

Jefferson Autism Center of Excellence

IMPLEMENTING AN AUTISM-FRIENDLY VISION CLINIC

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partial fulfillment of a Doctorate in Occupational
Therapy, March 2022**

Purpose

The purpose of this manual is to provide evidence-informed strategies and resources to help vision providers implement an autism-friendly vision clinic.

Autistic individuals demonstrate unique sensory differences that can impact their ability to participate in healthcare experiences, including vision exams. Sensory supports can increase an autistic person's ability to successfully participate in vision exams. The following resources are provided to guide clinicians through identifying a child's unique sensory needs and preferences, selecting appropriate sensory strategies accordingly, and implementing those strategies throughout the vision exam.

Table of Contents

- I. [Literature Synopsis](#)
- II. [Role of Occupational Therapy Practitioners](#)
- III. [Facilitating a Successful Vision Clinic: Recommended Timeline](#)
- IV. [Pre-Clinic Sensory Survey](#)
- V. [Vision Clinic Day: Before, During, and After the Eye Exam](#)
- VI. [Appendix](#)
 - a. ["Autism and the Vision Exam" online modules](#)
 - b. [Patient recruitment flier](#)
 - c. [Intro letter for families](#)
 - d. [Social story template](#)
 - e. [Pre-clinic sensory survey](#)
 - f. [Vision considerations and strategies](#)
 - g. [Auditory considerations and strategies](#)
 - h. [Tactile considerations and strategies](#)
 - i. [Smell & Taste considerations and strategies](#)
 - j. [Proprioception considerations and strategies](#)
 - k. [Vestibular considerations and strategies](#)
 - l. [Full-body movement activities](#)
 - m. [Communication strategies](#)
 - n. [Post-clinic satisfaction survey](#)
 - o. [Introducing corrective lenses](#)

Literature Synopsis

Autism Prevalence and Characteristics

Autism is the most common pediatric neurodevelopmental disorder, impacting about 2% of the population.¹ Unique sensory features are a hallmark characteristic of autism, and they are now part of the diagnostic criteria for autism in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.)² These unique sensory characteristics impact participation in all areas of life, including participation in healthcare such as vision exams. Sensory characteristics fall into three main categories: hyper-reactivity, hypo-reactivity, and challenges with sensory integration.

Review of Common Sensory Terminology

Hyper-reactivity:

Someone who is hyper-reactive to certain sensory input reacts strongly to stimuli that others may not notice.³ This can also be thought of as having a heightened sensitivity to certain sensory experiences. For example, someone who hyper-reactive to auditory input may cover their ears or physically pull away from loud noises. Someone who is hyper-reactive to visual input may find it difficult to navigate a space with bright, fluorescent overhead lighting, and glares from the floor or computer screens might be overwhelming.



Hypo-reactivity:

Someone who is hypo-reactive to sensory input will not react, or barely react, to stimuli that would bother other people.³ If a child is under responsive to sensory input, they may not be getting enough stimulation from their environment, and they may need to create more sensory input for themselves. Some children may flutter their fingers in front of their face, rock back and forth, jump, or spin; these are all means of providing comforting, regulating sensory information.



Sensory integration:

Sensory integration is defined as processing, integrating, and organizing sensory information from the body and the environment.³ People with autism may have difficulty integrating two or more senses simultaneously. For example, someone may not be able to follow verbal instructions while looking at something, because they have trouble integrating the information from both their auditory and visual systems at the same time. Thus, environments with multiple overlapping stimuli may be difficult for autistic individuals to manage.



Autism and Healthcare Experiences

Autistic children also experience a greater number of healthcare visits per year compared to neurotypical peers; however, despite having increased interactions with healthcare providers, children with autism are more likely to experience poorer quality healthcare.^{4,5} Johnson et al. (2014) suggested that increased anxiety may be exhibited by children with autism during healthcare visits due to unfamiliarity with the office routine and an inability to fully communicate their fears and frustrations to healthcare personnel.

Bultas and colleagues (2016) surveyed healthcare providers (HCPs) and parents of children with autism to identify barriers and supports to successful participation in healthcare. HCPs defined the top five challenges to providing care for children with autism as follows: child behavior(s), uncooperative and unable to examine, child's fears about the exam, difficulty communicating with child, and parent overwhelmed during the visit. Review of parent comments determined that barriers included provider's lack of understanding of ASD, child behaviors, environmental issues, and fast-paced nature of visits.

HCPs reported that resources for visits included parent collaboration and child's familiarity with office routines, while parents reported that resources included using a patient and calm approach, environmental adaptations, and sensory-based toys.⁴

Autism and the Vision Exam

Children with autism have an increased risk of ocular disorders, including refractive error, strabismus, amblyopia, nystagmus, ptosis, and cataracts.^{7,8,9} They may also be more likely to demonstrate saccade dysmetria, difficulty inhibiting saccades, and poor tracking of moving targets.¹⁰ Comprehensive eye examinations are necessary to treat these ocular disorders, but conducting a thorough examination can be challenging. Vision exams are a highly sensory experience, and unusual sensory response patterns can make vision exams particularly challenging for autistic individuals. For example, children that react adversely to touch may have difficulty occluding one eye for a monocular vision test, and it may be difficult to utilize an ophthalmoscope on children who are averse to bright light.¹¹ Autistic children may also demonstrate difficulty with the eye examination due to fatigue, inattention, distractibility, and cognitive differences.¹² Finally, children with autism often thrive on predictability and routine. An eye exam alters a child's typical routine and introduces unfamiliar people, environments, and activities, which can cause anxiety.¹¹

Researchers from Nova Southeastern University devised a specialized protocol for eye examinations for autistic patients. This protocol incorporated visual, sensory, and communication supports. Modifications to the exam included use of social story, and behavioral strategies such as *shaping* and *high-probability request/low-probability request*.¹³ Many of these strategies are discussed in future sections within this manual.



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3. Ayres, A. J. *Sensory Integration and Learning Disorders*; Western Psychological Services: Los Angeles, CA, USA, 1972
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Role of Occupational Therapy Practitioners

Occupational therapy (OT) practitioners are uniquely skilled at facilitating successful participation in daily activities by analyzing the client, the task, and the environment.¹ They also have unique expertise in understanding how the sensory systems impact participation and devising strategies to improve participation. OT practitioners can help to support the vision exams in the following ways:

- Identifying the unique sensory needs and preferences of each patient
- Administering pre- and post-clinic surveys
- Serving as a liaison between families and ophthalmologists to communicate the results of pre-clinic sensory survey
- Recommending environmental modifications to the vision center
- Recommending activity modifications during the vision exam
- Recommending specific sensory tools and strategies for use with patients, based on their unique sensory profile
- Assisting with clinic day to ensure that exams run smoothly and troubleshoot issues that may arise
- Creating resources, including educational handouts for caregivers, visual schedules, and social stories
- Supporting families within the space by working with siblings while the caregiver is interacting with the ophthalmology team

