UNDERSTANDING AUTISM & EARLY DEVELOPMENT: WORKSHOP SERIES

Autism 101

Participant Workbook

Mango Tree Center

Autism 101

Participant Workbook

Understanding Autism & Early Development Workshop Series
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Presented by
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Mango Tree Center

About This Workshop

Autism 101 provides an introduction to current understandings of autism, including autism as a neurodevelopmental difference, current research on genetics and neurobiology, trends in autism prevalence, how autism is identified and diagnosed, and perspectives that can help us better understand the internal experiences of autistic people.

This workbook was created as a companion to the workshop and includes key information from the presentation, opportunities for continued reflection and learning, practical activities, resources, and references.

Partnership & Acknowledgments

This workshop is presented through a partnership between Mango Tree Center and the Children and Youth with Special Health Care Needs Section of the Hawai'i State Department of Health through Project LAUNCH, a five-year initiative funded by the Substance Abuse and Mental Health Services Administration (SAMHSA).

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This workbook is provided for educational purposes and is not intended to provide individualized medical, psychological, or diagnostic advice.



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About Mango Tree Center

Mango Tree Center is a multidisciplinary psychology practice in Honolulu providing comprehensive, evidence-based, and identity-affirming care for neurodivergent individuals and their families across the lifespan.

Our team includes psychologists, behavior analysts, therapists, and other professionals with specialized expertise in autism and other neurodevelopmental conditions. Services include autism and ADHD assessment, individual and group therapy, caregiver coaching, consultation, and community education.

Our approach is neurodiversity-affirming, trauma-informed, family-centered, and grounded in the belief that meaningful support begins with understanding each person's individual strengths, needs, experiences, and goals.

About Dr. Maya

Maya Matheis, PhD, MSW ("Dr. Maya") is a licensed clinical psychologist and the Founder and Director of Mango Tree Center. She specializes in autism and other neuro-developmental conditions across the lifespan, with particular expertise in autism assessment, neurodiversity-affirming therapy, caregiver support, and community-based training and consultation.

Dr. Maya completed her doctoral training in clinical psychology at Louisiana State University and her clinical internship and postdoctoral fellowship at the UC Davis MIND Institute. In addition to her clinical work, she has conducted and published autism research and currently collaborates with the University of Hawai'i at Mānoa Center on Disability Studies through ECHO Autism Hawai'i. Her work focuses on helping translate autism research into compassionate, practical, and culturally responsive support for autistic people, families, professionals, and communities.

Connect With Mango Tree Center

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Introduction

Thank you for joining us for **Autism 101**, part of the *Understanding Autism & Early Development Workshop Series*.

Autism is complex, and our understanding of it continues to evolve. This workbook is designed to accompany the workshop and give you something you can return to afterward—whether you are a parent or caregiver, educator, healthcare professional, service provider, autistic person, or simply someone interested in learning more.

A Note About Our Approach

Throughout this workbook, we approach autism from a neurodiversity-affirming perspective. This means recognizing autism as a meaningful part of human neurological diversity while also acknowledging that autistic people can experience real challenges, disability, and support needs—sometimes substantial ones.

Our goal is not to minimize those challenges or to romanticize autism. It is to understand autistic people more fully: their strengths and support needs, their observable behavior and internal experiences, and the ways that both individual differences and the surrounding environment can affect daily life. There is no one way to be autistic, and there is no single approach to support that will be right for every autistic person.

A Note About Language

You may encounter different language used to talk about autism. Some people prefer identity-first language (for example, autistic person), while others prefer person-first language (person with autism). Research and community discussions suggest that preferences are mixed and can vary across individuals, families, communities, cultures, and settings.

Throughout this workbook, we use both identity-first and person-first language interchangeably. This is intentional and reflects the diversity of preferences within the autism community rather than suggesting that one form of language is right for everyone (Dwyer et al., 2026).

When talking with or about an individual person, we encourage respecting the language that person prefers for themselves.

How to Use This Workbook

Look for recurring features throughout the workbook:



KEY IDEA
Important concepts to remember.



SCIENCE CHECK
Tools for thinking critically about research findings and claims about autism.



BENEATH THE SURFACE
Perspectives and processes that may help us understand experiences that aren't always visible from the outside.



PUTTING IT INTO PRACTICE
Ways to translate what we're learning into everyday support.



REFLECTION
Opportunities to connect the material with your own experiences, questions, or work.



TRY THIS
Activities that invite you to apply what you're learning, explore ideas more deeply, or connect concepts to real-life experiences.

Section 1
Understanding Autism

What Is Autism?

Autism Spectrum Disorder (ASD) is the clinical term for a neurodevelopmental difference (APA, 2022). **Neurodevelopmental** means that autism is related to how the brain and nervous system develop, beginning early in life.

Autism can influence many interconnected aspects of development and everyday experience, including how a person communicates and interacts with others, processes information, learns, directs attention, responds to sensory input, regulates emotions and behavior, and experiences the world around them.

Autism is lifelong. It is not something a person develops suddenly or grows out of. However, the way autism looks can change considerably across childhood, adolescence, and adulthood. A person's strengths, challenges, coping strategies, environment, and support needs may also change over time.

Autism is also highly variable. Some autistic people communicate using spoken language, while others communicate in other ways. Some live very independently, while others need substantial assistance with everyday activities. A person may have significant strengths in one area and need considerable support in another. This variability is part of why autism is described as a spectrum.

Approximately 1 in 31 8-year-old children in the United States were identified as autistic in the CDC's most recent surveillance data (CDC, 2025). Autism occurs across racial, ethnic, socioeconomic, and gender groups, although who is recognized and diagnosed—and when—has not always been equal across groups.



KEY IDEA

There is no one way to be autistic. *Autism can look very different from person to person. Two autistic people may have very different ways of communicating, learning, interacting, regulating, and navigating everyday life—and very different strengths and support needs.*

Autism & Neurodiversity

Neurodiversity refers to the natural variation in how human brains develop and function. People differ in how they think, learn, communicate, pay attention, process sensory information, regulate, and experience the world (Singer, 1999).



*The rainbow infinity symbol represents **neurodiversity**—the infinite variation in how human brains and minds develop, function, and experience the world. It is widely used as a symbol of neurodivergent identity, diversity, and acceptance.*

A **neurodiversity-affirming** approach recognizes autism as one form of human neurological variation. Rather than assuming that every difference from typical development is something that needs to be corrected, it asks us to consider which differences are simply different ways of being and which create genuine challenges, distress, disability, or barriers to participation (Pellicano & den Houting, 2022).

This perspective does not mean ignoring the difficulties associated with autism. Autistic people can have significant support needs, and for some, those needs are substantial. A neurodiversity perspective makes room for both realities: autism can be an important part of a person's identity and way of experiencing the world, while also involving areas where meaningful support is needed (Pellicano & den Houting, 2022).



PUTTING IT INTO PRACTICE

When we notice something that differs from what is considered "typical," it can help to ask:

- Is this causing harm, distress, or a barrier for the person?
- Or, is it primarily different from what others expect?

When support is needed, we can also ask:

- Does the person need to change…or could we change something about the environment, expectations, or available supports?

Often, meaningful support involves some combination of building skills, accommodating needs, and reducing unnecessary barriers.

REFLECTION

- Think of a behavior or characteristic you have previously viewed as a deficit. Could there be another way to understand it?

_____

_____

- What information would help you decide whether something represents a difference to respect, a challenge to support, or both?

_____

_____

Understanding the Spectrum

The word spectrum can sometimes give the impression that autism exists along a single line—from "less autistic" to "more autistic." But autism doesn't work that way. Instead, the spectrum reflects the many different ways autism can present from person to person. Two autistic people—even two people with similar overall levels of support need—may have very different combinations of strengths, differences, and challenges.

An autistic person's individual profile may vary across areas such as:

COMMUNICATION
How someone expresses themselves, understands communication from others, participates in conversation, and uses spoken, nonverbal, or alternative forms of communication.

SENSORY PROCESSING
How someone experiences and responds to sound, light, touch, smell, taste, movement, pain, temperature, and other sensory information.

KEY IDEA

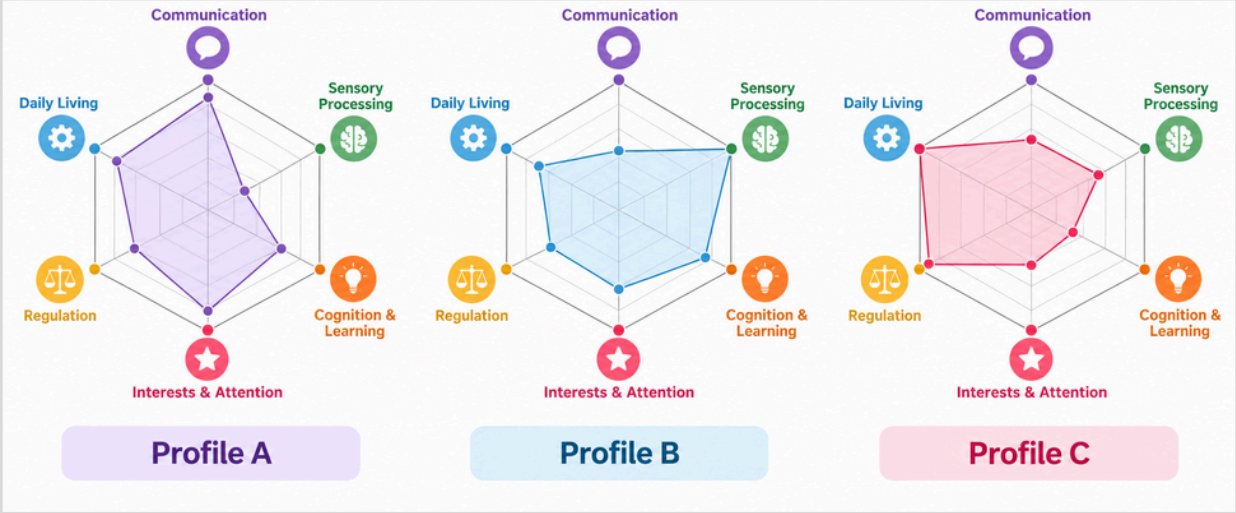
The spectrum describes a profile, not a ranking.
A person isn't simply "more" or "less" autistic. They may have significant strengths in one area and need considerable support in another—and that combination will look different for every autistic person.

