

# Autism Spectrum Disorders

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## Study: Too much repetition can hinder learning in those with autism

Reprinted from Autism Speaks—Science News

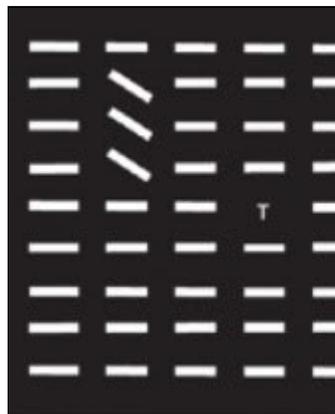
A [new study](#) suggests that, for those who have autism, repetition of information actually hinders the ability to apply what they've learned to new situations.

The finding challenges many popular autism education and therapy approaches that emphasize drilling and other forms of repetition.

The [study](#), by an international team of scientists, appears in [Nature Neuroscience](#).

The researchers enrolled a total of 20 adults affected by autism but not intellectual disability in the study. For comparison, they also enrolled 19 unaffected adults matched for IQ, age

and gender.



In the first phase of the experiment, the researchers asked ten adults with autism and nine without the condition to find the location of three diagonal lines surrounded by horizontal lines on a computer screen. (See figure at right.)

The researchers measured each participant's speed and accuracy in finding the diagonal bars during daily prac-

tice sessions.

For the first four days, the diagonal lines remained in the same location. On day five, the bars appeared in a new location and remained there through day eight.

Those in the autism group performed just as well as the non-autistic group when learning the initial location of the bars. However, when the location of the diagonal bars changed, a substantial learning difference appeared:

\* The participants unaffected by autism found the second location substantially faster than did those on the autism spectrum, and they continued to improve in speed and accuracy each

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- “Our conclusions is that breaks in repetition allow the visual system some time to rest and allow autistic individuals to learn efficiently and to then generalize.” David Heeger - Dr York University
- “Though repetition is a great way to learn new skills, being flexible is just as important” - Dr Murillo

day thereafter.

\* By contrast, the participants with autism continued to show difficulty finding the new location. Even on day eight, they were locating it more slowly and with less accuracy than they had found the original location when they first learned the task.

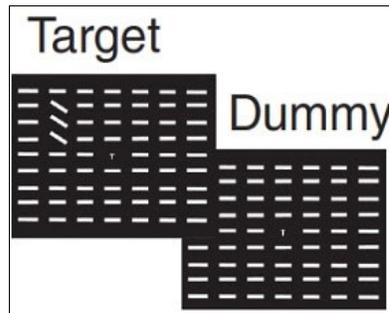
This persistent difficulty, the researchers proposed, suggested that the extensive drilling on days one through four was interfering with the ability to apply the new skill (finding the diagonal bars) in a new context (a changed location).

"It's like they showed 'hyperspecificity' of learning," says lead researcher Hila Harris, of Israel's Weizmann Institute. "Their learning became fixed and inflexible – since learning the first location adversely influenced their ability to learn the second instance."

Next, the researchers looked for a way to circumvent the "hyperspecific" learning. They began again with the second group (ten with autism, ten without). This time, the repetition of the diagonal bar's first location was broken up with the occasional "dummy" screen that did not contain any diagonal bars. (See figure 2 at right.)

Again the location of the bars changed on the fifth day. But

this time, those in the autism group learned the new location just as quickly as those in the comparison group. And like those in the comparison group, they continued to improve in speed and accuracy.



"Our conclusion is that breaks in repetition allow the visual system some time to rest and allow autistic individuals to learn efficiently and to then generalize," says study co-author David Heeger, of New York University.

"There have been few systematic investigations into the fundamental mechanisms by which information is acquired by ASD individuals – and into the potential reasons for their restricted, atypical learning," adds co-author Marlene Behrmann, of Carnegie Mellon University.

The inflexible behavior often associated with autism may be what's interfering with learning new tasks, the researchers conclude.

"These findings may help us improve educational and vocational programs for those with autism," comments Lucia Murillo, Autism Speaks assis-

tant director of education research." Dr. Murillo was not involved in the study.

"Though repetition is a great way to learn new skills, being flexible is just as important," Dr. Murillo emphasizes. "This reinforces the importance of teaching new skills to children and adults with autism in realistic ways and situations that involve change and not just rote drilling."



#### "A New Year's Resolution: Creating Moments"

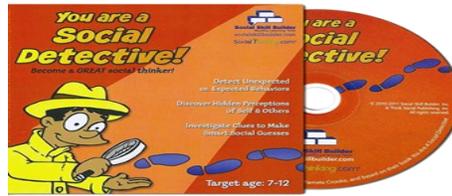
In the January 2016 edition of "The Oracle" (monthly newsletter put out by the Organization for Autism Research) Brenda Smith Myles talks about "creating moments" with your child on the autism spectrum. She defines those moments as "seconds or minutes in time that encourage interactions, success, and use of simple skills that can make a major impact". She says that the moments should be "brief, positive, and expand the world of the individual on the spectrum just a bit.