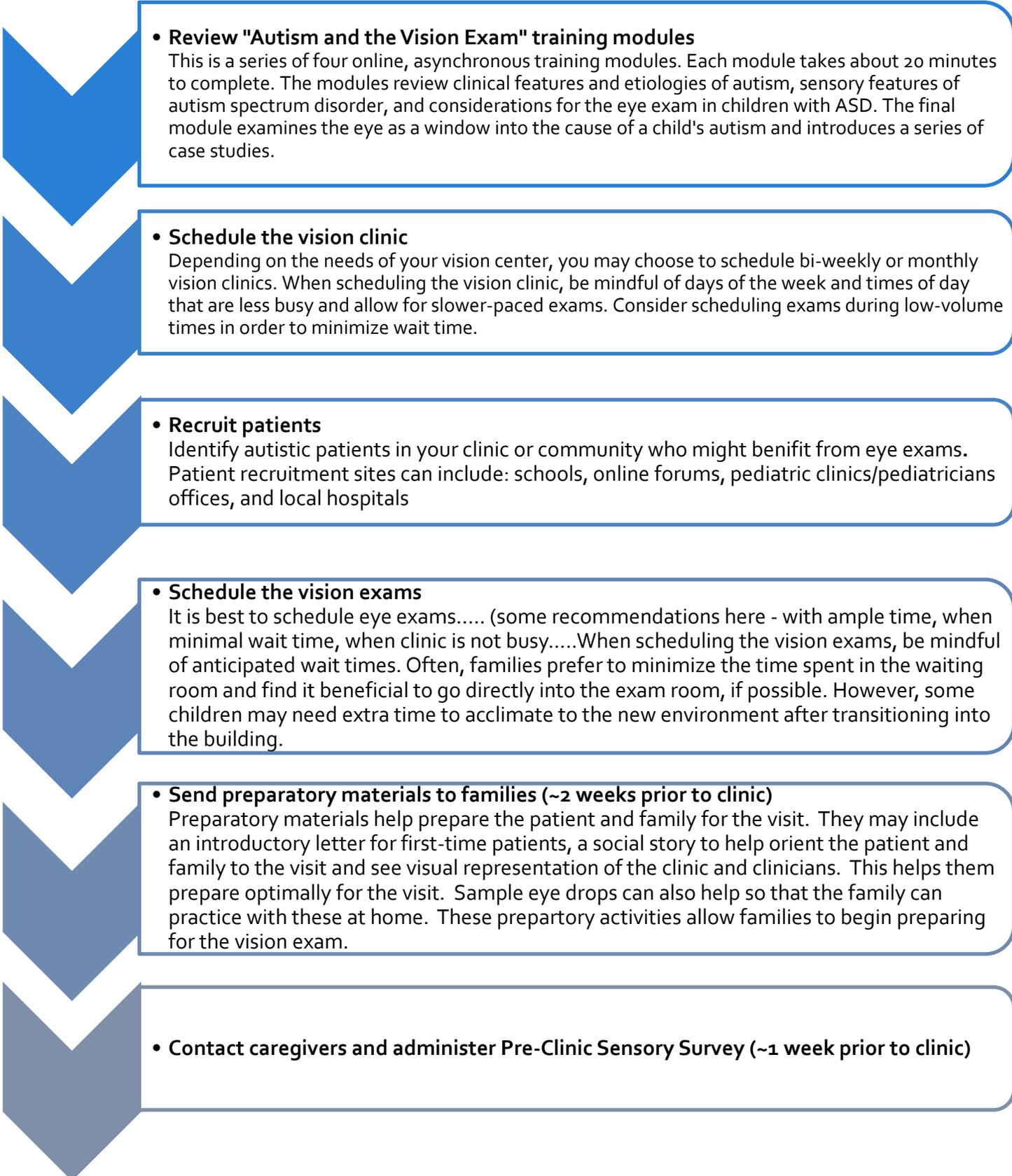


If occupational therapy practitioners are not available at your vision center, consider identifying local OT programs and reaching out to students. OT students may be able to assist with vision clinics as a volunteer opportunity, or the eye center may be able to serve as a fieldwork site. Be mindful of the number of people within the exam room. If space within the exam room is limited, the OT or OT student can brief the vision provider then leave the room, while still remaining accessible should any challenges arise during the exam.

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Facilitating a Successful Vision Clinic: Recommended Timeline

All materials indicated in this timeline are located within the appendix of this manual.



- **Review "Autism and the Vision Exam" training modules**

This is a series of four online, asynchronous training modules. Each module takes about 20 minutes to complete. The modules review clinical features and etiologies of autism, sensory features of autism spectrum disorder, and considerations for the eye exam in children with ASD. The final module examines the eye as a window into the cause of a child's autism and introduces a series of case studies.

- **Schedule the vision clinic**

Depending on the needs of your vision center, you may choose to schedule bi-weekly or monthly vision clinics. When scheduling the vision clinic, be mindful of days of the week and times of day that are less busy and allow for slower-paced exams. Consider scheduling exams during low-volume times in order to minimize wait time.

- **Recruit patients**

Identify autistic patients in your clinic or community who might benefit from eye exams. Patient recruitment sites can include: schools, online forums, pediatric clinics/pediatricians offices, and local hospitals

- **Schedule the vision exams**

It is best to schedule eye exams..... (some recommendations here - with ample time, when minimal wait time, when clinic is not busy.....When scheduling the vision exams, be mindful of anticipated wait times. Often, families prefer to minimize the time spent in the waiting room and find it beneficial to go directly into the exam room, if possible. However, some children may need extra time to acclimate to the new environment after transitioning into the building.

- **Send preparatory materials to families (~2 weeks prior to clinic)**

Preparatory materials help prepare the patient and family for the visit. They may include an introductory letter for first-time patients, a social story to help orient the patient and family to the visit and see visual representation of the clinic and clinicians. This helps them prepare optimally for the visit. Sample eye drops can also help so that the family can practice with these at home. These preparatory activities allow families to begin preparing for the vision exam.

- **Contact caregivers and administer Pre-Clinic Sensory Survey (~1 week prior to clinic)**

Pre-Clinic Sensory Survey

The [pre-clinic sensory survey](#) is administered to caregivers during the week prior to the vision clinic. The survey may be administered by clinic staff or occupational therapy practitioners.

Utilizing the Pre-Clinic Sensory Survey is an integral step to facilitating successful vision exams for patients with autism. The survey provides insight into the child's strengths and interests, preferred methods of communication, and past experiences with vision exams. It then examines whether the child has any unique sensory needs or challenges related to each of the sensory systems, what strategies can be used to help regulate the child during stressful experiences, and what sensory supports the family will bring with them to the exam. Finally, it obtains the caregivers' perspectives about the child's ability to travel to/from the vision center, participate in the vision exam, and interact with clinic staff. The results of the Pre-Clinic Sensory Survey will indicate which sensory tools may be useful during the child's vision exam.

The Pre-Clinic Sensory Survey should be administered in addition to any other pre-visit surveys or questionnaires that are already in place within the vision center. Vision providers may administer the surveys via a phone call with caregivers, or they may choose to automate the survey (e.g. send to caregivers via email). Prior to the vision exam, it is imperative that the results of the Pre-Clinic Sensory Survey are communicated to all members of the vision clinic team. This allows team members to identify specific tools or strategies to help support the child during the vision exam.

Utilizing the Pre-Clinic Sensory Survey provides a number of benefits, including:

- Asking for strengths and interests emphasizes a **strengths-based** approach to treatment
- Encourages caregiver collaboration and utilizes caregivers' knowledge of child behaviors and communication strategies¹
- Can be used to help build rapport with caregivers, many of whom have likely had unpleasant encounters with healthcare before²
- Encourages self-advocacy among patients who are able to communicate their own sensory preferences and needs
- Helps the vision care team to prepare optimally for the exam and mitigates wait times during vision clinic day
- Allows practitioners to take an individualized approach; sensory interventions are **only** effective when individualized³
- Gives insight into the caregivers' concerns about the vision exam
- Helps to determine the patient's motivators, which can then be incorporated into the vision exam

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Vision Clinic Day: Before, During, and After the Eye Exam

Before beginning the eye exam:

- Briefly meet with ophthalmology team to review the results of the Pre-Clinic Sensory Survey. This ensures that all team members are familiar with the patient's sensory preferences, dislikes, motivators, and calm-down strategies.
- Collaborate with team members to designate roles for the vision exam. You will want to identify who will oversee specific activities, such as:
 - Gathering materials for an [individualized sensory toolkit](#).
 - A sensory toolkit contains sensory tools and toys, which are indicated based on the results of the pre-clinic survey. Examples of sensory tools for each sensory system are provided in [Appendices F-L](#).
 - Identifying communication strategies that may be beneficial according to the results of the Pre-Clinic Sensory Survey. Communication strategies are provided in [Appendix M](#).
 - Being present during the exam to help with scaffolding activities and adapting the exam
 - Sanitizing sensory toys and tools and storing them properly after the exam
- If the family arrives late to the appointment, provide time for the patient and the caregiver to regulate and orient themselves before progressing with the vision exam. This provides an opportunity for the vision provider to build rapport with the patient and their caregivers. During this time, incorporate the patient's motivators and regulation strategies, as determined by the Pre-Clinic Sensory Survey results.

During the eye exam:

- Utilize caregiver expertise and guidance. Caregivers can clarify whether a child's behaviors are abnormal or unexpected, and they can provide insight into a child's sensory preferences and dislikes.¹
- Present choices when possible. Presenting a task as a choice between two desired behaviors increases the chance of that task being performed. For example, you may ask, "Do you want to hold the eye occluder, or do you want me to hold it?"^{2,3}
- Utilize distraction techniques, including singing, counting, or introducing sensory toys during procedures.^{2,3}
- Maintain a patient, calm, and predictable demeanor.⁴
- Utilize observation during the initial stages of the exam. For example, you may be able to note the size of the text on the screen while the child is playing a game on a tablet. This also allows the child more time to acclimate to the exam room environment.¹
- Modify communication to be simple and direct.¹ Utilize communication strategies as necessary.