COGNITION & LEARNING
How someone processes information, learns, remembers, solves problems, and applies skills.

INTERESTS & ATTENTION
What captures someone's attention, how deeply they focus, and how easily they shift attention between topics or activities.

REGULATION
How someone responds to emotions, uncertainty, change, sensory input, demands, and stress.

DAILY LIVING
How independently someone navigates everyday activities and how much support they may need with tasks such as eating, dressing, hygiene, planning, safety, or managing responsibilities.



Autistic people can have very different combinations of strengths and support needs across areas of development and daily life. These example profiles illustrate why the autism spectrum is better understood as multidimensional rather than a line from "less" to "more" autistic. No single profile represents what autism "looks like."



Moving Beyond "High" and "Low" Functioning

Terms like **"high functioning"** and **"low functioning"** have historically been used as shorthand to describe autistic people. But these labels can hide more than they reveal.

Calling someone "high functioning" may cause others to underestimate the support they need because their challenges are less visible.

Calling someone "low functioning" may cause others to underestimate their abilities, strengths, or potential because their support needs are more visible.

Neither label tells us where a person needs support, what they can do independently, what takes significant effort, or what helps them succeed.



BENEATH THE SURFACE

What someone can do isn't always the same as how easy it is for them to do it.

A person may speak fluently, earn good grades, work, maintain relationships, or complete daily activities independently while putting tremendous effort into managing sensory input, communication, uncertainty, planning, or social expectations.

Likewise, someone who needs substantial assistance with communication or daily living may have strengths, knowledge, interests, and abilities that are not immediately apparent to others.

What we see from the outside is only part of the person's profile.



PUTTING IT INTO PRACTICE

Instead of using a broad functioning label, describe what is actually useful to know.

Rather than:

- “They're high-functioning.”

Try:

- “They communicate independently using spoken language and manage most daily living tasks, but need significant support with transitions, planning, and sensory overload.”

Specific descriptions help us move from labeling a person to understanding what supports may actually be helpful.



REFLECTION

- When you previously pictured the autism spectrum, what did you imagine?

_____

_____

- What is the difference between being able to do something and being able to do it easily, consistently, or independently?

_____

_____

- How might the same person’s support needs look different across settings, situations, or days?

_____

_____

TRY THIS: Map an Individual's Profile

Every autistic person has a different combination of strengths, preferences, challenges, and support needs. Use the profile below to think about one individual—yourself, someone you know, or a fictional example. You can complete the profile more than once using different questions. There is no "ideal" shape.

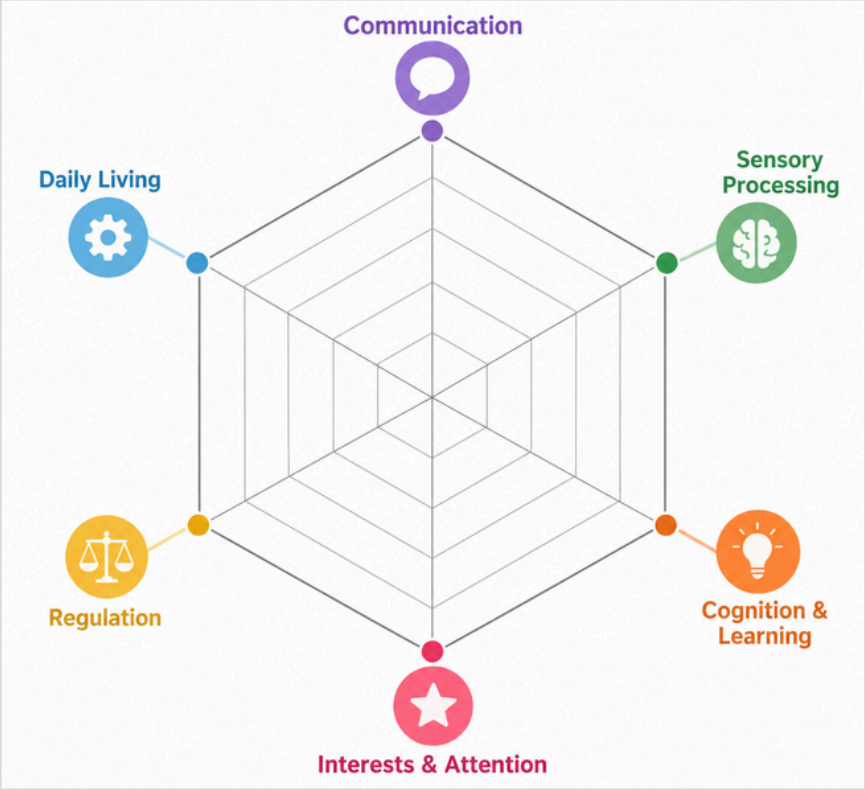
Choose what you want to map

Before you begin, decide what the distance from the center will represent. For example:

- *Support needed:* Center = little or no support needed → Outside = more support needed
- *Effort required:* Center = usually takes little effort → Outside = usually takes a lot of effort
- *Area of strength:* Center = less of a strength → Outside = significant strength

Map the Profile

For each area, place a point on the corresponding line. Connect the points when you're finished.



REFLECTION

- *What additional information would you need to better understand and complete this person's profile?*
- *What does this profile tell you that a label like "high functioning" or "low functioning" would not?*

Context Matters

A person's abilities are not necessarily the same in every situation. Access to skills can be affected by:

Sleep • Stress • Health • Sensory demands • Familiarity • Predictability • Emotional state • Cognitive load • Social demands • Available support

A person might manage something independently one day and need help with the same task another day. That doesn't necessarily mean the skill disappeared; the demands surrounding the skill may have changed.

SCIENCE CHECK

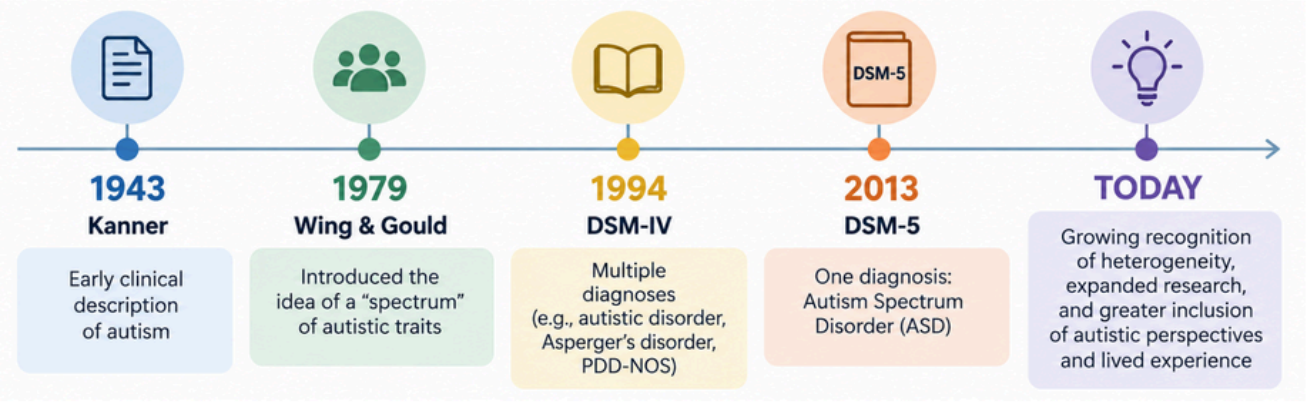
Autism research often compares groups of autistic and non-autistic people. Researchers may find that, on average, the groups differ in a particular characteristic. That does not mean every autistic person has that characteristic—or that we can use a group average to predict exactly what one autistic person will be like.



When you hear:
"Research shows that autistic people..."
consider asking:

- How much variation was there within the autistic group?
- How many participants actually showed this characteristic?
- Who was included—or excluded—from the research?
- Does this finding describe a group average or an individual person?

Research can help us understand autism. It cannot replace getting to know the individual.



Changes Over Time

The way autism is defined, recognized, and diagnosed has changed considerably over time. Early clinical descriptions focused on a relatively narrow group of people with more readily observable characteristics. As researchers studied larger and more diverse groups, it became increasingly clear that autism can present in many different ways (Wing & Gould, 1979).
This growing understanding eventually led to the concept of an autism spectrum and, later, to the consolidation of several previously separate diagnoses—including Autistic Disorder, Asperger's Disorder, and PDD-NOS—under the diagnosis of Autism Spectrum Disorder (ASD; APA, 2022).

Our understanding is still evolving. Current research increasingly considers the heterogeneity of autism, including different developmental and biological pathways, variation across sex and gender, masking, sensory and internal experiences, and autistic people's own perspectives on autism (Cook et al., 2021; Geschwind & Levitt, 2007; Pellicano & den Houting, 2022).

KEY IDEA

Changes in how we define and recognize autism affect who gets identified.

