



# PALS NEWSLETTER

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**PALS Scheduling Line (412) 246-5656**

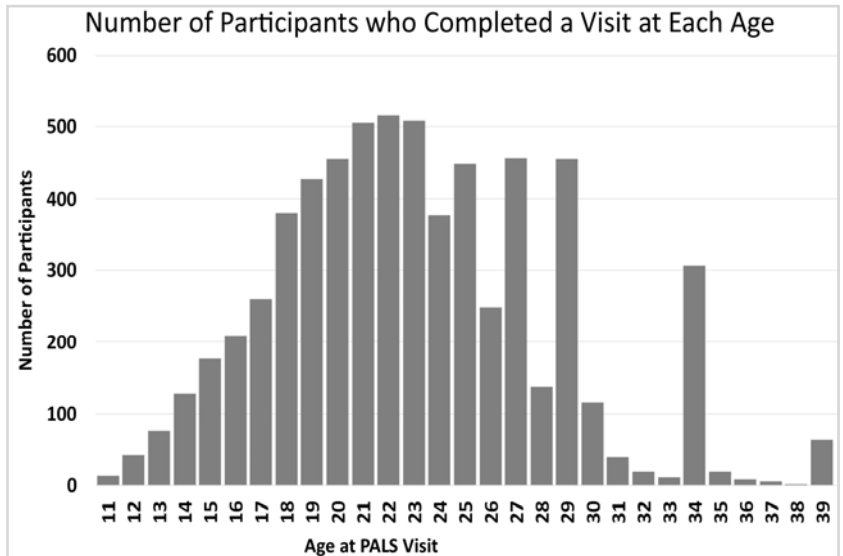


**Study Update:** The PALS Study began its 20<sup>th</sup> year of funding in September. A total of 650 young adults and 835 parents have been enrolled to the study. To date, 91% of the enrolled young adults (590) remain active in the study. A total of 14,587 interviews have been completed during the study’s lifetime: 6,538 with young adults and 8,049 with parents. We hope that you all know how much we appreciate your faithful participation in the project!

The chart below shows the number of interviews that we have done by age. It shows the large numbers of participants in mid-to-late adolescence and in early adulthood through age 29. This many assessments allow us to describe the wide ranges of life experiences had by our study participants. For those of you savvy with statistics, you know that larger sample sizes create more reliable findings. Thus, with literally hundreds of participants, we can describe different life course trajectories over time. Our hope is that we will eventually be able to have tall bars for 34-35 year olds and for 39-40 year olds.

Dr. Molina and our research team submitted a proposal to NIH in November to continue PALS for another five years of funding, with interviews continuing at ages 35, 37, 39, and 45. The proposal will be reviewed in the next month, and we will receive preliminary feedback shortly afterward.

Stay Tuned!



## PARIS- Calling All Baby Scientists!

As we recently announced, Dr. Heather Joseph, a psychiatrist with our lab, is beginning a study to examine attention of infants born to parents with or without ADHD. Postcards about the study will be sent to PALS participants who live in the Pittsburgh area. Dr. Joseph seeks to enroll parents and their infants under the age of 10 months.

If you are the parent of an infant or are expecting a child in the coming year, and would like to learn more about the PARIS study, please email [PARISstudy@upmc.edu](mailto:PARISstudy@upmc.edu) or call (412) 420-8309.



**Winter – More than just a season** According to Webster’s Dictionary & Wikipedia winter is defined as the cold season between autumn and spring in the northern hemisphere and is caused by the axis of the Earth being oriented away from the sun ultimately causing less sunlight to hit the northern hemisphere. To you and me this means experiencing shorter days of sunlight and more days of freezing temperatures. Ugh!



