." "Electronics allow me to get things done." "Screen-time is the only motivator that works." "It's what all the kids do, and anyway my child uses it a lot less than others." "I only let her play educational games." And so on. If you find yourself rationalizing use, simply cut yourself some slack and keep reading. I don't want you to dwell on what's already happened; I only wish to show you *there's a way out*. On the other hand, if you think you might be rationalizing use to avoid guilty feelings over taking electronics away, then just acknowledge this fact, and know that these feelings will diminish as you take action and start to see positive changes.

Aside from guilt, parents also experience anxiety about the potential impact of an electronic fast on their child: they worry about how the child will react, about what his or her peers will think (particularly if the child already has social problems), and about whether screen restrictions will breed resentment and put additional strain on an already tense parent-child relationship. Even when parents agree that screen-time is a problem, many fear that the Reset will only produce *more* stress — more headaches, more tears, more *work*. Yet while many parents feel overwhelmed initially, most report that the Reset is far easier than they imagined. This is in part because the child "gets over it" a lot faster than the parents expect, and in part because as the relief and pleasure grow from seeing their child become happier, better behaved, and more focused, the restrictions become easier for everyone to follow.

Lastly, some parents question the concept of Electronic Screen Syndrome itself. They want *scientific proof* behind the claims I make. After all, how could something so pervasive have been overlooked as a problem until now, and don't "positive" studies regarding interactive screen-time come out on a regular basis? I have two answers to this question. The first is to emphasize that despite seemingly conflicting studies presented by the popular press, there is a solid consensus in the medical community that screen-time

is associated with multiple adverse outcomes — including academic, emotional, sleep-related, behavioral, and physical health issues — and that these effects may be long-lasting.[12] Indeed, this now rather large body of research is cited throughout this book, and there has been a push by the American Academy of Pediatrics to encourage physicians to discuss screen-time health risks with parents.[13] And positive studies? Even I admit there may be special cases where video games might be helpful, such as rehabilitating a limb after a serious injury. But those instances are the exception, not the norm. The vast majority of positive findings don't transfer to real-life functioning or are conclusions from studies that aren't considered methodologically sound. There will never be 100 percent consensus among researchers in any field, but with screen-related research, studies are often funded by powerful corporations or organizations with vested financial and political interests. These studies' findings are suspect to begin with, and they are also "spun" in terms of significance.

For instance, regarding the use of technology in education, it may *appear* that there is a division of scientific opinion regarding risks versus benefits. However, despite much hype and many promises, there is as yet no solid evidence that educational software enhances learning or brain development, while there is increasingly clear evidence that computer use may hamper both. Meanwhile, virtually all the "positive" research studies are industry funded.[14] Educational policy makers are often misled by such research, whose decisions trickle down to school administrators, who then buy software and licensing agreements, and so it goes.

In contrast, whether their focus is medical, psychological, or educational, serious researchers who don't have skin in the game also don't have huge public relations departments — which is why you don't always hear about their work. There is nothing inherently radical about linking screen-time usage with behavioral problems. Perhaps the most radical thing I've done is to gather a wide range of diverse symptoms under a single name and created an effective program to address it.

Which leads to my second answer to this question. Whatever specific studies show, whatever you believe about screen-time usage, the Reset Program works. That it works is the best evidence that screen-time usage, in itself, can cause behavioral, mood, and cognitive problems. Even if parents are unsure, the risks of trying an electronic fast are virtually nonexistent. The

Reset Program involves no real expenses, no medicine, and has no side effects. It's safe, widely applicable, and is shown to be highly effective across multiple domains. Yes, there are inconveniences, but what are they next to the difficulties your child is experiencing? Which, ultimately, is more inconvenient, losing the screen-time status quo or having a child who rages, who can't focus enough to learn, or who drives others away because of behaviors? What about the inconvenience of not sleeping at night because you're worried, of endlessly driving to fruitless appointments, or of spending money on treatments because you don't know what else to do? Acting on the information presented here requires mental energy and a leap of faith — but the payoff can be enormous.

Throughout the book, I present the stories and case studies of real children. Many of these stories are based on my formal work with my own patients and on my informal experience with children of friends and family, and some are from reports I've received from parents, grandparents, teachers, and therapists who've completed the website course, read my articles, or heard me speak. To protect identities, I've changed descriptive details and occasionally created composites, but the effects of screen-time and of the Reset Program are accurate to what actually happened. That said, even though I took pains not to exaggerate results, I realize that some stories sound a little too good to be true. Is it possible that something as simple as an electronic fast could resolve so many issues and situations so neatly? In fact, yes. Done properly, the Reset Program is that effective, and its benefits are that widespread. Further, these benefits can be maintained as long as the appropriate screen-time restrictions are maintained. That doesn't mean it's always easy, but for many parents, the most convincing proof that Electronic Screen Syndrome is real is seeing how the Reset Program improves the life of their own child.

Chapter 1 Take-Home Points

- When traditional mental health or educational resources are ineffective or insufficient for treating children with psychosocial issues, an environmental cause might be screen-time usage, manifesting as Electronic Screen Syndrome (ESS).
- The introduction and ubiquitous use of interactive screen devices represents a widespread new source of environmental toxicity, and it's capabilities to produce nervous system dysregulation are largely underestimated.
- Symptoms and issues associated with ESS are not due solely to screen addiction or violent content; even "moderate" screen-time can trigger fight-or-flight reactions.
- The concept of ESS was developed to capture the unifying features that explain the variety of symptoms and dysfunction that screen-time can induce.
- ESS is characterized by overstimulation and hyperarousal and defined by the presence of mood, cognitive, and/or behavioral symptoms that are relieved with strict removal of electronic devices (the Reset Program).
- Interactive screen-time is more likely to create hyperarousal and dysregulation compared with passive screen-time, and it is more likely to disrupt sleep and be associated with mood, cognitive, and social problems.
- Electronic devices create electromagnetic fields (EMFs), but whether and how EMFs negatively impact the brain is controversial and complicated; for more, see appendix B, "Electromagnetic Fields (EMFs) and Health: A 'Charged' Issue."
- Uncertainty about ESS and reluctance or resistance to trying an "electronic fast" are normal. The Reset Program requires changes in everyone's daily life in terms of screen-time usage. Anticipating these changes, and acknowledging and accounting for resistance, is essential for success.

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For more information visit www.DrDunckley.com

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