When our picture of autism is too narrow, people whose characteristics don't match that picture may be overlooked. A broader understanding has helped increase recognition of autistic people whose experiences may look different from older stereotypes (Cook et al., 2021; Loomes et al., 2017).



BENEATH THE SURFACE

Some autistic characteristics are easier for others to notice than others.

As our understanding has expanded, we've become more attentive not only to observable behavior, but also to experiences that may be less visible—such as sensory differences, the effort involved in social interaction, masking, and internal regulation (Cook et al., 2021; Livingston & Happé, 2017).

This is also one reason that autism may not be recognized until later in childhood, adolescence, or even adulthood.

Section 2
Current Science

What Causes Autism?

Autism has a strong genetic component. Evidence for this has accumulated over decades through family and twin studies and, more recently, increasingly large genomic studies (Tick et al., 2016).

But this isn't a story about finding a single "autism gene." Autism is extremely genetically **heterogeneous**—meaning that many different genetic variations can contribute to autism in different people.

The SFARI Gene database, which tracks genes associated with autism, currently includes more than 1,200 implicated genes, with more than 400 classified as having strong or high-confidence evidence. These numbers continue to change as studies grow and genetic methods improve (SFARI, 2026).



KEY IDEA

Autism is highly genetically heterogeneous.

There is no single gene—or even one genetic pathway—that explains autism for everyone. Many different combinations of genetic variation can contribute to an autistic developmental profile.

Genetic influences can also take different forms. For many autistic people, genetic influence may involve many common genetic variants, each contributing a very small amount of risk. In other cases, rarer genetic variants may have much larger effects.



SCIENCE CHECK

In September 2026, the UK's National Autistic Society published a review of 83 research papers examining evidence about what causes autism. Based on that evidence, the organization concluded that the evidence is now strong enough to state:

"Autism is genetic." (National Autistic Society, 2026)

That's an unusually simple statement for a very complicated area of science. It doesn't mean that researchers have identified one cause of autism, that every autistic person has the same genetic differences, or that there is a single genetic test that can determine whether someone is autistic.

Instead, it reflects the strength of evidence that genetic variation plays a central role in the development of autism, while the specific genetic pathways involved can differ substantially from person to person.

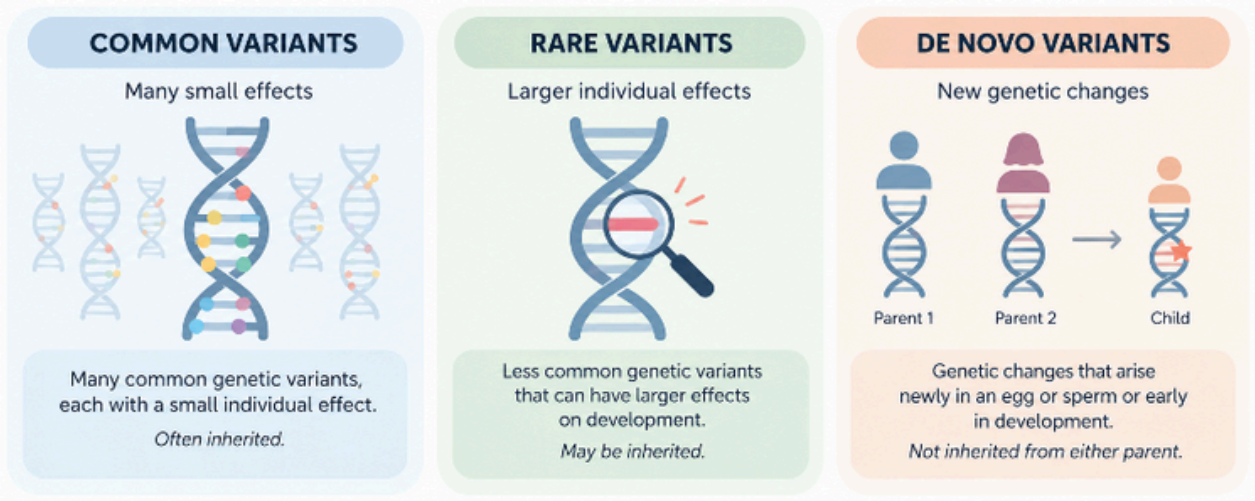
"Genetic" ≠ "Inherited"

When we say autism is genetic, we're actually talking about several different kinds of genetic variation (Chaste et al., 2017; Havdahl et al., 2021).

Common Variants
These are genetic differences that are relatively common throughout the population. Each individual variant typically has a very small effect, but many of them together can contribute to a person's likelihood of being autistic. Common variants are often inherited from parents.

Rare Variants
Some genetic variants occur in far fewer people and can have a larger effect on development. Rare variants may be inherited from a parent—or they may occur for the first time in a child.

De Novo Variants
De novo means "new." These are genetic changes that are present in a child but not present in either parent. They can arise in an egg or sperm cell or very early after conception.



Importantly, these influences can work together. A person might inherit many common variants associated with autism while also having a rarer inherited or de novo variant. This helps explain why autism does not follow a simple pattern of inheritance—and why the genetic contributors to autism can look very different from one autistic person to another.

Autism in Siblings

Because autism has a strong genetic component, it tends to run in families. Having one autistic child does not mean that another child will necessarily be autistic, but the likelihood is higher than in the general population. A large 2024 study from the Baby Siblings Research Consortium followed 1,605 infants who had an older autistic sibling. By age 3: **About 1 in 5 younger siblings (20.2%) were also diagnosed with autism.**

This closely replicated an earlier 2011 study, which found a sibling recurrence rate of 18.7% (Ozonoff et al., 2011, 2024).

The likelihood was not the same for every family. In the 2024 study, recurrence was higher when: the younger sibling was male, the family already had more than one autistic child, or the older autistic sibling was female (Ozonoff et al., 2024).

Most younger siblings in this study were not diagnosed with autism. These numbers describe patterns across groups of families; they cannot tell us with certainty whether an individual child will or will not be autistic.

KEY IDEA

Genetic does not always mean inherited. *Autism can reflect many different combinations of inherited and new genetic variation, which is why it can run in families while looking very different—or not occurring at all—among siblings.*

PUTTING IT INTO PRACTICE

Families often have understandable questions about what "genetic" means for them. Here are a few ways to respond clearly and compassionately:

"If autism is genetic, does that mean someone in our family passed it down?"

>> *"Not necessarily. Some genetic influences on autism are inherited, while others are new genetic changes. Often, many different genetic variations contribute, so we usually can't point to one person or one gene as the cause."*

"Can genetic testing tell us if someone is autistic?"

>> *"No. Genetic testing can sometimes identify genetic differences associated with autism, but it doesn't diagnose autism. Autism is diagnosed based on a person's development and characteristics."*

"If we have another child, will they be autstic, too?"

>> *"Not necessarily, but autism does tend to run in families, so the likelihood is higher when there is already an autistic child in the family. The exact likelihood varies depending on the family and genetics involved."*

"Why are some siblings autistic and others aren't?"

>> *"Each child inherits a different combination of genetic variation. Because many different genes can contribute to autism, siblings can have different developmental outcomes—even within the same family."*

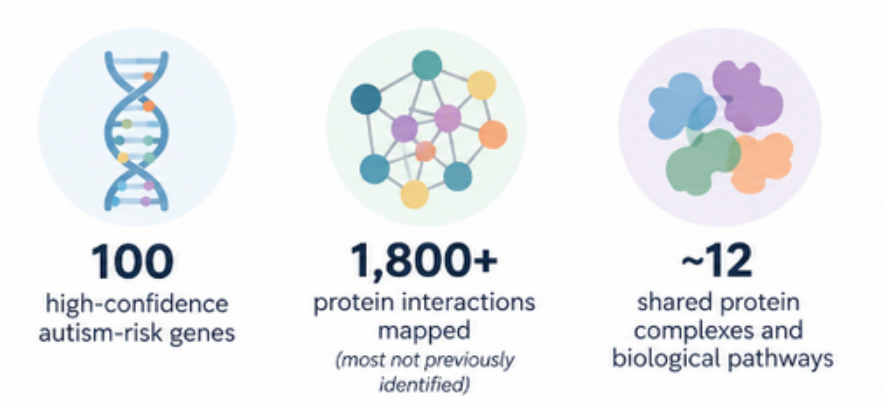
"Did I do something that caused my child's autism?"

>> *"No. Autism is a neurodevelopmental difference with a strong genetic basis. It isn't caused by parenting, something you said or did, or a failure to do the 'right' thing during your child's development."*

From Genes to Biological Pathways

Knowing that hundreds of genes are associated with autism raises an important question: How can so many different genetic pathways contribute to something we recognize as autism?

A 2026 study published in *Science* offers an important piece of the puzzle. Researchers started with 100 genes strongly associated with autism, particularly rare, higher-impact genetic variants associated with profound autism (Wang et al., 2026).