To survive this harness of winter, certain animals are known to hibernate, a state of reduced metabolic activity. Some animals "sleep" and only come out when the warm weather returns; e.g., gophers, frogs, snakes, and bats. Some fur-coated mammals grow a heavier coat to help improve the heat-retention qualities of their fur. This got me to thinking, since we as humans can’t “sleep” the winter away or grow a nice heavy coat of fur, how do we deal with the passing days of winter here in Pittsburgh? How about ice skating? Why drive to New York City when our *ice skating* rink downtown is larger! The MassMutual Pittsburgh Ice Rink at PPG Place is 116 by 116 feet — 67 percent larger than the Rink at Rockefeller Center. Its open 7 days a week through Feb. 26. Adult admission is \$8, kids 12 & under are \$7; skate rental is \$4. Another fun outdoor activity is *snowtubing* at the family-friendly winter complex at Boyce Park. Here you’ll find slick slopes dedicated to this easy but exhilarating winter activity. The fun begins with a ride that pulls you up the hill; then it’s off to the races! Admission is \$17 for Allegheny county residents and \$21 for non-residents. Enough of passing the time outside, head indoors and take a *cooking class*. Chop, WOK & Talk! began offering cooking classes in 2002. They have class offerings in cuisines from across the globe. Groups, private parties and individuals are welcome to sign up for the registration-required classes; prices can range from \$70-\$150. You could also try a *hot yoga class*. Amazing Yoga is one of the most established studios in Pittsburgh. Here you can enjoy the temperatures of summer while getting a great workout. Classes range from \$65- \$300 and they offer veteran and student discounts.



One activity you may not want to participate is seeing if your tongue will really stick to a frozen pole. Believe me it will! and quickly according to [livescience.com](http://livescience.com). Here is the science to prove it. If a pole is colder than 32°F, the warmth of your tongue creates a layer of moisture on the metal. Metal is high in thermal conductivity so it draws the heat out of your tongue faster than your body can replenish it. The saliva on your tongue then freezes, and since your taste buds are textured, the frozen moisture bonds between the metal and your tongue; thus, your tongue is now “*stuck to a pole.*” While your finger or hand can also “stick” to metal, their lack of texture results in a bond that is not nearly as strong as your tongue. But don’t worry warm fluids will melt the ice between your tongue and the pole setting you free. If you’re ever alone and find yourself in this situation, stick your finger into your mouth and moisten the area between your tongue and the pole. Wiggle your tongue gently and use your finger to roll the skin away from the pole. Once free, tell no one!



So, where ever you may find yourself this winter, either inside exercising or cooking or braving the cold ice skating or tubing down a mountainside, one thing is for sure for me. I will never look at the movie A Christmas Story the same way again!

Cheers to winter!

Kellie Spontak  
PALS Interviewer

## What is “Late-Onset ADHD”?

Do you know anyone who was diagnosed with ADHD later in life (as a teenager or adult)? ADHD is widely considered to begin early in childhood – perhaps even at birth – and often continues into adulthood. However, based on findings from large, longitudinal studies in New Zealand and the UK, several research groups have recently questioned this long-held belief, suggesting there may be a subtype of ADHD – “late-onset ADHD” – that begins later in adolescence or even adulthood<sup>1,2</sup>.

These surprising findings have stirred some debate among professionals. Clinicians have observed for years that ADHD does not tend to develop in adults out the blue, but instead has its roots in childhood. Although these recent studies examined many research participants over many years, they are limited, because their assessments of ADHD are not very detailed, and the large number of participants does not allow for a case-by-case examination of how ADHD symptoms developed over time. Therefore, they cannot rule out the possibility that ADHD-like symptoms in adulthood may be better explained by other factors, such as another disorder (e.g., bipolar disorder, anxiety disorder) or heavy substance use. Ruling out these other possible explanations is an important part of clinical diagnosis that large research studies often overlook.

A recent study led by Dr. Margaret Sibley at Florida International University took a closer look at cases of apparent “late-onset” ADHD to tease apart other potential explanations for the symptoms<sup>3</sup>. Along with other researchers, including PALS primary investigator Dr. Molina and post-doctoral researcher Dr. Kennedy, Dr. Sibley analyzed data from the Multimodal Treatment of ADHD (MTA) study, in which children with ADHD and a comparison group without ADHD were followed for 16 years to an average age of 25. The authors focused only on the 239 individuals in the comparison group – those who were *not* diagnosed with ADHD in childhood – and traced their ADHD symptoms up to age 25. This study is unique from others that have investigated this question, because although there are fewer participants, the assessments occurred more frequently and included more detail than other studies. Additionally, because of the manageable number of participants, the researchers could examine cases of suspected late-onset ADHD in great detail, considering many factors beyond the mere presence of symptoms (e.g., other disorders, substance use, level of impairment, differences among reports from individuals, their parents, and their teachers, etc.).

