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# Television and Children —Rewiring the Brain?

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Over the past three decades, a series of academic studies has considered the impact of television programming on children. The nation has gone through recurring waves of anxiety over television programming, concerned with the impact of violence, sensuality, and negative role models on young minds.

Just recently, attention has turned to a more fundamental question. Does watching television actually change the way children think, not just how they think? A recent study published in the journal *Pediatrics* should set off alarm bells around the nation.

Under the direction of pediatricians at the University of Washington, researchers considered the connection between exposure to television and a loss of attentiveness. After studying over two thousand five hundred children, the researchers determined that one hour of daily television exposure in children from birth to three years old is directly tied to as much as a ten percent loss of attentiveness when the children reach age seven.

The article, "Early Television Exposure and Subsequent Attentional Problems in Children" traces the influence of early television exposure to the fact that "the newborn brain continues to develop rapidly through the first few years of life and that considerable plasticity exists during this period." In other words, the actual process of watching television tends to "rewire" the brains of very young children, so that they grow accustomed to visual stimulation and multiple visual exposures. As the researchers determined: "The types and intensity of visual and auditory experiences that children have early in life therefore may have profound influences on brain development."

Television does not merely replicate everyday life and customary ways of experiencing the world. In the real world, our eyes are directed at objects around us, and we see from one perspective at a measured pace controlled by our own eye movements. Television, on the other hand, controls attention by offering multiple scene shifts, electronic visual stimulation, words accompanied by sound track, and stimulation by other visual cues presented on the television screen.

As the researchers explained the problem: "In contrast to the pace with which real life unfolds and is experienced by young children, television can portray rapidly changing images, scenery, and events. It can be over stimulating yet extremely interesting." In clinical terms, the researchers theorized "that very early exposure to television during the critical periods of synaptic development would be associated with subsequent attentional problems."

The research project verified the theory, and validated parental concern. The risk of television impact was actually greater than the researchers had feared. Exposure to television at age one was associated with as much as a 28 percent increase in the probability of having attentional problems at age seven.

The research data makes for compelling reading. Of the one-year-olds, thirty-six percent watched no TV, thirty-seven percent watched one to two hours daily, fourteen percent watched three to four hours each day, and the rest watched at least five hours of television each day. Those who watched from one to two hours demonstrated a twenty percent increased risk of attention problems. Those who watched three to four hours had an increased risk of from thirty to forty percent.

Dr. Dimitri Christakis, the projects lead researcher and a pediatrician at Children's Hospital and Regional Medical Center in Seattle, explained to CNN, "The newborn brain develops very rapidly during the first two to three years of life. It's really being wired," he said. "We know from studies of newborn rats that if you exposed them to different levels of visual stimuli...the architecture of the brain looks very different." Television can fundamentally change the way the brain responds to visual stimulation, Christakis believes. An over stimulation of the brain during the critical period of early development "can create habits of the mind that are ultimately deleterious," the researcher explained.

Over the past several years, millions of American children—primarily boys—have been diagnosed with attention deficit disorders. As a matter of fact, the pervasiveness of attention deficit problems has reached epidemic proportions. While some of this can no doubt be attributed to over zealous diagnosis, the problem really does exist.

Television is one of the most influential technologies ever to be invited into the American home. For adults, the television offers what amounts to an intellectual break from every day life. That's why the television is often described as "video Valium." Generally speaking, television makes few demands of the viewer and stimulates the brain, providing the sensation of thinking without the discipline of actually using the mind's intellectual powers.

With children, the dangers are only increased. When television is used as a video babysitter or "electronic pacifier," parents put their children at risk. Even before issues of program content are brought into question, the physiological and neurological impact of television must already be a pressing concern. When issues of content, moral values, violence, and ideology are added to the mix, the full picture of television's impact comes into clearer focus.

Christian parents should be especially mindful of this problem. For years now, many Christian parents have sought to replace toxic children's programming with Christian alternatives, believing that the content of the television experience is of first importance. This new research should offer an additional and urgent caution. Exposure to television—regardless of the program content—can harm children by changing the way the mind works in receiving and processing information.

The American Academy of Pediatrics has offered an official advisory cautioning parents to protect children under age two from all television watching.

Another study raises an entirely new issue. Researchers can now document the impact on children overhearing programming watched by their parents. This problem of "secondhand television," like secondhand smoke, indicates that a spillover effect happens when young children overhear or see programming parents believe they are watching alone. Children are drawn to the visual and auditory stimulation of the television medium, regardless of the programming. When children are in the room, they will watch programming even when parents think the content is "over their heads" and unnoticed.

According to industry reports, as many as one third of all American children have a television in their bedroom. That probably says more about the state of America's families than we would like to know, but it represents a truly frightening statistic in itself. "The truth is there are lots of reasons for children not to watch television," Dr. Christakis argues. "Other studies have shown it to be associated with obesity and aggressiveness," as well as anger and intellectual passivity.

The next time parents scratch their heads wondering about a lack of attentiveness in their children, perhaps they should look in the living room and see the real culprit, blaring away in living color.