- Shape new experiences that might be difficult for the child to tolerate by starting with acceptable version of the task and slowly progressing towards the desired endpoint. For example, when introducing the ophthalmoscope, you might first shine the light on the patient’s feet, then on the chest or hands, and finally progressing to shining the light on the patient’s eye.¹
- Recognize when the exam will need to be scheduled for another day. A child may not be able to complete the eye examination on a given day for a multitude of reasons. When the exam will need to be rescheduled for a different day, it is preferable to make this decision early in the visit to minimize frustration of both the patient and the caregiver. In this case, aim to end the visit on a positive note. Reassure the caregiver that it is not uncommon to require a follow-up exam and that generally, the more a child visits the vision center, the more comfortable they will be during returning visits.¹

After the eye exam:

- Immediately after the exam, debrief with team members to determine what supports were effective, what challenges arose, and how to improve the next visit with that patient.
- Following the exam, administer the Post-Clinic Satisfaction Survey. The Post-Clinic satisfaction survey may be administered at the conclusion of the vision exam, or clinic staff may call caregivers in the days after the vision clinic to administer the survey.
 - This survey is based on the Client Satisfaction Questionnaire⁵ and serves as an outcome measure for vision clinics. Outcome measures provide opportunity for improvement of service provision, improve strategic decision making, and help to meet patients' expectations.^{6,7} Additionally, in line with the healthcare industry’s focus on patient-centered care, patient satisfaction measures solidify the patient’s role as a partner and shared decision-maker during healthcare services.⁷



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Appendix

The following resources may be downloaded and customized to serve the specific needs of your vision center.

Note that although this manual was developed with pediatric patients in mind, many of these resources may also be applicable to autistic adults. These resources can also be utilized during routine clinical practice for sites that are not currently able to implement a specialized autism-friendly clinic.

Appendix A: Autism and the Vision Exam: Considerations for Ophthalmologists and other Health Providers

Access all asynchronous learning modules [here](#).

Module 1: [Autism Spectrum Disorders: Clinical Features and Etiologies](#)



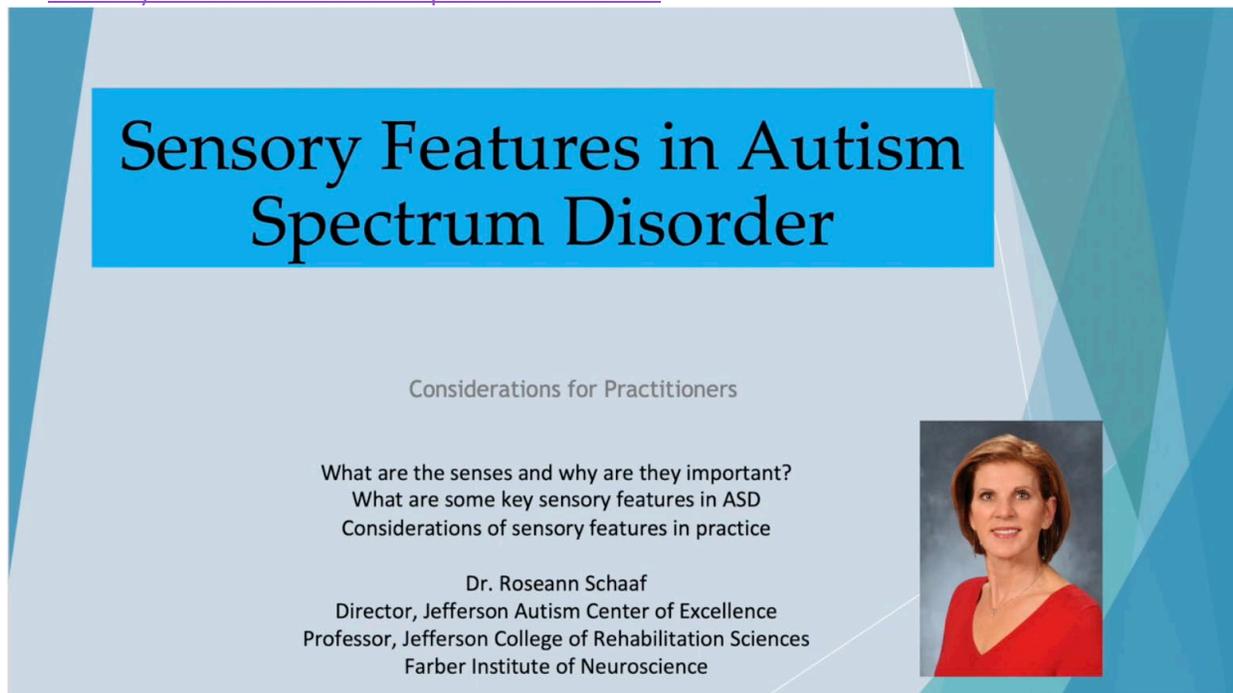
The slide features a light blue background with a darker blue geometric shape on the right. The title 'Autism Spectrum Disorders' is written in large, bold, blue letters with a reflection effect. Below it, 'Clinical Features and Etiologies' is written in white. On the right, there is a portrait of Elysa Marco, MD, and her credentials: 'Elysa Marco, MD; Cognitive and Behavioral Neurologist, Cortica Healthcare, Nancy Lurie Marks Foundation, Sensory Function in Autism'.

Autism Spectrum Disorders

Clinical Features and Etiologies

Elysa Marco, MD;
Cognitive and Behavioral Neurologist
Cortica Healthcare
Nancy Lurie Marks Foundation
Sensory Function in Autism

Module 2: [Sensory Features in Autism Spectrum Disorder](#)



The slide has a light blue background with a darker blue geometric shape on the right. The title 'Sensory Features in Autism Spectrum Disorder' is in a blue box. Below it, 'Considerations for Practitioners' is written in grey. The text 'What are the senses and why are they important? What are some key sensory features in ASD Considerations of sensory features in practice' is in black. Below that, 'Dr. Roseann Schaaf' and her credentials are listed. On the right, there is a portrait of Dr. Roseann Schaaf.

Sensory Features in Autism Spectrum Disorder

Considerations for Practitioners

What are the senses and why are they important?
What are some key sensory features in ASD
Considerations of sensory features in practice

Dr. Roseann Schaaf
Director, Jefferson Autism Center of Excellence
Professor, Jefferson College of Rehabilitation Sciences
Farber Institute of Neuroscience

[Back to Table of Contents](#)

Module 3: [The Eye Exam in Children with Autism and Neurodevelopmental Disorders](#)

**THE EYE EXAM IN CHILDREN WITH
AUTISM AND NEURODEVELOPMENTAL
DISORDERS**

JADE M. PRICE, MD
STAFF PHYSICIAN
PEDIATRIC OPHTHALMOLOGY
WILLS EYE HOSPITAL

Module 4: [Investigating the Cause of a Child's Autism: The Eyes May Be the Window](#)

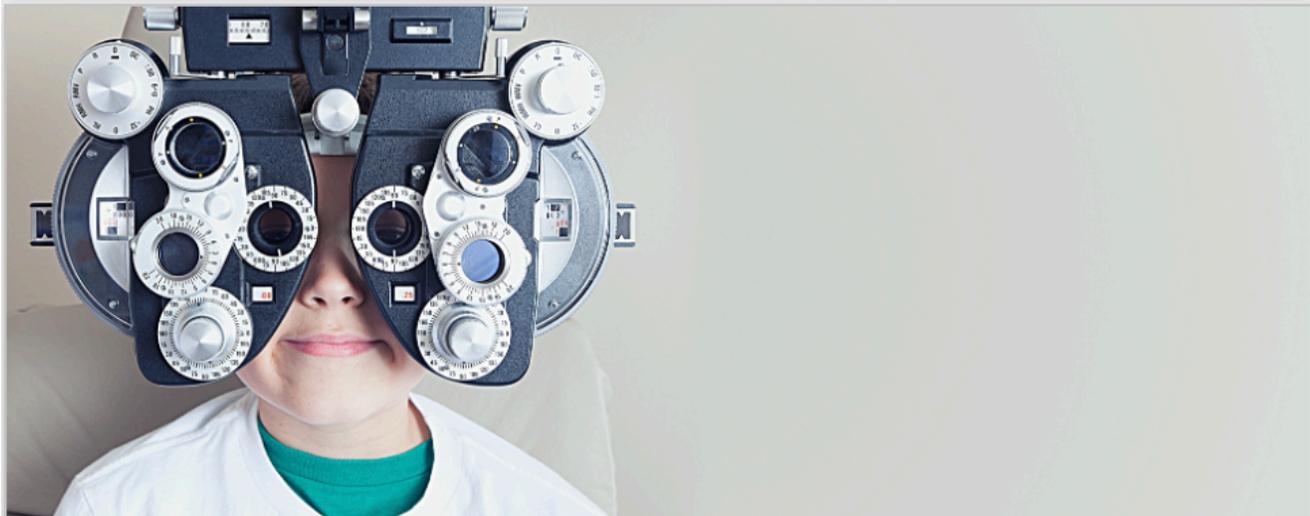
Note: This module includes a series of case studies and applies content from all previous modules.