This fine-grained perspective is more similar to how a professional would diagnose ADHD in a clinical setting.



As in previous studies, the authors found a small number of individuals whose symptoms of ADHD started in adolescence or adulthood. But when they delved deeper into the detailed data on each of those individuals and considered alternative explanations for the symptoms, the authors found that 95% of those who initially appeared to meet criteria for ADHD (and would have been diagnosed in the previous studies) did not receive a diagnosis once the additional information was considered. This left 6 individuals with a diagnosis of ADHD starting in adolescence and only 2 with a diagnosis starting in adulthood. For instance, some of the individuals who initially screened positive for ADHD in adolescence or adulthood had substance use or other psychiatric disorders that better accounted for the symptoms ADHD. Several others had ADHD symptoms only in one setting (e.g., school but not home), whereas symptoms in 2 or more settings is required for a diagnosis. Others did not reach the level of functional impairment required for a diagnosis of ADHD – that is, their symptoms did not significantly interfere with their day-to-day functioning. By taking these factors into account, the authors of the MTA study were able to make more precise diagnoses of adolescent/adult ADHD than previous studies were capable of making.

Even among those who were ultimately diagnosed with ADHD later in life, some experienced only transient symptoms that later remitted, and others had superior intellect. Most of the “late-onset” cases did experience some symptoms of ADHD as children, but they did not quite meet the threshold to be formally diagnosed in childhood. This profile led the authors to speculate that rather than “late-onset” ADHD, these individuals may have “late-identified” ADHD: as children, they may have been bright enough to succeed in school and overcome some of the challenges posed by ADHD, but by the time they entered high school and then transitioned to adulthood, their ADHD symptoms may have made it more difficult to function well in those more demanding environments. Hence, parents, teachers, and doctors may not have noticed the ADHD until it became problematic in adolescence.

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# YFRP WEBSITE STATS

As many of you may already know, we launched our brand-new Youth & Family Research Program website in late August, 2017. Since then, we've been tracking our site's statistics and wanted to share some of the information with you! If you haven't visited our website yet, here are a few features worth mentioning:

- ◇ *Study Pages:* Learn about YFRP studies and study findings, and see which studies are currently recruiting.
- ◇ *Resources:* Learn about ADHD, mental health resources, and more.
- ◇ *Research Registry:* Sign up to be notified when you may be eligible for a new study.
- ◇ *Newsletters:* See archived issues of PALS newsletters, and browse previous articles by topic.
- ◇ *Search:* Search for any term on the website using the bar in the upper right corner of each page.

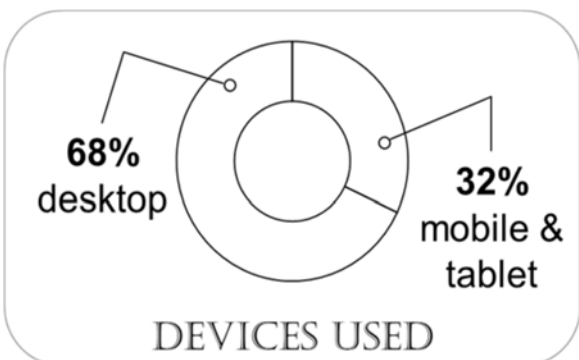
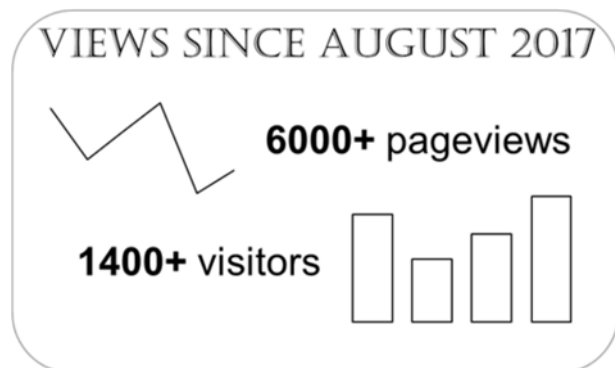
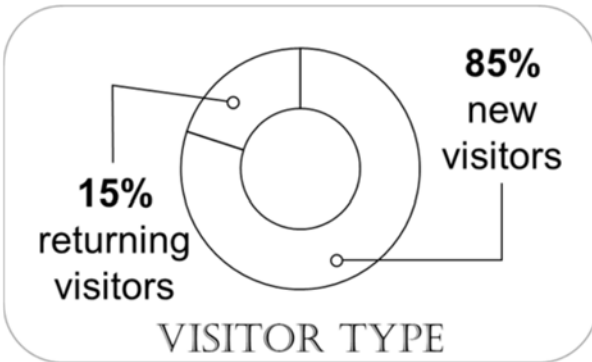
## A few things we've learned from our website statistics:

- ◇ People from all over the country (and all over the world!) visit our site, but we still get a majority of our views from the Pittsburgh area.
- ◇ About half of our visitors come to our website through search engines like Google or Bing.
- ◇ People are very interested in our staff and studies. 5 staff members and 5 study pages make our top 20.



## TOP 20 PAGES VIEWED

- |                        |                                 |
|------------------------|---------------------------------|
| 1. Home                | 11. Teen Study                  |
| 2. People              | 12. Heather Joseph, DO          |
| 3. Research            | 13. PARIS                       |
| 4. Current Studies     | 14. Participate in our Research |
| 5. Research Registry   | 15. Traci Kennedy, PhD          |
| 6. PALS                | 16. Understanding ADHD          |
| 7. Sarah Pedersen, PhD | 17. Completed Studies           |
| 8. Brooke Molina, PhD  | 18. ADHDenic                    |
| 9. Contact Us          | 19. ACE                         |
| 10. Resources          | 20. Heidi Kipp, MEd, LPC        |



Visit our website  
[WWW.YFRP.PITT.EDU](http://WWW.YFRP.PITT.EDU)



Michelle Wilson  
PALS & PALS Neuroimaging  
Interviewer



# What is “Late-Onset ADHD”?

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What do these findings mean for professionals? First, just because someone has not been diagnosed with ADHD in childhood does not mean that the disorder will not become apparent in adulthood, so a “late-identified” diagnosis should not be ruled out. However, professionals should be cautious when making a first-time ADHD diagnosis in adults. It is critical that professionals take all available factors into account, including level of impairment, whether symptoms occur across multiple settings, and whether substance use or other psychiatric diagnoses may explain the symptoms. Additionally, it is best to monitor ADHD symptoms over time and check whether they decrease when other problems resolve.

This MTA study importantly contributes to the discussion about “late-onset” ADHD. Although ADHD is still considered a developmental disorder that has its roots in childhood, the debate over the existence of a “late-onset” type of ADHD will likely continue as more research helps clarify the nature of this phenomenon. Until then, Dr. Sibley and her colleagues suggest it may be more accurate to think of this form of ADHD as “late-identified” rather than “late-onset”.

*Traci M. Kennedy, PhD  
Postdoctoral Associate*

<sup>1</sup> Moffitt, T. E. et al. (2015). Is adult ADHD a childhood-onset neurodevelopmental disorder? Evidence from a four-decade longitudinal cohort study. *American Journal of Psychiatry*, 172(10), 967-977.

<sup>2</sup> Agnew-Blais, J. C. et al. (2016). Evaluation of the persistence, remission, and emergence of Attention-Deficit/Hyperactivity Disorder in young adulthood. *JAMA Psychiatry*, 73(7), 713-720.

<sup>3</sup> Sibley, M. H. et al. (2017). *American Journal of Psychiatry* (advance online publication).

**Sudoku Classic**

4					6			5
	9						8	
		3				7		
9			2		8			4
		7				5		
8			4		9			7
		1				4		
	6						2	
7				8				6

### GAMEPLAY

The object of the game is to fill all the blank squares with the correct numbers. Fill in the empty squares of the grid with the numerals 1, 2, 3, 4, 5, 6, 7, 8, and 9. The puzzle is solved when each ROW and each COLUMN, and each 3 x 3 square within the puzzle contain the numerals 1–9 with each numeral appearing only once.

### SOLUTION

An answer key is available on our website at [www.yfrp.pitt.edu](http://www.yfrp.pitt.edu). From our home page on the website, select *Studies*, click on *PALS, Newsletters* and you will see *Sudoku Puzzle Answer*.

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**Address Correction Requested**