The moment for the child becomes "a pleasant interaction that works in many places and provides a pleasant moment for the person you interact with as well".

The entire article can be found at:

[www.researchautism.org/resources/newsletters/January2016.asp#HowTo](http://www.researchautism.org/resources/newsletters/January2016.asp#HowTo)

# Autism NAVIGATOR™



Surfside Beach, South Carolina ~ "Autism Friendly Travel Destination"

## 16 by 16™

Did you know that all children should have 16 gestures by 16 months? The 16 by 16™ series is designed to help families and others learn critical social communication skills that children should reach by 16 months in order to launch language learning, literacy, and much more by 24 months. This series of online Lookbooks illustrate with photographs each of the critical skills to provide a roadmap for families to monitor their child's early development and celebrate these important small steps your child is making. This information can help families notice small delays early in order to prevent bigger delays later and give all children an edge before preschool to better prepare for success in Kindergarten.

2 mo.- Gives, shakes head

4 mo. - Reaches, Raises Arms

6 mo. - Shows, Waves

8 mo. - Points with open hand, Taps

More information at [autismnavigator.com](http://autismnavigator.com)

Authors: Michelle Garcia Winner, Pamela Crooke, PhD

Great for both home and school! Designed for cross system compatibility, one CD will work for BOTH Mac & PC..

You Are a Social Detective! Interactive CD Game presents the social thinking concepts introduced in our You Are a Social Detective! book. The book is presented in the first chapter of the game, and then it kicks into interactive computer game with our social detective walking the students through each of the levels. There is no need to purchase the book because it is included in the CD, unless you want it in paper form.

Our new learning software CD, You are a Social Detective, is a dynamic combination of Social Skill Builder's interactive video modeling style with the characters, vocabulary and process of the book You are a Social Detective by Social Thinking® founder Michelle Garcia Winner and co-author

Surfside Beach is training local employees how to help families who have children with autism have a successful vacation experience in a non-judgemental, accepting community.

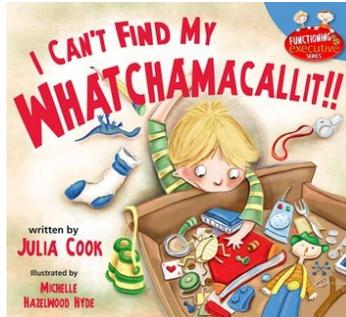
Events in the works:

- Sensory Friendly Movies
- Sensory Friendly Ripley's Aquarium
- Fishing on the Surfside Pier
- Movies in the park
- Playdates at All Children's Parks in Surfside Beach
- Group events at restaurants
- Surf lessons
- Visit to Surfside Fire Department Motorcycle Ride—Spanky's Ride on April 23
- Educational event with speaker(s)
- Possible respite for parents while kids are cared for at an activity or event

## Updated MDE Autism Webpage

Contents includes:

1. Online professional development tools for families and educators (Autism Navigator, AFIRM Modules, AIM, PBIS, Para training, etc)
2. ASD Assessment Resource Guide (2015): a comprehensive manual of assessments related to ASD (social communication, behavior, executive functioning, emotional regulation), with brief descriptions of all the resources housed on the Google Drive. Resources are accessed by simply clicking on the title in the manual.
3. Links to other state and government agencies related to ASD.



The first in the “Functioning Executive” book series, this book highlights the importance of being organized in a creative, applicable way. It also spotlights the unique differences and strengths that live in all of us.

This book teaches children to understand, develop, and apply organization – a vital executive function skill. Children who possess effective organizational skills can learn to manage daily responsibilities and how to plan ahead effectively.

## ASD Cohort



The Goodhue County Education District ASD Cohort will meet 2 more times during the 2015-2016 school year. The

dates are:

February 23, 2016 - and May 3, 2016.

We will gather at River Bluff Education Center. Our meeting time will be from 12 - 3, though the starting time is flexible as teachers have differing times that they can leave the classroom as well as some have extended driving times. Feel free to bring your lunch.

One of the topics we will talk about in

February is how to implement the evidence based practice of “Self Management”.

Until then, please let me know if there is any way that I can support you.

Lynne Petersen

## Upcoming Events



January 28 & 29 ~ Effective Interventions and Strategies.....aep connections.com

Feb. 8 ~ Solve Your Written Language Instructional Problems Region 10 website

April 24, 25, 26, 2016 ~ Charting the C's

April 27 – 30, 2016 ~ Autism Society of MN annual conference

June 20– 22 ~ Summer Institute (formerly Symposium) at Hamline