**Investigating the cause of a child's autism:
the eyes may be the window**

JADE M. PRICE, MD
STAFF PHYSICIAN
PEDIATRIC OPHTHALMOLOGY
WILLS EYE HOSPITAL

Appendix B: Patient Recruitment Flyer

Access the downloadable template [here](#). Created by Caitlin Rosica, OTD, OTR/L



ACCEPTING NEW PATIENTS!

ACCESSIBLE OPHTHALMOLOGY CLINIC FOR CHILDREN WITH AUTISM SPECTRUM DISORDER

Detailed assessment of vision in persons with Autism Spectrum Disorders (ASD) is both critical and challenging. Many persons with ASD present with visual impairments that may go undiagnosed. For example, 41% present with strabismus, 27% with significant refractive error, and 11% required surgical correction for adequate ocular-motor control. Further, over 70% of those with ASD have sensory challenges such as sensory sensitivities, unusual sensory preoccupations, and/or difficulty using or responding to two or more senses simultaneously that can impact the visual examination. Many clinicians are not trained to manage the behavioral and sensory challenges of ASD that often accompany assessment interactions, including visual examinations.

At [_____], we are offering a specialized vision clinic to better serve the unique needs of children with autism. This program utilizes an interdisciplinary collaboration with ophthalmologists, medical residents/fellows, and occupational therapists to create a successful eye exam experience. The experience consists of:



TRAINING

Ophthalmology residents and fellows are educated on ASD, sensory symptoms, and common visual features in ASD.



PREPARATION

Ophthalmologists prepare social stories, sensory strategies, and environmental adaptations to facilitate a successful eye exam experience.



CLINIC DAY

Ophthalmologists collaborate to host a successful vision clinic day using individualized sensory support strategies.

Are you interested in learning more? Contact [_____]

Appendix C: Intro Letter for Families

Access the downloadable template [here](#). Based on the intro letter written by Jade Minor, MD

Greetings!

My name is [____], and I am looking forward to meeting you at our clinic for patients with autism or developmental delay. This is a unique clinic designed by a team of specialists in pediatric ophthalmology. Our goal is to create an environment that will enhance your family's experience and optimize your child's eye exam. In order to do this, we have sent you this packet which includes tools to help you and your child properly anticipate their appointment. You should have received the following items along with this letter:

- A social story: This booklet contains photographs documenting what it will be like to come to our clinic and have an exam with us. Please go over the photos and story with your child so they may have an idea of what to expect.
- A paper with pictures, shapes and letters: Depending on your child's age or ability to communicate, we may ask them to match or tell us which letters, shapes or pictures they see. I encourage you to go over these sheets and practice them with your child so that they are familiar with them prior to their visit with us.
- A bottle of artificial tears: Consider practicing with artificial tears so that your child is familiar with receiving eye drops prior to their exam. For children who are especially sensitive to eye drops, you may concert slowly introducing the sensation of eye drops. In the weeks leading up to your child's eye exam, repeat each step as necessary until the child feels more comfortable with the sensation:
 - First, practice administering drops to the backs of the child's hands.
 - Next, practice administering drops to the child's cheeks.
 - Then, instruct the child to close their eyes, and practice administering eye drops onto the child's closed eyelids.
 - Finally, practice administering a single drop into the corners of each eye.

In preparation for this clinic, please anticipate two phone calls in advance of your visit with us. You will receive a phone call from an occupational therapy student to discuss your child's specific sensitivities as well as strategies to optimize their experience and examination. You will also receive a call from a physician in the pediatric ophthalmology department to discuss your child's medical history and vision concerns. By taking this information in advance, we hope to prepare your child for their visit, organize our clinic to meet your child's unique needs, and optimize the time we have together to provide a thorough eye exam.

We look forward to meeting with you soon.

Sincerely,

[_____]

[_____]

Appendix D: Social Story

Access the downloadable template [here](#). Adapted from the Wills Eye Social Story by Rachel L. Dumont, MS, OTR/L

[Insert Vision Center Name]

A Trip to the Eye Doctor



I am going to the eye doctor for a check-up!

First, I will put on my mask.



www.shutterstock.com - 1771963259

Then, I will walk into the building.



www.shutterstock.com - 589072295

There are nice people at the desk to help us.



www.shutterstock.com · 1829155187

I will sit in a chair and wait, or I can play in the waiting area.



www.shutterstock.com · 1858356067



www.shutterstock.com · 645961126

The staff will call my name when it is my turn.

I will walk with the staff to the room for my eye check-up.



I will sit in the chair.





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I may meet different doctors.

They are all nice and happy to see me!



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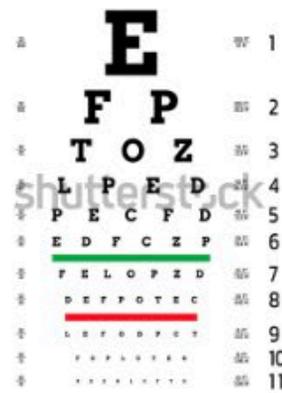
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One of the doctors will sit next to me in a chair.



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The doctor will ask me to name letters.



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First I will cover one eye, then I will cover the other eye.



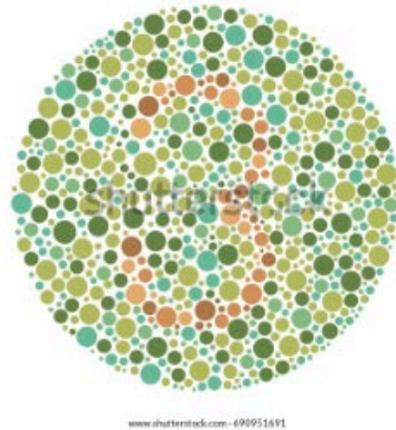
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The doctor will hold a light
and ask me to watch it with
my eyes.

The doctor will shine a
light at my eyes. I will try
to sit still.



The doctor might ask me to
look at pictures,



or to look into other objects
and machines.



I will sit in the chair and look through a machine.

I will tell the doctor when the machine helps me see clearly.



The doctor might put eye drops in my eyes. I will sit still for the eye drops.



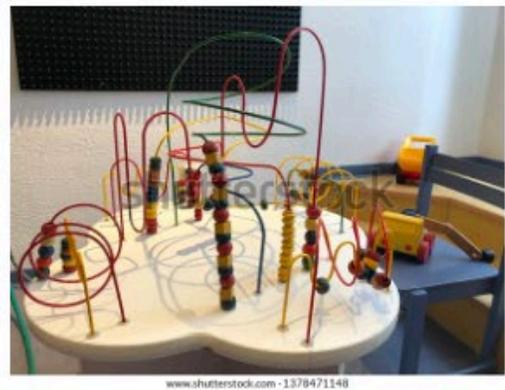
The drops make everything look blurry.



Then, I will sit in the chair and wait,



or I will play in the waiting area.



If the lights are bright, I can wear sunglasses.



Next, I will put my chin on a machine.

The doctor will use the machine to look at my eyes.

I will sit still while the doctor looks at my eyes.



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Finally, the doctor will say I am all done!



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We will talk to the people
at the desk,



www.shutterstock.com · 732744538

and then I will say goodbye
to [Insert Name of Vision
Center]!