Instead of looking only at the genes themselves, the researchers examined the proteins those genes produce and how those proteins interact with one another. They mapped more than 1,800 protein interactions and found something especially interesting:

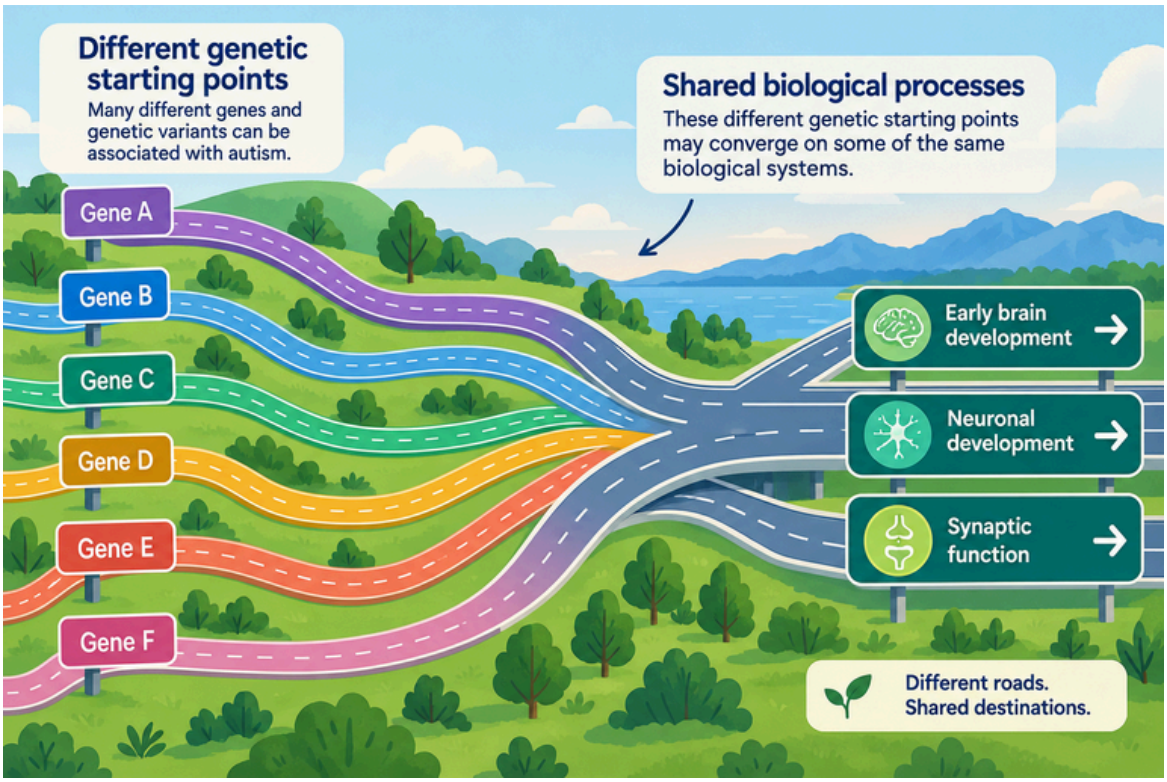
Many different autism-related genes converged on a much smaller number of interconnected protein networks. These networks included biological processes involved in early brain development, neuronal development, and synaptic function (Wang et al., 2026).



SCIENCE CHECK

This study does not mean researchers have discovered one biological pathway that "causes autism." Instead, it provides evidence that some autism-associated genetic variants may converge on shared biological networks—one important step toward understanding how very different genetic changes can contribute to overlapping developmental outcomes (Wang et al., 2026).

Imagine many different roads eventually merging onto the same highways. Autism may involve hundreds of different genetic variations, but some of those variations may ultimately influence overlapping processes involved in brain development. This helps researchers move from asking: "Which genes are associated with autism?" to the bigger question: "What biological processes do these different genes have in common?"



Autism or "Autisms"?

So what does this convergence mean for how we understand autism? The current working model is that different genetic and biological pathways can lead to overlapping developmental characteristics. In other words, two people can both meet criteria for autism without sharing the same underlying biology (Geschwind & Levitt, 2007; Leblond et al., 2024; Wang et al., 2026).

KEY IDEA

Autism is one diagnosis, but it may reflect many different underlying pathways. *Similar autistic characteristics can emerge from different combinations of genetics, neurobiology, and development.*

This is why some researchers have used the term “autisms.” What we currently call autism likely encompasses multiple developmental and biological pathways that converge on overlapping characteristics.

This helps make sense of something that might otherwise seem contradictory: autism can have a strong genetic basis while there is no single autism gene, biological pathway, brain profile, or biomarker. It also helps explain the tremendous diversity we see among autistic people. Different underlying pathways may contribute to different developmental profiles, co-occurring conditions, strengths, challenges, and support needs.



SCIENCE CHECK

Researchers are increasingly finding evidence that autism can be divided into biologically meaningful subgroups. For example, a 2026 study analyzing gene-expression data from more than 1,700 autistic participants identified three molecular subtypes, each associated with different patterns of gene expression, biological pathways, and clinical characteristics (Pang et al., 2026).

Other recent studies have identified different numbers and kinds of autism subgroups depending on what researchers measure and how they define subtypes. For example, researchers have identified four classes using developmental and behavioral characteristics linked with genetic differences (Litman et al., 2025), two subtypes based on patterns of functional brain connectivity (2025), and two biologically distinct connectivity subtypes in a large cross-species neuroimaging study (2026).

These are promising research findings but not established clinical categories. We do not yet have a universally accepted set of autism subtypes or a biological test that can tell us which “type” of autism someone has.

For now, “autisms” is best understood as a working model of biological heterogeneity, rather than a new diagnostic system.

Neurobiology of Autism

Autism is **neurodevelopmental**: the characteristics we recognize as autism reflect differences in how the brain develops, organizes, and communicates. Research has identified differences across several aspects of brain development and function. Consistent with what we've learned about autism's many underlying pathways, there is no single "autistic brain."

Brain Structure

At the group level, researchers have found differences in several brain regions, including the cerebral cortex, amygdala, hippocampus, and cerebellum (Ecker et al., 2017). Findings vary across studies, individuals, and stages of development; there is no single structural pattern shared by all autistic people.

Early Brain Development

Some differences emerge before autism can be diagnosed behaviorally. Studies following infants who later received an autism diagnosis have found differences beginning during the first year of life, including increased extra-axial cerebrospinal fluid and, in some children, differences in cortical surface-area expansion and brain growth (Hazlett et al., 2017; Shen et al., 2017).

Brain Connectivity

Researchers also find differences in white-matter development and communication among brain regions (Wolff et al., 2012). This suggests that autism involves not only individual brain areas, but also differences in how networks throughout the brain develop and work together.



KEY IDEA

There is no single brain difference that defines autism. *Autism is associated with differences in brain development, structure, and connectivity—but these patterns are highly variable across autistic people.*



SCIENCE CHECK

We cannot see autism on a brain scan. Brain-imaging studies can identify differences between groups of autistic and non-autistic people, but these findings overlap substantially between individuals. There is currently no brain scan, imaging pattern, or biological marker that can diagnose autism in an individual person.

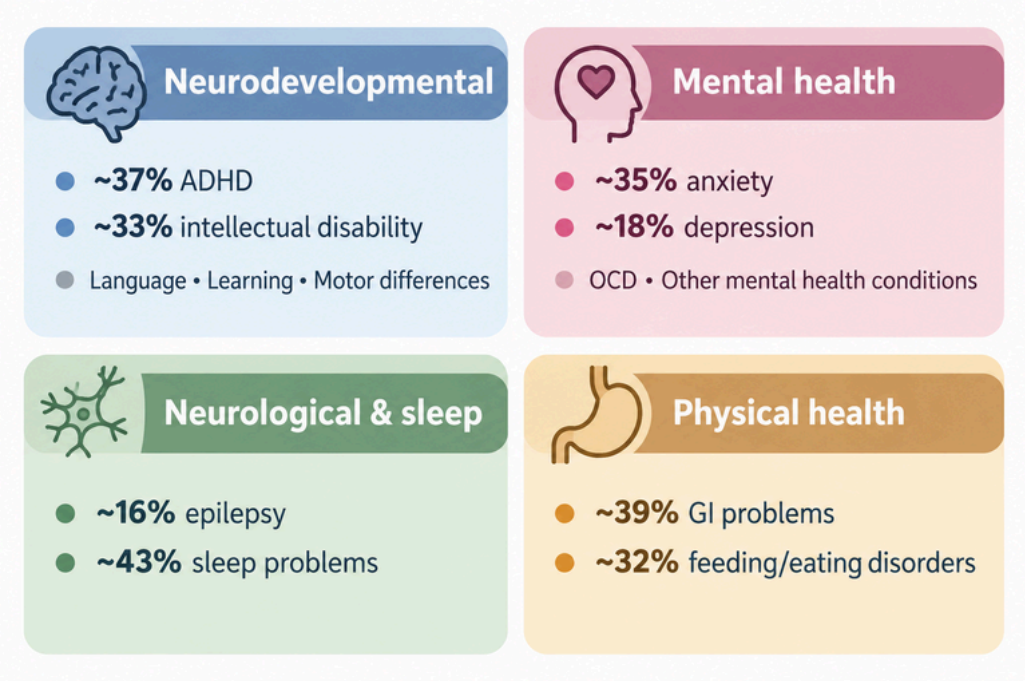
Co-Occurring Conditions

Autism frequently occurs alongside other neurodevelopmental, mental health, neurological, sleep, and physical health conditions. A large systematic review and meta-analysis of 340 studies representing nearly 600,000 autistic people found that co-occurring conditions are common across all of these areas (Micai et al., 2023).

The estimates below provide a sense of how commonly some conditions occur. They are population-level estimates, not predictions for any individual person, and rates vary considerably depending on age, sex, intellectual functioning, and how conditions are assessed.

KEY IDEA

Autism rarely exists in isolation. *Co-occurring conditions can have a major impact on health, well-being, daily functioning, and support needs.*



Why Are Boys Diagnosed More Often?

Autism is diagnosed more often in boys than girls. Historically, this difference has often been described as about 4 boys for every 1 girl. However, a large systematic review and meta-analysis estimated that the underlying ratio among children meeting autism criteria may be closer to 3:1, suggesting that some autistic girls are missed or diagnosed later (Loomes et al., 2017).

