

## *Restricted, Repetitive, and Stereotyped Behavior in Autism Spectrum Disorders*

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### Overview

Restricted, repetitive, and stereotyped behaviors (RRSB) are one of the three clinical features of an autism spectrum disorder (ASD) diagnosis. RRSB include both nonverbal and verbal behaviors. Non-verbal RRSB can include hand flapping, finger flicking, spinning, pacing, rocking, preoccupations with parts of objects (e.g., opening and closing the door of a toy car instead of playing with the whole car), and/or non-functional routine following (e.g., walking backwards out of a room) and ritualistic behaviors (e.g., collecting sticks and keeping them in a bag behind the bedroom door; lining up preferred objects; pouring water from a cup repeatedly into the sink). Verbal RRSB include intense preoccupations with objects, topics, or interest areas (e.g., searching websites just on superman) that is considered abnormal in their focus or intensity (i.e., it consumes a lot of the individual's time and can prevent them from engaging in other activities). Non-verbal RRSBs are reportedly more often seen in younger children with ASD or those individuals with limited speech/language and/or lower cognitive abilities. Verbal RRSBs are reportedly more likely to be observed in older children and/or those individuals with higher speech/language skills and/or higher cognitive abilities<sup>3, 6, 7</sup>. While we are not sure about the exact reason or reasons why individuals with ASD may present with RRSB, research indicates that the type and severity of RRSBs can vary widely across individuals and within the same individual over time. In addition, clinical observation and research indicates that the presence of one or more RRSB can interfere significantly with the individual's daily functioning<sup>1</sup>. Therefore, it is essential that the individual be evaluated regularly for the type and severity of their RRSB and the affect it has on their daily functioning. Assessment information can assist with determining the need for specific interventions and/or treatment.

Assessment of RRSB by a clinician, such as a psychologist or behavior analyst, is the first step to identifying appropriate interventions and/or treatment. To gain a good understanding of the individual's RRSB, the clinician will typically use multiple methods to assess the type of RRSB, when and where the RRSB is likely to occur, how often and for how long it occurs, and the reason or reasons the individual may engage in RRSB. This type of comprehensive assessment is called a *Functional Behavioral Assessment (FBA)*. It often includes an *interview* with the individual with ASD and/or caregiver(s) to gather information on the type, frequency and severity of RRSB and to gain a better understanding of the specific situations that the RRSB occurs in. The FBA may also include administering a *questionnaire* to the caregiver that asks questions about the type, frequency, and/or severity of RRSB<sup>2, 3, 4 & 7</sup>; and *direct observation* of the individual to gain a better understanding of what the RRSB may look like and how it affects the individual's ability to complete other activities or tasks, including social interactions. Data from this assessment will help the clinician understand why the individual engages in the RRSB, which can include escape from non-preferred activities (e.g., school work, socializing with others), for self-reinforcement (i.e., the individual with ASD enjoys the RRSB so is not inclined to stop it), and to help regulate emotional arousal or upset (sometimes called 'self-regulation'). In many instances, the clinician will find out that the individual with ASD will engage in RRSB for various reasons, rather than just one reason. These data are important to assist the clinician in determining the best intervention(s) and/or treatment.

Once assessment data are collected and the clinician has a better understanding of the individual's RRSB and the reason(s) for RRSB, treatment should begin. A variety of treatment approaches have been used to treat RRSBs. Currently, interventions based within the field of Applied Behavior Analysis (ABA) have the most scientific support<sup>3, 7</sup>. ABA treatment recommendations will vary based on the specific needs of the individual and data from the FBA. There are many interventions that a clinician can choose from. For example, a clinician may recommend changes to the individual's environment to reduce the potential for RRSB to happen. Or, the clinician may recommend an intervention that signals to the individual when he/she can and cannot engage in the RRSB. Other interventions include teaching the individual other skills that are more socially appropriate and which the individual finds reinforcing in order to replace the RRSB (for example, playing a preferred game on the X-box, exercising etc). ABA interventions will always include recommendations for reinforcing the individual for using these other skills and/or for not engaging in the RRSB. Often in practice, ABA interventions are combined with medication; however, research on the success of medication interventions is still in progress<sup>7</sup> and sometimes medications have negative side effects that make them less beneficial to the individual. Therefore, careful assessment should be completed in order to assist in identifying the most effective intervention(s)/treatment plan for reducing or eliminating RRSB. Moreover, once intervention/treatment has begun, the clinician should routinely monitor the individual's response to intervention and make changes based on the individual's progress.

## Find Out More

### Informational Websites

To learn more about Functional Behavioral Assessment (FBA), particularly as it is used in the schools, visit the following website:  
<http://www.wrightslaw.com/info/discipl.fab.starin.htm>

To learn more about Applied Behavior Analysis in Autism treatment, visit the Autism Speaks website at:  
<http://www.autismspeaks.org/what-autism/treatment/applied-behavior-analysis-aba>

### Assessment and Treatment Resources in the RRCASD Region:

Easter Seals: [http://ny.easterseals.com/site/PageServer?pagename=NYDR\\_services](http://ny.easterseals.com/site/PageServer?pagename=NYDR_services)  
-Provides a wide variety of diagnostic and treatment services for children and adults.

Kelberman Center in Utica NY: <http://www.kelbermancenter.org/>  
-provides a wide variety of diagnostic and treatment services for children and adults.

SUNY Upstate Applied Behavioral Analysis Center in Syracuse NY:  
<http://www.upstate.edu/hospital/providers/locations/?clinicID=1138>  
-specializes in the treatment of intense behavior disorders in children.

SUNY Upstate Center for Development, Behavior and Genetics in Syracuse NY:  
[http://www.upstate.edu/gch/providers/group\\_list.php?group\\_id=16](http://www.upstate.edu/gch/providers/group_list.php?group_id=16)  
- provides a wide variety of diagnostic and treatment services for children birth through seven years of age.

University of Rochester, Kirch Developmental Services Center in Rochester NY: <http://www.urmc.rochester.edu/childrens-hospital/developmental-disabilities/services/kirch/Center-Services.cfm#eisupplemental>  
-provides a wide variety of diagnostic and treatment services for children birth to age 21 years of age.

### References

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