Appendix E: Pre-Clinic Sensory Survey

Access the downloadable template [here](#). Created by Rachel L. Dumont, MS, OTR/L and Rachel Huang, Medical Student, including adaptations from the Massachusetts General Hospital /MGHfC Autism Care Questionnaire and the AASPIRE Autism Healthcare Accommodations Tool

Pre-Clinic Sensory Survey:

1. **What are your child/teen's areas of strengths?** Please describe: _____
2. **What are your child/teen's areas of interests?** Please describe: _____
3. **Has your child/teen ever been able to sit through a whole vision exam?**
 - Yes
 - No
 - N/A, never had a vision exam before
4. **How does your child/teen best communicate with others?**
 - Spoken language
 - Written language
 - Sign language
 - Communication device
 - All of the above
 - Other (please describe): _____
5. **How does your child/teen show if he/she is upset?**
 - Making sounds (please describe): _____
 - Facial expression (smiling, frowning, etc.) (please describe): _____
 - Physical movements (squeezing hands, rocking, flapping hands) (please describe): _____
 - Hitting or hurting self
 - Hitting or hurting others
 - Through the communication method from Question #4
 - Other, (please describe): _____
6. **Does your child/teen have any sensory needs that we should be aware of?**
 - Yes
 - No

If Yes, continue with all questions

If No, please skip to Question #7

- Difficulties with **visual** experiences which may include avoiding bright lights/sunlight, disliking flashing colors
 - Yes, which **visual** experiences: _____
 - NoIf "Yes", what are the best ways to calm or support your child/teen during these **visual** experiences? Please describe: _____
- Difficulties with **smell** experiences which may include: being aware of scents/smells that others aren't aware of, experience discomfort or nausea from certain smells
 - Yes, which **smell** experiences: _____

Name of screener: _____

Date of completed phone screen: _____

Patient initials: _____

No

If "Yes", what are the best ways to calm or support your child/teen during these **smell** experiences? Please describe: _____

- Difficulties with **sound** experiences which may include: crying/fleeing at loud or unexpected sounds, may cover ears or turn head away from sounds:

Yes, which **sound** experiences: _____

No

If "Yes", what are the best ways to calm or support your child/teen during these **sound** experiences? Please describe: _____

- Difficulties with **touch** experiences which may include: avoiding touching certain fabrics or textures, intense reaction to light touch, avoids certain clothing or sensitive to touch

Yes, which **touch** experiences: _____

No

If "Yes", what are the best ways to calm or support your child/teen during these **touch** experiences? Please describe: _____

- Difficulties with **movement or balance** experiences which may include: difficulty changing directions while moving, gets motion sickness easily, difficulty staying upright when sitting or standing

Yes, which **movement or balance** experiences: _____

No

If "Yes", what are the best ways to calm or support your child/teen during these **movement or balance** experiences? Please describe: _____

7. **Are there any strategies / items that motivate your child/teen to complete other routine medical or vision exams?**

If yes, please describe: _____

No

8. **Will you be bringing any items to support your child/teen with this visit?**

If yes, please describe: _____

No

For the following questions, please rate how strongly you agree with each statement.

9. **My child/teen will be able to travel to [location of vision center].**

Strongly Agree

Agree

Neither

Disagree

Name of screener: _____

Date of completed phone screen: _____

Patient initials: _____

Strongly Disagree

10. I am concerned about the eye doctor being able to provide appropriate care for my child/teen.

Strongly Agree

Agree

Neither

Disagree

Strongly Disagree

11. I am concerned about the other health care staff (front desk, technicians, security etc.) being able to provide appropriate support for my child/teen.

Strongly Agree

Agree

Neither

Disagree

Strongly Disagree

12. Is there anything else you would like for us to know about your child/teen before the visit?

If yes, please describe: _____

No

Appendix F: Vision Considerations and Strategies

For patients who are **hyper**-reactive to visual stimuli:

- Be mindful of fluorescent overhead lighting, as well as the glare that it can create on floors, computer screens, and other shiny surfaces.¹
- Bright colors and detailed patterns may be distracting or disorienting.^{2,3}
- Using the ophthalmoscope may be challenging for this patient.
 - It may be helpful to first demonstrate the procedure on a caregiver or sibling.
 - Consider facilitating decision-making by having the child decide where they would like to sit during the procedure, or what they would like to do for a break after.
- The child may need more time to acclimate to changes in light intensity (for example, when walking from the parking lot into the building, or when exiting an elevator and entering a brightly lit hallway).^{2,3}
- Consider offering sunglasses to reduce light intensity (especially after administering eye drops).

For patients who are **hypo**-reactive to visual stimuli:

- Patients may seem unaware of the visual environment.¹
- Considering adding more explicit visual cues to attract the child's attention towards a specific spot. For example, you might add a brightly colored border around the outside of a Snellen chart.
- Patients may have difficulty finding things in a visually busy environment.¹ Eliminate unnecessary clutter in exam rooms if possible.



1. Smith-Roley, S., Imperatore-Blanche, E., & Schaaf, R. (2001). Understanding sensory integration with diverse populations. New York: Therapy Skill Builders.

2. Robertson, A. E., & Simmons, D. R. (2015). The sensory experiences of adults with autism spectrum disorder: a qualitative analysis. *Perception*, 44(5), 569-586. <https://doi.org/10.1068/p7833>

3. Piller, A., & Pfeiffer, B. (2016). The sensory environment and participation of preschool children with autism spectrum disorder. *OTJR: occupation, participation and health*, 36(3), 103-111. <https://doi.org/10.1177/1539449216665116>

Vision Tools:

Name of Product	Image	Notes
Fluorescent light covers		<p>Reduce potentially triggering sensory stimuli, including flickering lights and glare</p>
Space World tent		<p>Can be used to create a “cozy corner” within the waiting room for patients who are overwhelmed by visual stimuli</p>
Star projector		<p>Projects calming, slow-moving visuals onto the ceiling of the exam room</p>
Sunglasses		<p>Can be used to reduce intensity of lighting, particularly after eye drops have been administered</p>

Appendix G: Auditory Considerations and Strategies

For patients who are **hyper**-reactive to auditory stimuli:

- Patients may cover their ears or try to flee from loud or unexpected sounds.^{1,2} It is helpful to ask caregivers what words or visuals you can use to help explain that certain sounds are “safe.”³
- Patients may notice sounds that others do not; be mindful of “background noise” such as air conditioning units, crinkling paper, and the buzz of overhead lighting.
- Overlapping sounds can be disorienting.^{4,5}



For patients who are **hypo**-reactive to auditory stimuli:

- The child may not respond to their name or other auditory stimuli.² It may be helpful to get the child’s attention by incorporating a visual cue (such as a wave) as well.
- Some individuals who are hypo-reactive to sound may not be getting enough auditory input from their environments; in this case, they may create loud or repetitive sounds, such as banging or clapping.⁶



1. Stiegler, L. N., & Davis, R. (2010). Understanding sound sensitivity in individuals with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities*, 25(2), 67-75. <https://doi.org/10.1177/10883576103645302> .
2. Tomchek, S. D., & Dunn, W. (2007). Sensory processing in children with and without autism: a comparative study using the short sensory profile. *American Journal of Occupational Therapy*, 61(2), 190-200. <https://doi.org/10.5014/ajot.61.2.1903>.
3. Stiegler, L., & Davis, R. (2011). Managing sound sensitivity in individuals with ASDs. *The ASHA Leader*, 16(1), 5-7. <https://doi.org/10.1044/leader.FTR3.16012011.56>.
4. Robertson, A. E., & Simmons, D. R. (2015). The sensory experiences of adults with autism spectrum disorder: a qualitative analysis. *Perception*, 44(5), 569-586. <https://doi.org/10.1068/p78337>.
5. Landon, J., Shepherd, D., & Lodhia, V. (2016). A qualitative study of the noise sensitivity in adults with autism spectrum disorder. *Research in Autism Spectrum Disorders*, 32, 43-52. <http://doi.org/10.1016/j.rasd.2016.08.005>
6. Weitlauf, A. S., Sathe, N., McPheeters, M. L., & Warren, Z. E. (2017). Interventions targeting sensory challenges in autism spectrum disorder: a systematic review. *Pediatrics*, 139(6), e20170347. <https://doi.org/10.1542/peds.2017-03474>.