PUTTING IT INTO PRACTICE

Diagnostic overshadowing happens when a person's symptoms, behaviors, or difficulties are attributed to autism rather than considering whether another condition or unmet need might also be contributing.

When trying to understand a concern, whether it is new or longstanding, ask:

- Could there be another explanation or co-occurring condition?
- Has this concern been evaluated on its own, rather than assumed to be part of autism?
- Could pain, sleep, anxiety, ADHD, medication effects, sensory needs, or another health issue be contributing?
- What might this person be communicating through changes in behavior, participation, or regulation?

Autistic people can have the same health and mental health concerns as anyone else, and those concerns deserve appropriate assessment and care.

Biology & Genetics

Some of the difference may reflect biology. Research suggests that sex may influence how genetic liability for autism translates into development, with several possible biological mechanisms currently being investigated.



Recognition & Diagnosis

Some of the difference likely reflects who gets recognized and diagnosed. Autism research and clinical descriptions have historically been disproportionately based on boys and men. Girls who meet autism criteria may therefore be less likely to fit familiar expectations of what autism “looks like” (Hull et al., 2020; Loomes et al., 2017).

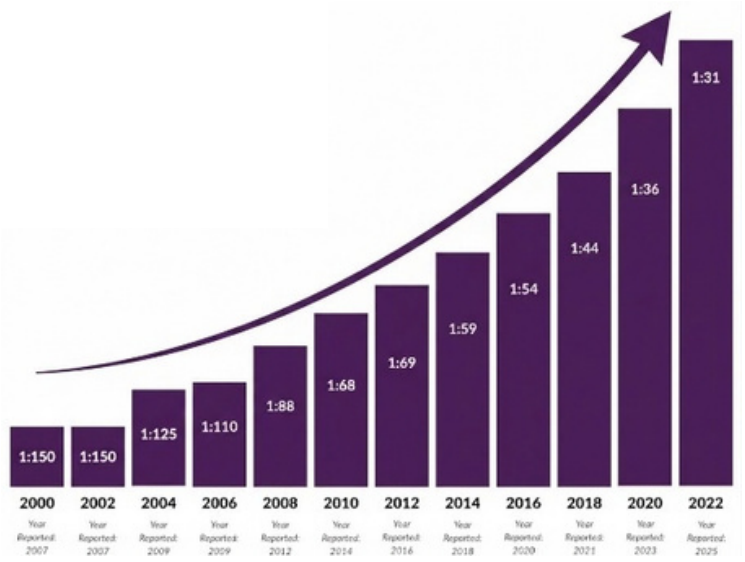
Presentation & Masking

Autistic girls may also show somewhat different patterns of social behavior or restricted interests, and some research suggests differences in camouflaging or masking. However, findings about sex and gender differences in camouflaging are not completely consistent across studies (Cook et al., 2021; Hull et al., 2020).

Autism Prevalence Has Increased

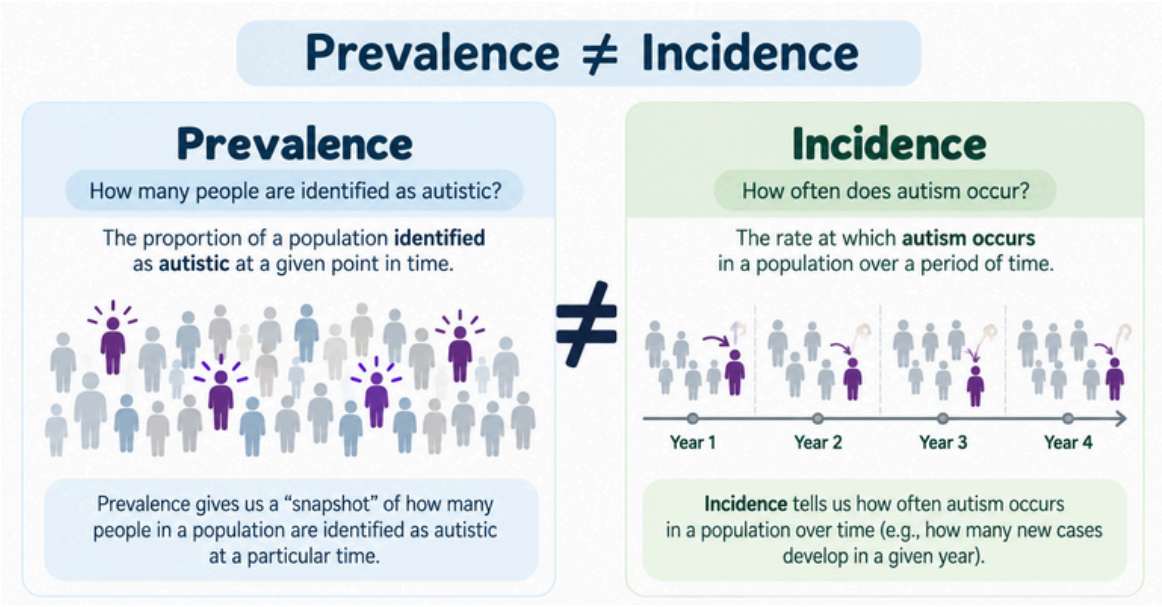
The number of people identified as autistic has increased substantially over time. But an increase in autism prevalence does not automatically tell us *why* more people are being identified.

But interpreting that increase requires an important distinction: identified prevalence is not the same as underlying incidence.



CDC, 2000-2022 ASD Prevalence Data

Prevalence and incidence describe different things. **Prevalence** tells us how many people in a population are identified as autistic at a particular point in time. **Incidence** refers to how often autism occurs in a population over time. This distinction matters because identified prevalence can increase even if the underlying incidence of autism has not increased by the same amount. Changes in awareness, screening, diagnostic criteria, access to evaluation, and recognition of people who were previously missed can all increase the number of people identified as autistic. For this reason, an increase in prevalence alone cannot tell us whether autism itself is occurring more often.



Why Has Identified Prevalence Increased?
There is probably no single explanation. Several factors can influence how many people are identified as autistic:

- Broader diagnostic criteria
- Greater awareness and screening
- Better access to evaluation
- Changes in diagnostic practices
- Recognition of people historically more likely to be missed
- Population and developmental factors that may also contribute

Research demonstrates that changes in how autism is defined, recognized, and recorded account for a meaningful portion of the increase in identified prevalence, although they may not explain all of it (Hansen et al., 2015; King & Bearman, 2009).



KEY IDEA

More people being identified as autistic does not necessarily mean that autism is occurring more often.

Prevalence data alone cannot tell us whether the underlying incidence of autism has changed. That is why researchers continue to study both changes in identification and factors that may influence neurodevelopment.

What about environmental factors?
Autism has a strong genetic basis, but genetic does not mean that environment is irrelevant. Brain development occurs through complex interactions among genes, biology, and environment.

Researchers have studied many prenatal and perinatal factors associated with autism, including aspects of maternal health, medications and other exposures, infection and inflammation, air pollution, and pregnancy and birth factors (Kim et al., 2019; Zhu et al., 2026).

Importantly, finding an association does not necessarily mean that an exposure caused autism. Environmental exposures can be related to other genetic, medical, socioeconomic, or demographic factors that are difficult to separate in research.



SCIENCE CHECK

When you hear that something is "linked to autism," ask: **Was it simply associated with autism, or is there evidence that it actually causes autism?** Those are very different scientific claims.

What About Vaccines?

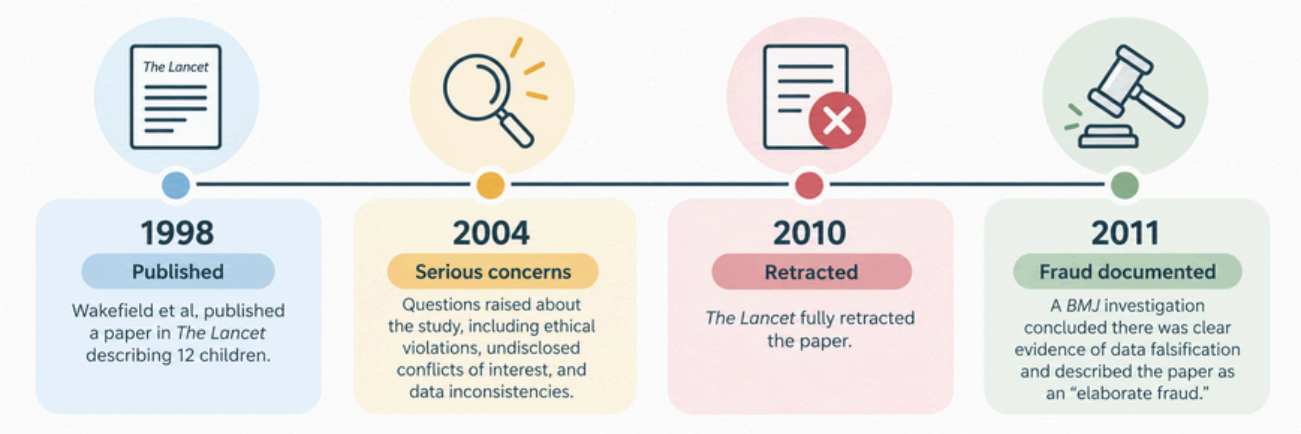
Questions about vaccines and autism have persisted for decades. Part of the reason may be timing: routine childhood vaccines are given during the same developmental period when autistic characteristics often become more noticeable. About a third of autistic children also experience developmental regression, which can make a change seem sudden and lead families to understandably wonder what caused it (Tan et al., 2021).

Where Did the Vaccine-Autism Claim Come From?

