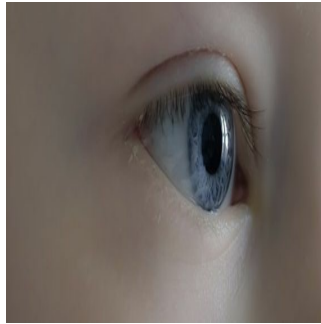


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## CT Scans for Headaches in Children Used Widely



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More than one quarter of the children treated for headache across a range of care settings received a computed tomography scan, possibly exposing them to unnecessary radiation and increased cancer risks, according to an article in the July edition of *Pediatrics*.

"It's ironic that providers sometimes use CT scans to rule out brain tumours or brain abnormalities because parents are concerned about this possibility — which is the cause of less than 1 percent of those with paediatric headache — when overuse of CT scans can increase the risk of brain tumours," said co-author Dr. Paul Young, professor of pediatrics at the University of Utah School of Medicine. "It's possible that physicians underestimate the risks associated with CT scans."

The use of CT scans to diagnose paediatric headache remains high despite increased cancer risks and the fact that except for certain narrow indications, providers often gain little clinically useful information from these imaging studies while exposing children to unnecessary radiation. Headaches are among the five most common health issues in children, as well as one of the most frequent reasons for paediatric neuroimaging, particularly in emergency departments.

The study found that children who were evaluated in the emergency room were four times more likely to have CT scans than those children who did not go to the emergency room. However, even outside the emergency room, use of CT scans remained widespread. In paediatric patients getting CT scans for headaches, 67 percent received their scans outside of the emergency department setting.

Other studies have drawn correlations that CT scans increase a child's lifetime risk of cancer. A retrospective study published in the *Lancet* in 2012 suggested that the cumulative radiation from as few as two to three CT scans in a child younger than 15 years old could triple the risk of brain tumors, while five to 10 head scans could triple the risk of leukaemia. A study published in the June 2013 edition of *JAMA Pediatrics* noted that a radiation-induced solid cancer is projected to result from every 300 to 390 abdomen/pelvis scans in girls.

The *Pediatrics* study, written by authors either employed by or designated by HealthCore, American Academy of Pediatrics, American Academy of Family Physicians, American Academy of Neurology and WellPoint, stemmed from discussions by WellPoint and AAP to find out "to what extent do current practice patterns for treatment of paediatric headache align with practice guidelines?" An advisory group including representatives from the AAP, AAN, and AAFP helped frame the discussion that resulted in this study.

The American Academy of Neurology recommends in favor of MRIs as opposed to CT imaging for people with headache, a normal history and neurologic examination. This recommendation was endorsed by the American Academy of Pediatrics and the American Colleges of Radiology.

"We found that AAN imaging guidelines were most often followed by neurologists when treating children, but not by other physicians," said Dr. Alan Rosenberg, WellPoint vice president of medical and clinical pharmacy policy. "We want to better understand current utilisation patterns to help parents of patients, clinicians, and health benefits companies with the information we need to inform and facilitate change to improve care for children and adolescents."

In 2008, 1.7 million paediatric CT scans were performed in the emergency room, nearly six percent of all paediatric emergency room visits that year.

As many as 28 percent of those scans were performed for headache unrelated to head injury. Quality improvement initiatives, such as those supported by AAN and advocated in the Choosing Wisely Campaign by the AAP, could significantly reduce paediatric and adolescent exposure to unnecessary radiation.

The retrospective analysis included 15,836 children aged three to 12 years old with more than two medical claims for headache.

The article was authored by Andrea DeVries of HealthCore, Dr. Paul Young of University of Utah School of Medicine, Thomas Getchius of the American Academy of Neurology, Chia-hsuan Li of HealthCore and Dr. John Whitney and Dr. Alan Rosenberg of WellPoint.

Source: WellPoint

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