Auditory Tools:

Name of Product	Image	Notes
Noise-canceling headphones		<p>Used to filter out background noises (e.g. humming of air conditioner, shuffling of papers, buzzing of lights)</p> <p>Can also decrease the intensity of loud/unexpected sounds (e.g. doors closing)</p>
Sound machine		<p>Used to project slow, rhythmic sounds or music</p>
Calming playlists/ nature sounds apps		<p>Playing the patient's preferred songs or videos, calming music, or nature sounds via a smart phone is a cost-free option to provide regulating auditory input during vision exams</p>

Appendix G: Tactile Considerations and Strategies

For patients who are **hyper**-reactive to tactile stimuli:

- Physical touch may cause discomfort or even pain; children may pull away to avoid physical touch. ^{1,2}
- Children may be aversive to certain textures (e.g. exam gloves). ^{1,3}
- Provide a warning before initiating a procedure that requires physical touch.¹ Consider demonstrating the procedure on a caregiver or sibling before performing it on the patient.
- May have difficulty concentrating/listening to instructions when being touched due to discomfort. ⁴



For patients who are **hypo**-reactive to tactile stimuli:

- Patients may not notice light touch; sense of vision helps to inform touch sensation. ⁵
- Patients may have a diminished response to pain or temperature. ^{1,2}
- Children may benefit from rough, deep pressure on the skin. ^{1,2}
- Strategies may include hand squeezes or shoulder rubs *with caregiver guidance and approval*.



1. Robertson, A. E., & Simmons, D. R. (2015). The sensory experiences of adults with autism spectrum disorder: a qualitative analysis. *Perception*, 44(5), 569-586. <https://doi.org/10.1068/p78332>.
2. Mikkelsen, M., Wodka, E.L., Mostofsky, M.H., Puts, N.A. (2018). Autism spectrum disorder in the scope of tactile processing. *Developmental Cognitive Neuroscience*, 29, 140-150. <https://doi.org/10.1016/j.dcn.2016.12.0053>.
3. Crane, L., Goddard, L., & Pring, L. (2009). Sensory processing in adults with autism spectrum disorders. *Autism*, 13(3), 215-228. <https://doi.org/10.1177/13623613091037944>.
4. Hilton, C.L., Harper, J.D., Holmes Kueker, R., Runzi Lang, A., Abbacchi, A.M., Todorov, A., LaVesser, P.D. (2010). Sensory responsiveness as a predictor of social severity in children with high functioning autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 40(8), 937-945. <https://doi.org/10.1007/s10803-010-0944-8>

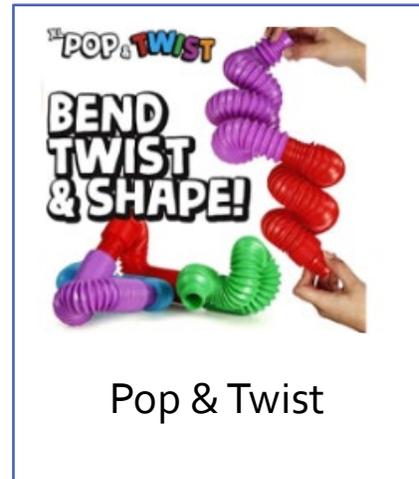
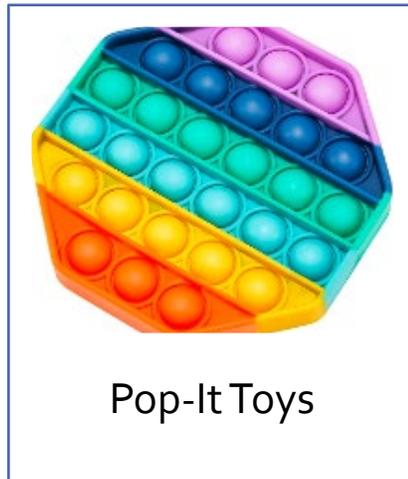
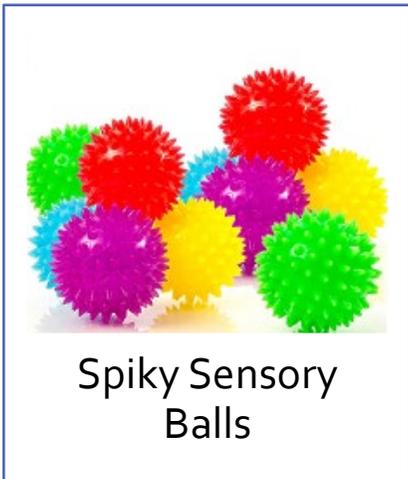
5. Allely, C.S. (2013). Pain sensitivity and observer perception of pain in individuals with autistic spectrum disorder. Scientific World Journal, 2013, 916178. <https://doi.org/10.1155/2013/9161786>.

Tactile Tools:

Name of Product	Image	Notes
Activity board		<p>An activity board may be installed within the waiting room. Smaller activity boards may be included within sensory toolboxes.</p>
Tactile drawing surfaces		<p>Tactile drawing surfaces can be used as a motivator or during breaks. They may also be used to communicate with the child (e.g., the child may be able to draw a smiley face or frowny face to describe to the ophthalmology team how they are feeling)</p>

Appendix H: Sensory Toolboxes

Smaller tactile items are especially well-suited to be contained within a sensory toolbox. Tactile items can be used to provide “expected, predictable, and controllable sensory input,” which can be extremely soothing for autistic individuals.³ The sensory toolbox can be easily stored within the exam room, allowing eye care professionals to have easy access to sensory toys to support the vision exam. Suggested items for a sensory toolbox include:



Appendix I: Smell & Taste Considerations and Strategies

For patients who are **hyper**-reactive to smell stimuli:

- Patients may be aware of smells that others do not notice.¹
- Patients may experience discomfort or nausea due to certain smells.¹
- Be mindful of strong smells, which may include:²
 - Perfumes, cologne, and lotion
 - Hand soaps
 - Hand sanitizer
 - Alcohol wipes/disinfecting sprays
 - Air fresheners
 - Lingering scent of coffee/foods on breath or clothing

For patients who are **hypo**-reactive to smell stimuli:

- Children may seek to smell items within the room.
- Patients may fixate on new or unfamiliar smells.³
- May not notice strong or unpleasant smells.¹

Taste considerations:

- Note that it may be challenging for a patient to have his/her mealtime or snack routine changed or interrupted.⁴
- Consider allowing snack breaks as the patient adjusts to the clinic environment or after administering eye drops.⁴



1. Wicker, B., Monfardini, E. & Royet, J. (2016). Olfactory processing in adults with autism spectrum disorders. *Molecular Autism*, 7(4). <https://doi.org/10.1186/s13229-016-0070-33>.
2. Srivastava, A. (2016). Sensory integration strategies for handwriting among autistic children. *Academic Journal of Pediatrics and Neonatology*, 2(1). <https://doi.org/10.19080/AJPN.2016.02.555795>.
3. Mays, N. M., Beal-Alvarez, J., & Jolivet, K. (2011). Using movement-based sensory interventions to address self-stimulatory behaviors in students with autism. *Teaching Exceptional Children*, 43(6), 46-52. <https://doi.org/10.1177/004005991104300605>
4. Schaaf, R. C., Toth-Cohen, S., Johnson, S. L., Outten, G., & Benevides, T. W. (2011). The everyday routines of families of children with autism: Examining the impact of sensory processing difficulties on the family. *Autism*, 15(3), 373-389. <https://doi.org/10.1177/1362361310386505>

Smell & Taste Tools:

Name of Product	Image	Notes
Essential oils		<p>Essential oils, or other pleasant-smelling items, can be used for aromatherapy to help patients relax (Lytle & Todd, 2009). Note that this strategy should <u>not</u> be used with patients who are hyper-reactive to smell.</p>
Alcohol- free/ unscented hand sanitizer		<p>Unscented/ alcohol-free hand sanitizers can reduce olfactory stimuli for patients who are hyper-reactive to smell.</p>
Unscented disinfecting wipes		<p>Unscented disinfecting wipes can be used to sanitize exam room surfaces as well as sensory toolbox materials.</p>
Unscented soaps		<p>Unscented hand soaps can reduce olfactory stimuli for patients who are hyper-reactive to smell.</p>

Appendix J: Proprioception Considerations and Strategies

Patients who are **hyper**-reactive to proprioceptive stimuli are generally not observed.