In 1998, Andrew Wakefield and colleagues published a report in *The Lancet* describing just 12 children. The study had no control group and was not designed to determine whether vaccines caused autism. Nevertheless, the paper and Wakefield's public statements received widespread attention and helped popularize the idea that the MMR vaccine might be connected to autism.

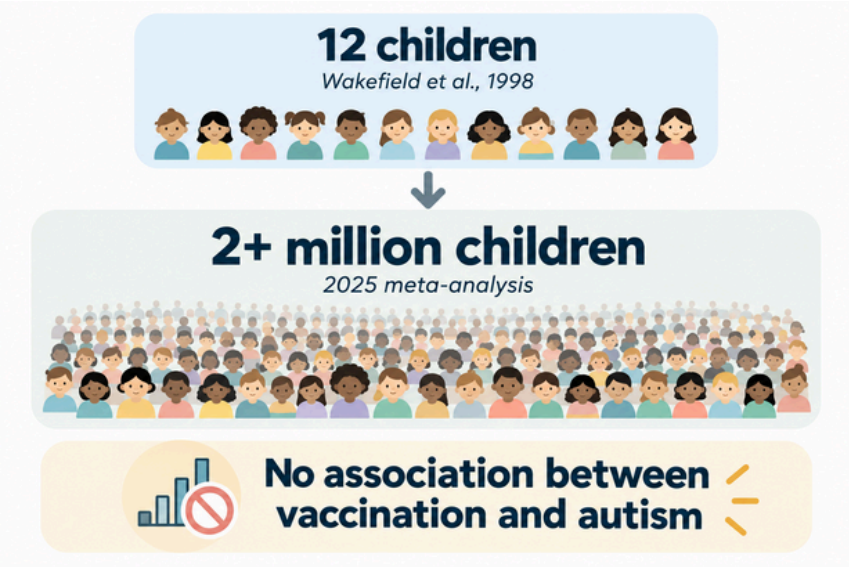
Over the following years, serious concerns emerged about the research, including undisclosed conflicts of interest, ethical problems, and discrepancies between the published report and the children's medical records. In 2010, *The Lancet* fully retracted the paper, and a subsequent BMJ investigation concluded that key information had been deliberately misrepresented and falsified (Deer, 2011; Dyer, 2010; Godlee et al., 2011; Wakefield et al., 1998).

By then, however, the vaccine-autism narrative had already been circulating for more than a decade, allowing the misinformation to become deeply established before the original paper was fully retracted.



What Did Later Research Find?

The most important question is not what happened with the original study, but what happened when scientists independently tested the vaccine-autism hypothesis. Over the following decades, researchers examined the relationship using much larger populations, stronger study designs, and data from multiple countries and healthcare systems. A 2025 meta-analysis combined 12 studies involving more than 2 million children and found no association between vaccination and autism, including analyses of the MMR vaccine and vaccines containing thimerosal.



A separate World Health Organization (WHO) review examined additional studies published between 2010 and 2025, building on decades of earlier research, and similarly found no evidence of a causal relationship. The consistency of these findings is important: the conclusion that vaccines do not cause autism does not depend on one study, one research group, or one type of analysis. It reflects a large body of evidence that has repeatedly tested the hypothesis across different populations and research methods (Gulati et al., 2025; WHO GACVS, 2025).



SCIENCE CHECK

The history of the vaccine-autism claim illustrates why scientific claims should be evaluated using the **whole body of evidence**, not one study or one compelling story. It also shows why misinformation can be difficult to correct once it becomes widely established, even when the original evidence is later discredited.



TRY THIS: What Would You Say?

Families often have questions about autism that don't have simple answers. Match each question with the response that best reflects what we currently know.

1. "Does autism run in families?"
2. "If autism is genetic, does that mean one of us passed it down?"
3. "Why is autism diagnosed so much more often now?"
4. "Why are boys diagnosed more often than girls?"
5. "Can a brain scan or genetic test tell us if someone is autistic?"
6. "My child is autistic. Does that mean their younger sibling will be too?"
7. "Did vaccines cause my child's autism?"
8. "Are there different types of autism?"
9. "Where is my child on the autism spectrum?"
10. "Did I do something to cause my child's autism?"

A. No. Autism is not caused by parenting or something a parent did or didn't do.

B. Not necessarily. About 1 in 5 younger siblings of autistic children are also diagnosed with autism.

C. The spectrum isn't a line from "less" to "more" autistic. Each person has a unique profile of strengths and support needs.

D. No. Brain scans and genetic tests cannot currently diagnose autism.

E. Probably for several reasons, including biology, differences in presentation and masking, and how autism has historically been recognized.

F. Not necessarily. Genetic influences can be inherited or arise as new genetic changes.

G. No. The vaccine-autism link originated from misinformation and has been extensively studied. Vaccines do not cause autism.

H. Yes. Autism tends to run in families, and genetics play an important role.

I. Greater awareness, broader diagnostic criteria, and better recognition have all contributed to increased autism identification.

J. Possibly. Research suggests there may be different biological and developmental pathways to autism, but there are no established biological "types."

Answer key: 1–H | 2–F | 3–I | 4–E | 5–D | 6–B | 7–G | 8–J | 9–C | 10–A

Section 3
Identifying and Diagnosing Autism

How Is Autism Identified?

Autism is developmental. The biological and developmental processes associated with autism begin very early, including during prenatal brain development, even though autistic characteristics may not become noticeable until later (APA, 2022; Stoner et al., 2014; Willsey et al., 2013).

For some children, differences may be apparent early in communication, play, sensory responses, or social interaction. For others, they become more noticeable as social, communication, or independence demands increase.

There Is No Medical Test for Autism

Autism cannot currently be diagnosed with a:

- 🧬 Genetic test
- 🩸 Blood test
- 🧠 Brain scan

Instead, autism is identified by looking at a person's pattern of development and characteristics over time. Genetic testing or neuroimaging may provide useful information in some circumstances, but neither can determine whether someone is autistic (Hyman et al., 2020; Schaefer et al., 2013).

What Are We Looking For?

The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR) is the manual used by clinicians in the United States to define and diagnose autism and other mental health and neurodevelopmental conditions (APA, 2022). The DSM-5-TR organizes autistic characteristics into two broad areas:

1. *Social communication and interaction:* Differences in areas such as social-emotional reciprocity, nonverbal communication, and navigating relationships.

2. R*estricted or repetitive behaviors, interests, and activities:* This includes repetitive movements or speech, focused interests, preferences for sameness and routine, and sensory differences.

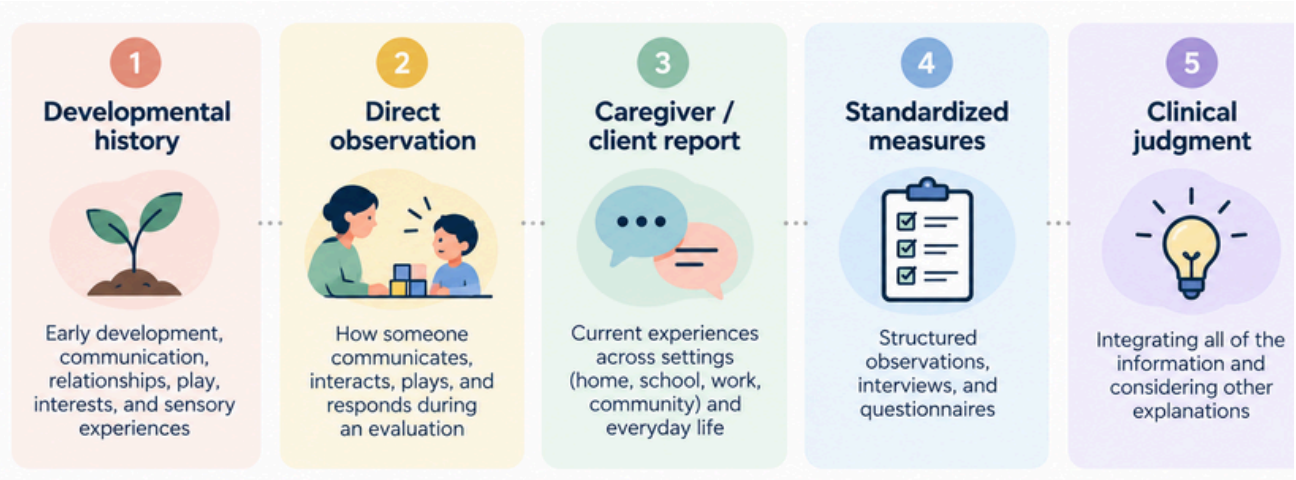
These characteristics begin during development and must have a meaningful impact on everyday functioning for a clinical diagnosis (APA, 2022).

Because there is no single test for autism, clinicians bring together multiple types and sources of information. Different sources can help us understand how a person has developed over time, what they experience in everyday life, and what their communication, interaction, behavior, and functioning look like across different settings.

KEY IDEA

*Autism diagnosis is based on the **pattern** across multiple sources of information, not any single test or score.*

An evaluation may draw from developmental history, interviews, direct observation, standardized assessment tools, questionnaires, records, and information from other people or



settings. Additional testing may also be used to better understand areas such as language, learning, cognition, or daily living skills. These pieces of information are considered together. A single behavior, questionnaire score, or assessment result does not determine whether someone is autistic. Instead, clinicians look for a constellation of data points that form a consistent developmental pattern and consider whether another explanation might better account for what they are seeing (APA, 2022; Hyman et al., 2020).

Why Does Identification Matter?

An autism diagnosis is not simply a label. For many people and families, identification can provide a framework for understanding a person's developmental profile, experiences, strengths, and support needs.