For patients who are **hypo**-reactive to proprioceptive stimuli:

- Consider providing [full-body movement](#)/ “heavy work” opportunities prior to beginning the vision exam. ¹
- Patients may require periodical movement breaks during the vision exam.
- Offer a weighted blanket/vest or lap pad to provide proprioceptive input during the exam. ^{2,3}
- Patients may demonstrate poor postural control.⁴



1. Schaaf, R. C., & Smith Roley, S. (2006). Chapter 13: Sensational ways to play. In *Sensory integration: applying clinical reasoning to practice with diverse populations* (pp. 195-242). Austin, TX. Pro-Ed, Inc.
2. Eron, K., Kohnert, L., Watters, A., Logan, C., Weisner-Rose, M., & Mehler, P. S. (2020). Weighted blanket use: A systematic review. *The American Journal of Occupational Therapy*, 74(2), 1–14. <https://doi.org/10.5014/ajot.2020.037358>
3. Gee, B., McOmber, T., Sutton, J., & Lloyd, K. (2017). Efficacy of weighted blankets for children with autism spectrum disorder, sensory overresponsivity, and sleep disturbance. *American Journal of Occupational Therapy*, 71(4). <https://doi.org/10.5014/ajot.2017.7151-PO4116>
4. Dumas, M., McKenna, R. & Murphy, B. (2016). Postural control deficits in autism spectrum disorder: The role of sensory integration. *Journal of Autism and Developmental Disorders*, 46(3), 853–861. <https://doi.org/10.1007/s10803-015-2621-4>

[Back to Table of Contents](#)

Proprioception Tools:

Name of Product	Image	Notes
Weighted disc blanket		A weighted disc blanket can be placed over the child’s lap during vision exams to provide comforting proprioceptive input. It can also be easily wiped clean with a disinfecting wipe.
Lap pad		Weighted lap pads are available in a variety of sizes, weights, colors, and textures. They can also be placed on the child’s lap to provide comforting proprioceptive input.
Weighted vest		Weighted vests are available in a variety of colors, sizes, and weights. A weighted vest can mimic the sensation of getting a “bear hug,” which can be very regulating for a child with autism.

Appendix K: Vestibular Considerations and Strategies

For patients who are **hyper**-reactive to vestibular stimuli:

- Patients may have a fear of leaving the ground.¹
 - This may include sitting in an exam chair; consider offering alternative seating options if possible.
- Patients be easily susceptible to motion sickness.¹
- Movements may appear clumsy, and the child may avoid actions requiring movement.¹
- Child may experience dizziness or have difficulty changing directions while moving.¹

For patients who are **hypo**-reactive to vestibular stimuli:

- Children may demonstrate repetitive movements (such as rocking or spinning).
 - Patients may not be aware of their own movements.²
- Patients may enjoy intense movements, such as rocking or spinning, without experiencing dizziness.^{1,3}
- May need to provide space to allow movements (e.g. spinning, rocking, jumping), because a patient may need this movement to stay calm or to be alert.²

NOTE: Sensory Disintegration and the Vestibular System

- The vestibular system is closely related to the auditory system. Loud or unexpected sounds (such as a door slamming) can cause vestibular dysfunction, and the patient may experience dizziness.⁴
- Vestibular system also closely related to visual system. Children may experience dizziness while tracking an object or scanning the visual environment.⁵



1. Kern, J.K., Garver, C.R., Grannemann, B.D., Trivedi, M.H., Carmody, T., Andrews, A.A., & Mehta, J.A. (2007). Response to vestibular sensory events in autism. *Research in Autism Spectrum Disorders*, 1(1), 67-74. <https://doi.org/10.1016/j.rasd.2006.07.0062>.
2. Howe, M.B., Brittain, L.A., & McCathren, R.B. (2004). Meeting the sensory needs of young children in classrooms. *Sensory Needs*, 8(1), 11-19. <https://doi.org/10.1177/109625060400800102>
3. Smith-Roley, S., Imperatore-Blanche, E., & Schaaf, R. (2001). *Understanding sensory integration with diverse populations*. New York: Therapy Skill Builders.
4. Baum, S.H., Stevenson, R.A., & Wallace, R.T. (2015). Behavioral, perceptual, and neural alterations in sensory and multi-sensory function in autism spectrum disorder. *Progress in Neurobiology*, 134, 140-160. <https://doi.org/10.1016/j.pneurobio.2015.09.007>

5. Carson, T.B., Wilkes, B.J., Patel, K., Pineda, J.L., Ko, J.H., Newell, K.M., Bodfish, J.W., Schubert, M.C., Radonovich, K., White, K.D., & Lewis, M.H. (2017). Vestibulo-ocular reflex function in children with high-functioning autism spectrum disorders. *Autism Research*, 10(2), 251–266. <https://doi.org/10.1002/aur.1642>

Vestibular Tools:

Name of Product	Image	Notes
Rocker chair		Rhythmic, linear movements (such as rocking) can be extremely regulating for autistic individuals. Consider adding a rocking chair in the waiting room of the vision center.
Wiggle cushion		A wiggle cushion can be placed on the exam chair, allowing the child to move or fidget slightly in the seat during the exam.
Therapy/exercise ball		An exercise ball can be used as an alternative seating option for patients with sufficient body control and balance; it can also be used to facilitate full-body movements or exercises to help regulate the patient.

Appendix L: Full-Body Movement Activities

These activities are rich in proprioceptive and vestibular input. They can be used to help the child regulate before the exam, or they can be offered as movement breaks periodically throughout the exam.

Wall Push Ups



Dance Breaks



Freeze Dance



Simon Says



Movement Songs (YMCA, Macarena)



Animal Movements



Yoga Poses



Appendix M: Communication Strategies

Non-Speaking and Minimally-Speaking Patients

Approximately 30% of children with autism are non-speaking or minimally speaking.¹ However, non-speaking does **not** mean non-understanding. An autistic individual's use (or lack thereof) of verbal language is not indicative of their ability to comprehend language; for that reason, it is important to always assume competence when working with non-speaking autistic children. Many autistic individuals who are non-speaking can become strong communicators without the use of verbal language.²

When working with non-speaking patients, strategies include:

- Maintain high expectations and do not assume that developmental ability on one area (e.g. expressive language) is reflective of another (e.g. motor skills)
- If challenging behaviors arise, interpret that behavior as **communication**
 - As McKinney and colleagues³ (2021) stated: "In a population with little or no verbal communication, behavior may be the only means that the child has to say 'no' which makes it highly relevant to the issue of assent and consent."
- Maintain relationships with caregivers
 - Utilize parents' perspectives on whether a behavior is usual and whether the child will be able to participate
 - Encourage parents to demonstrate a task for the child
- Timing is everything
 - Kylliainen et al.⁴ (2014) report a range for how long the child can concentrate for an uninterrupted period of time, from 20-30 min for a 7-year-old without intellectual disabilities to 2-10 min for a 3 year-old with profound (non-speaking) autism
 - Monitor the patient's interest and energy levels and follow the child's cues for when a break is needed
- Utilize communication cards with simple pictures or graphics to facilitate decision-making and communication

Echolalia

Echolalia is the repetition of words or phrases, often without obvious meaning or within an unusual context.⁵ An individual with autism may use echolalia for communicative purposes, including:

- **To ask for things:** For example, a child might ask, "Do you want a break?" to ask for a break
- **To start or continue an interaction:** For example, the child might initiate a game of I Spy by reciting, "I spy with my little eye..."