Identification may help:

- Make sense of differences that were previously misunderstood
- Guide individualized supports and accommodations
- Inform educational, healthcare, or therapeutic planning
- Provide access to services or resources
- Help the person and those around them better understand their needs
- Connect autistic people and families with information and community



KEY IDEA

Identification can give us a ***useful framework,*** *but the diagnosis is the beginning of understanding the person, not the end.*

At the same time, the diagnosis itself does not tell us exactly what support a person needs. Two people who both meet criteria for autism may have very different strengths, challenges, goals, and support needs. That is why assessment should help us understand the individual person, not simply determine whether they meet diagnostic criteria.

Coming Up in This Series

This workbook provides a brief overview of how autism is identified. We'll explore the diagnostic process in greater depth, including assessment, early identification, and pathways to services and supports, in the upcoming workshop: **Autism Diagnosis & Service Pathways.**

Section 4
Understanding the Autistic Experience

Much of what we use to recognize and diagnose autism involves behavior we can observe from the outside. But what we see is only part of the picture.

The same behavior can have very different explanations depending on what a person is experiencing internally. For example, withdrawing from an activity might reflect sensory overload, difficulty processing multiple demands, anxiety, fatigue, a need for recovery, or something else entirely.

Autistic people may experience differences in areas such as sensory processing, awareness of internal body signals, emotional awareness, attention and information processing, and nervous-system regulation. These experiences can interact with one another, and demands can accumulate over time, sometimes contributing to overload, shutdown, or dysregulation.

These are not explanations we should automatically assign to every autistic person. Instead, they offer lenses for becoming more curious about what might be happening beneath the surface.



BENEATH THE SURFACE

Behavior tells us that something is happening. It does not always tell us why.
Rather than asking only, *"How do we change this behavior?"* we can also ask:
"*What might this person be experiencing, and what is this behavior communicating about their needs?*"

Sensory Processing

We all take in information through our senses, but the same sensory environment can feel very different from one person to another. Autistic people commonly experience differences in how sensory information is noticed, processed, and responded to, although sensory profiles vary considerably from person to person (Tavassoli et al., 2026).

Sensory differences can occur across any sensory system and may include:

- **Hyperresponsivity:** Sensory input may feel unusually intense, distracting, uncomfortable, or overwhelming.
- **Hyporesponsivity:** Sensory input may be less noticeable or may require greater intensity before it is registered.
- **Sensory seeking:** A person may actively seek particular sensations because they are enjoyable, organizing, regulating, or help with attention.

Importantly, these patterns are not mutually exclusive. The same person might be highly sensitive to certain sounds, barely notice some sensations, and actively seek movement or pressure. Sensory responses can also vary with the environment, stress, fatigue, health, and other demands. Sensory processing can influence much more than comfort. It can affect attention, communication, participation, learning, regulation, and behavior.



PUTTING IT INTO PRACTICE

What looks like refusal, distraction, avoidance, or dysregulation may sometimes reflect a sensory experience that isn't obvious to other people. When someone is having difficulty in a particular setting, consider the sensory demands of the environment: sound, lighting, visual activity, smells, touch, temperature, movement, crowding, and opportunities for breaks.

Instead of only asking:

- “Why won't they do this?”

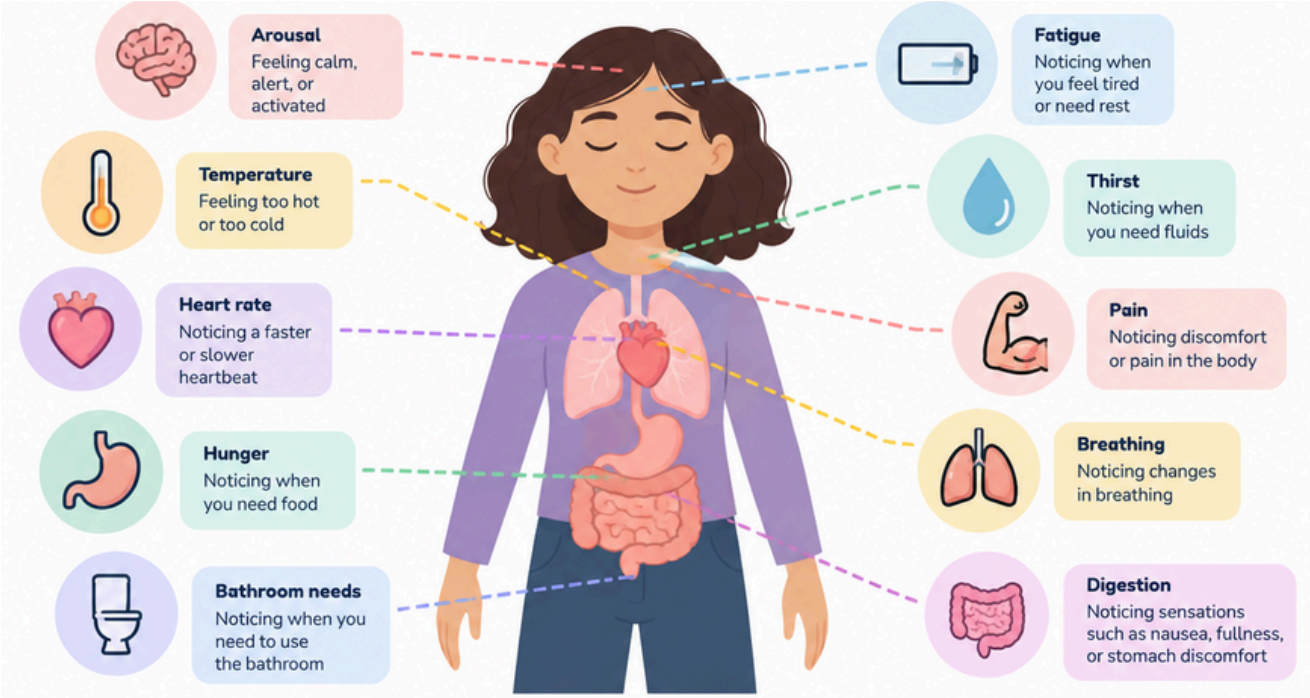
Try asking:

- “What does this environment feel like to them?”
- “What could we change to make participation more accessible?”

The goal isn't necessarily to help someone tolerate more sensory discomfort. Sometimes the most effective support is changing the environment.

Interoception

Interoception is our ability to notice and make sense of signals coming from inside our body. These signals help us recognize things like:



Research suggests that some autistic people experience differences in interoception, although these experiences vary considerably from person to person and depending on how interoception is measured (Klein et al., 2025; Williams et al., 2023).

A person might:

- Notice a body signal later than expected
- Experience a signal very intensely
- Notice that something feels different without knowing what the signal means
- Have difficulty deciding how to respond to the signal

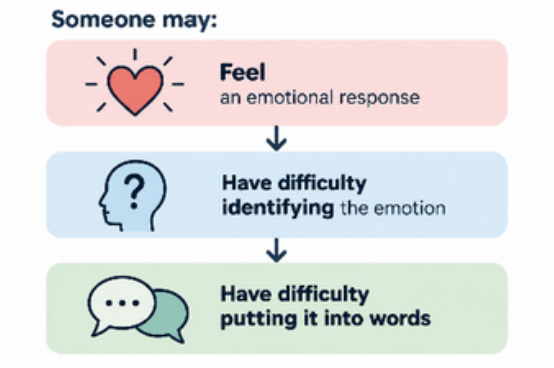
For example, someone may know that they feel "bad" or uncomfortable without immediately recognizing that they are hungry, overheated, anxious, in pain, or need to use the bathroom.

KEY IDEA

Body signals are not always obvious or easy to interpret.

Differences in interoception can affect how quickly someone recognizes what their body needs and how easily they can respond to those needs.

Alexithymia



Alexithymia refers to difficulty identifying and describing one's own emotions. It is more common among autistic people, although it is not universal and is not itself a diagnostic feature of autism (Bird & Cook, 2013; Kinnaird et al., 2019).

Someone experiencing alexithymia may have a strong emotional or physical response without immediately knowing what emotion they are feeling, what caused it, or how to describe it. For example, a person might recognize that they feel overwhelmed or "off," but need more time or support to determine whether they are anxious, frustrated, embarrassed, disappointed, or something else.

Alexithymia also overlaps with interoception. Identifying an emotion often involves noticing and interpreting signals from the body, such as a racing heart, muscle tension, warmth, nausea, or changes in breathing.

PUTTING IT INTO PRACTICE

Identifying and describing emotions may take more time and more concrete support. Instead of expecting an immediate answer to "How do you feel?", allow time to notice, process, and put the experience into words.

Visual supports can make this process easier. Consider using:

- Emotion charts or visual emotion scales
- Body maps to identify physical sensations
- Written or pictured choices
- Visual rating scales for intensity
- Lists of possible emotions to choose from

Give time to process. Someone may understand what they are feeling later, after the intensity has decreased or they have had time to reflect. Not being able to name an emotion in the moment does not mean they aren't experiencing it.

Attention & Processing

Autistic attention may sometimes be more deeply focused and less easily shifted. One framework for understanding this is **monotropism**, an autistic-developed theory proposing that attention may become deeply concentrated on a smaller number of interests, activities, or sources of information at one time (Dwyer et al., 2024; Murray et al., 2005).

This style of attention can contribute to:

- Deep focus, learning, and expertise
- Becoming highly engaged in interests or activities
- Difficulty shifting attention from one thing to another
- Transitions requiring more time or effort
- Missing information that falls outside the current focus
- Interruptions feeling particularly disruptive



KEY IDEA

Difficulty shifting attention is not the same as refusing to shift attention.

Someone may understand what is expected and still need additional time and support to disengage from one attentional focus and redirect to another.