- **To draw attention to something:** For example, a child might imitate the phrase “It’s a bird, it’s a plane, it’s Superman!” to draw attention to something within the room
- **To protest something:** For example, if a child repeats “You don’t want to sit in the exam chair?” when a caregiver asks, he may be indicating that he does not want to sit in the exam chair
- **To answer yes:** For example, a child may imitate “Do you want to get a toy?” right after being asked as a way to respond “yes”

TheSpectrum.org recommends the following strategies to support successful communication with autistic individuals: ⁵

Do This	Avoid This
Modify your communication style (e.g. use simplified instructions, provide additional processing time)	Multi-step verbal instructions/ directions particularly when the environment is noisy/ busy or when the individual appears distracted
Use pictures and written information to compliment instructions/ conversation/ spoken language.	Using open ended or rhetorical questions (e.g. “How are you feeling?”)
Communicate with the individual regardless of whether or not they are demonstrating conventional social cues to show you that they are listening (e.g. eye contact, body language)	Ignoring the individual or excluding them from conversations even if they are demonstrating difficulties with non-verbal communication (eye-contact, gestures and body language)
Recognize that repetitive behaviors (such as rocking or flapping) may be used to convey how an individual is feeling, e.g., anxious or excited	Asking the individual to stop self-stimulatory behaviors such as flapping, rocking, or spinning
Use visuals/ social stories/ visual schedules to support an individual to cope/ adjust to changes in routine	Surprises and changing routines without forewarning or appropriate supports to cope with change
Provide access to rewards, motivators, or reinforcers after engagement in structured tasks	Inhibiting access to preferred activities after engagement in structured tasks or interaction

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2. MediLexicon International. (n.d.). *Everything to know about nonverbal autism*. Medical News Today. Retrieved March 21, 2022, from <https://www.medicalnewstoday.com/articles/non-verbal-autism#:~:text=Having%20nonspeaking%20autism%20does%20not,with%20or%20without%20verbal%20language.&text=Having%20nonspeaking%20autism%20means%20that,only%20say%20a%20few%20words>
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4. Kylliäinen, A., Jones, E. J., Gomot, M., Warreyn, P., & Falck-Ytter, T. (2014). Practical guidelines for studying young children with autism spectrum disorder in psychophysiological experiments. *Review Journal of Autism and Developmental Disorders*, 1(4), 373–386. <https://doi.org/10.1007/s40489-014-0034-5>

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Appendix N: Post-Clinic Satisfaction Survey

Access the downloadable template [here](#). Includes survey questions by Rachel L. Dumont, MS, OTR/L and Rachel Huang, Medical Student and items from the Client Satisfaction Questionnaire-3

Name of screener: _____

Date of completed phone screen: _____

Patient initials: _____

Post-Clinic Survey:

1. Overall, how satisfied are you with the service you and your child/teen received at [_____]?

- Very satisfied
- Mostly satisfied
- Mildly dissatisfied
- Very dissatisfied

2. To what extent has our program met your needs?

- Almost all of my needs have been met
- Most of my needs have been met
- Only a few of my needs have been met
- None of my needs have been met

If parent indicates that needs were **not** met, please ask:

How can the team address your unmet needs: _____

3. If you were to seek help with a vision exam again, would you come back to our program?

- Yes, definitely
 - Yes, I think so
 - No, I don't think so
 - No, definitely not
-

Next, we will be asking for some additional details and feedback on your experience and how we can continue to improve you and your child/teen's experience.

4. How satisfied were you with the preparatory materials, including the introductory letter, social story, and artificial tears?

- Very satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Somewhat dissatisfied
- Very dissatisfied

5. If you practiced with eye drops before the visit, did you find it helpful?

- It was very helpful (Made the experience so much easier)
- It was somewhat helpful
- It was somewhat unhelpful

Name of screener: _____

Date of completed phone screen: _____

Patient initials: _____

- It was very unhelpful
- N/A – Didn't have the opportunity to use eye drops beforehand

6. Do you have any feedback or recommendations for other preparatory materials to improve preparing for the eye exam?

- Yes, please detail: _____
- No

7. Was the Doctor able to complete the full vision exam?

- Yes
- No

8. How satisfied did your child/teen seem with the waiting room experience?

- Very satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Somewhat dissatisfied
- Very dissatisfied

9. What would improve the waiting room experience for your child/teen:

- Bean bag chairs
- Music (please describe): _____
- Quiet corner space (i.e., tent or other smaller space)
- Bubble tubes to watch bubbles
- Fish tank with moving fake fish/jellyfish
- Dim lighting
- Nothing else is needed
- Other items (please describe): _____

10. How satisfied did your child/teen seem with the eye exam experience?

- Very satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Somewhat dissatisfied
- Very dissatisfied

11. How satisfied were you with your child/teen's eye exam experience?

- Very satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Somewhat dissatisfied

Name of screener: _____

Date of completed phone screen: _____

Patient initials: _____

Very dissatisfied

12. What would improve the eye exam room experience for your child/teen:

Deep pressure wrap / vest

Music (please describe): _____

Light projector to make images on ceiling (i.e., stars, waves, etc.)

Nothing else is needed

Other items (please describe): _____

13. What was challenging about the eye exam visit for you and your child/teen?

Challenges described/detailed: _____

Nothing was challenging

14. Is there anything else that we could do to improve you and your child/teen's visit?

Yes, please detail: _____

No

15. Was your child given a new or changed vision prescription today?

Yes

No

16. Did your child receive a new vision health diagnosis today?

Yes

No

17. Do you have any recommendations on how best to reach other families with children or teens with autism to support them with their eye care and exams?

Yes, please detail: _____

No

Thank you for your time today and we appreciate your feedback so that we can continue to best support you and your child/your teen during routine eye care. Please feel free to contact [_____] staff by email at [_____] with any further feedback.

Introducing Corrective Lenses

Autistic children may have trouble accepting the introduction of glasses due to sensory difficulties (e.g. sensitivity to touch). To facilitate successful wearing of corrective lenses, psychologist Stephanie Weber of the Kelly O’Leary Center for Autism Spectrum Disorders recommends the following strategies:¹

1. Build tolerance
 - a. Before purchasing prescription glasses, consider purchasing an inexpensive pair of sunglasses or reading glasses and removing the lenses. If possible, include the child in selecting a pair of glasses, and try to select frames that are similar to the child’s future “real” glasses.
2. Utilize rewards
 - a. Identify personal motivators that can be used as a reward when the child tolerates wearing his or her glasses: these may include hugs, a play activity, stickers, prizes, or verbal praise and encouragement, depending on the preferences of the child.
3. Daily practice
 - a. Implement short, focused daily practice sessions. The length of these practice sessions will vary based on the child’s tolerance.
4. Set the child up for success
 - a. Children who are extremely sensitive to touch may not immediately be able to tolerate wearing glasses for a few minutes at a time. Build the child’s confidence by starting with more manageable goals. For example, the child may begin by simply holding the glasses, then touching the glasses to his/her cheek, and finally wear the glasses for 5-10 seconds at a time. Utilize a timer so the child can see how much time has elapsed, and begin introducing glasses in a place that is quiet and free from distractions. Provide consistent rewards as the child successfully completes these tasks.
5. Build momentum
 - a. As the child becomes more comfortable with the glasses, increase the duration or frequency of wear. Continue to provide positive reinforcement.
6. Emphasize the reward of seeing clearly
 - a. Consider playing a game of “Can you see this?” to help the child appreciate the ability to see more clearly while wearing glasses.
7. Use visual supports
 - a. Consider incorporating the wearing of glasses into visual supports, such as a “First/Then” chart or a visual schedule.
8. Incorporate into daily routines
 - a. As the child becomes ready to wear the glasses more often, have him or her practice wearing the glasses during daily activities, such as a trip to the grocery store or while reading a book.

Teaching the child to take off his or her glasses in an appropriate manner is also an important component of wearing corrective lenses successfully. Practice having the child hand the glasses to a caregiver or placing them in a designated location after taking them off.²

In certain instances, wearing glasses may not be indicated for some children. This can occur when safety concerns for self-inflicted injuries or falls are present, when glasses are repeatedly damaged, or after multiple unsuccessful trials of introducing corrective lenses.³ In this case, the eye care provider should discuss visual ergonomics with caregivers. Considerations can include:³

1. Systematically placing household objects to promote mobility in children with a restricted visual field
 - a. E.g. Rearrange furniture to create clear walkways; maintain the placement of frequently-used objects in a familiar environment.
2. Introducing shorter viewing distances for children with myopia during activities such as watching television
3. Adapting lighting and enhance contrast for children with cataracts or keratoconus (e.g. introduce cutlery with high contrast)
4. Utilizing materials with larger prints, various textures, colors, and contrasts



1. Weber, S. (2015, May 29). *Autism Challenge: Kid Needs Glasses; Won't Tolerate Anything on Face*. Autism Speaks. Retrieved August 1, 2022, from <https://www.autismspeaks.org/expert-opinion/autism-challenge-kid-needs-glasses-wont-tolerate-anything-face>
2. Grattan, J., & Burton, A. (n.d.). *Promoting Wearing of Glasses*. Nevada Dual Sensory Impairment Project. Retrieved August 1, 2022, from <https://www.unr.edu/ndsip/english/resources/tips/promoting-wearing-of-glasses>
3. Li, J. C. H., Wong, K., Park, A. S. Y., Fricke, T. R., & Jackson, A. J. (2015). The challenges of providing eye care for adults with intellectual disabilities. *Clinical and Experimental Optometry*, 98(5), 420–429. <https://doi.org/10.1111/cxo.12304>