Monotropism is a useful framework, not a universal explanation for autistic attention. Autistic people have varied attention profiles, and ADHD also commonly co-occurs with autism.



PUTTING IT INTO PRACTICE

When transitions or interruptions are difficult, consider what it takes to disengage and redirect attention.

Helpful supports might include advance notice, visual schedules or timers, predictable transition cues, time to reach a natural stopping point, and reducing unnecessary interruptions.

Instead of asking:

- *"Why won't they move on?"*

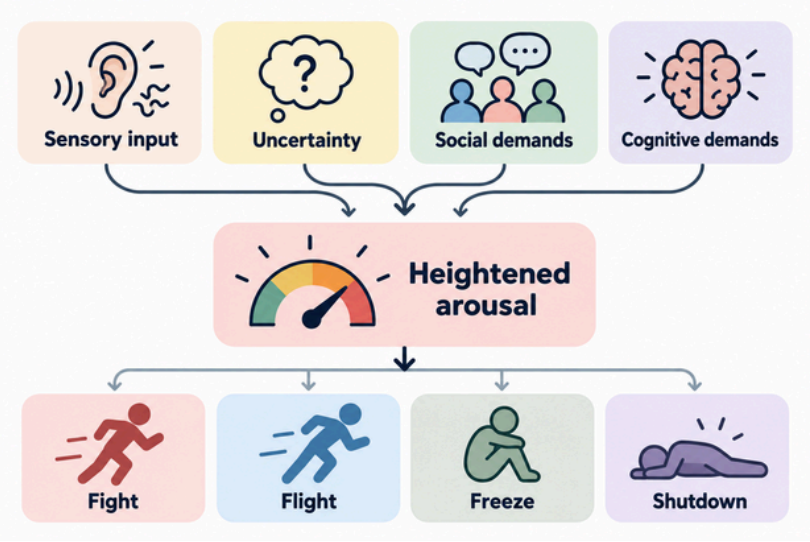
Try asking:

- *"What would help them shift their attention?"*

Stress and Nervous System Regulation

Autistic people may experience differences in how the nervous system responds to and recovers from stress and environmental demands. Research on autonomic nervous system regulation in autism has found considerable individual variability, including patterns of both heightened and reduced arousal and differences in regulation and recovery (Arora et al., 2021; Thapa et al., 2021).

Sensory input, social demands, cognitive effort, uncertainty, transitions, and other stressors can all affect a person's level of arousal. When demands exceed the nervous system's current capacity, responses might include fight, flight, freeze, or shutdown.



These responses are not simply "behaviors." They can reflect the body's attempt to respond to and regulate overwhelming demands.

BENEATH THE SURFACE

What looks like defiance, avoidance, overreaction, withdrawal, or "not coping" from the outside may reflect a nervous system responding to demands that have exceeded its current capacity.

The visible response may be only the final part of a much larger process involving sensory input, uncertainty, cognitive effort, social demands, fatigue, previous stress, and difficulty recovering between demands.

Allostatic Load

Our bodies are constantly adjusting to changing demands. **Allostasis** is the process of making those adjustments in order to maintain stability. **Allostatic load** refers to the cumulative burden that can build when the body has to repeatedly or continuously adapt to stress (Doan, 2021; Mahony & O'Ryan, 2022; McEwen, 1998).

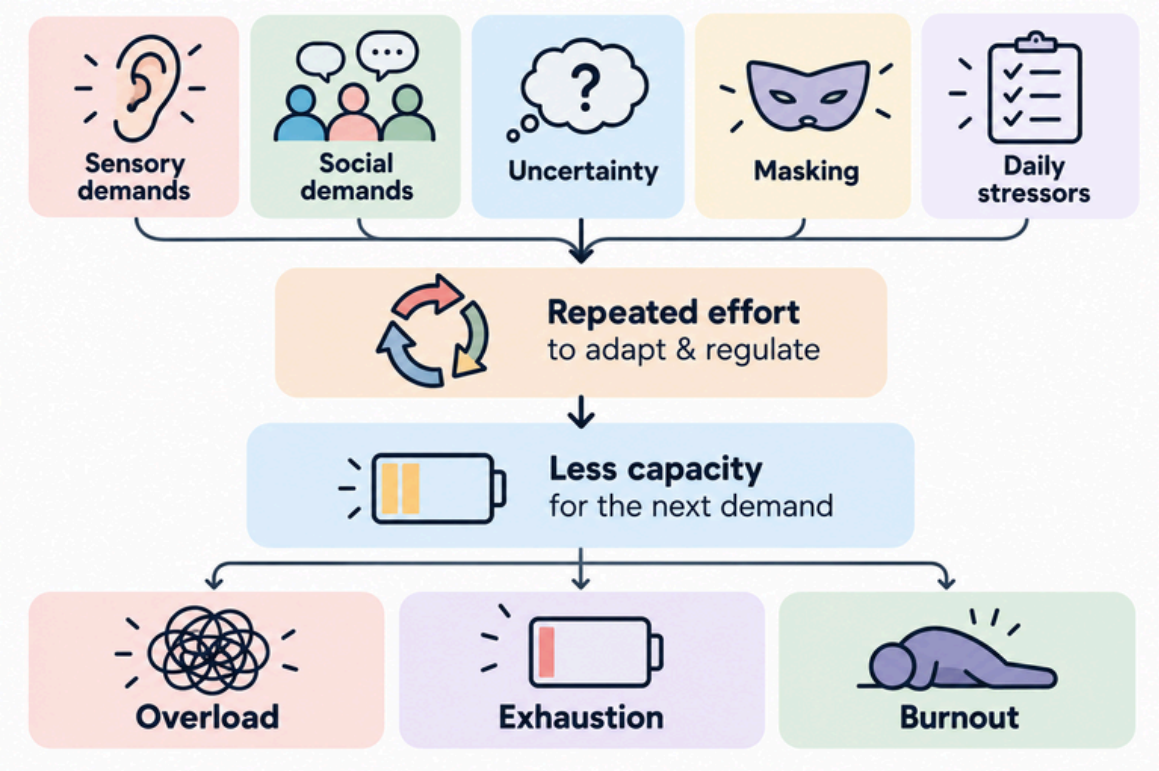
For an autistic person, that load may include not only major stressful events, but also the accumulation of everyday demands such as sensory input, social interaction, transitions, uncertainty, executive functioning demands, masking, and navigating environments that do not fit their needs.

KEY IDEA

Stress is cumulative.

The response we see in one moment may reflect not only what is happening right now, but everything the person's nervous system has already been managing.

Importantly, small demands can add up. A person may appear to manage each individual demand successfully while their overall capacity is gradually being depleted.



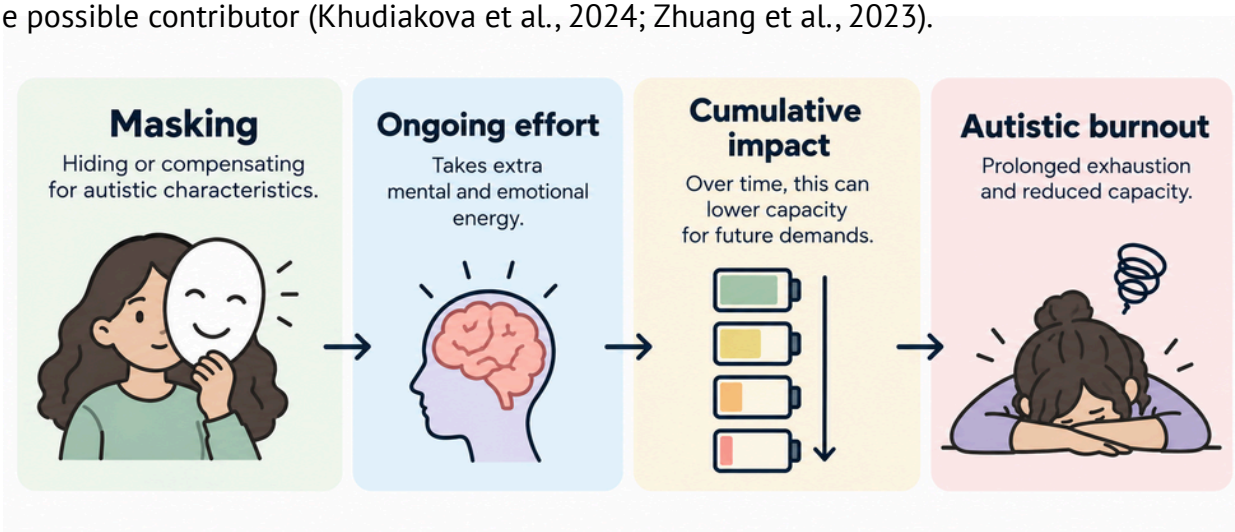
Autistic Masking & Burnout

Masking, sometimes called camouflaging, describes efforts to hide, suppress, or compensate for autistic characteristics in order to meet social or environmental expectations (Cook et al., 2021).

Masking might involve things like rehearsing conversations, consciously managing eye contact or facial expressions, suppressing stimming, copying other people's social behavior, or hiding sensory discomfort.

Some masking is deliberate, but it can also develop over many years and become so automatic that a person may not recognize how much effort they are putting into appearing "okay." Research has linked greater camouflaging with exhaustion and poorer mental health outcomes (Cook et al., 2021).

Autistic burnout has been described as a state of prolonged exhaustion accompanied by reduced tolerance for sensory and social demands and a temporary or longer-lasting reduction in skills or capacity. Burnout can result from many interacting demands, with masking being one possible contributor (Khudiakova et al., 2024; Zhuang et al., 2023).





BENEATH THE SURFACE

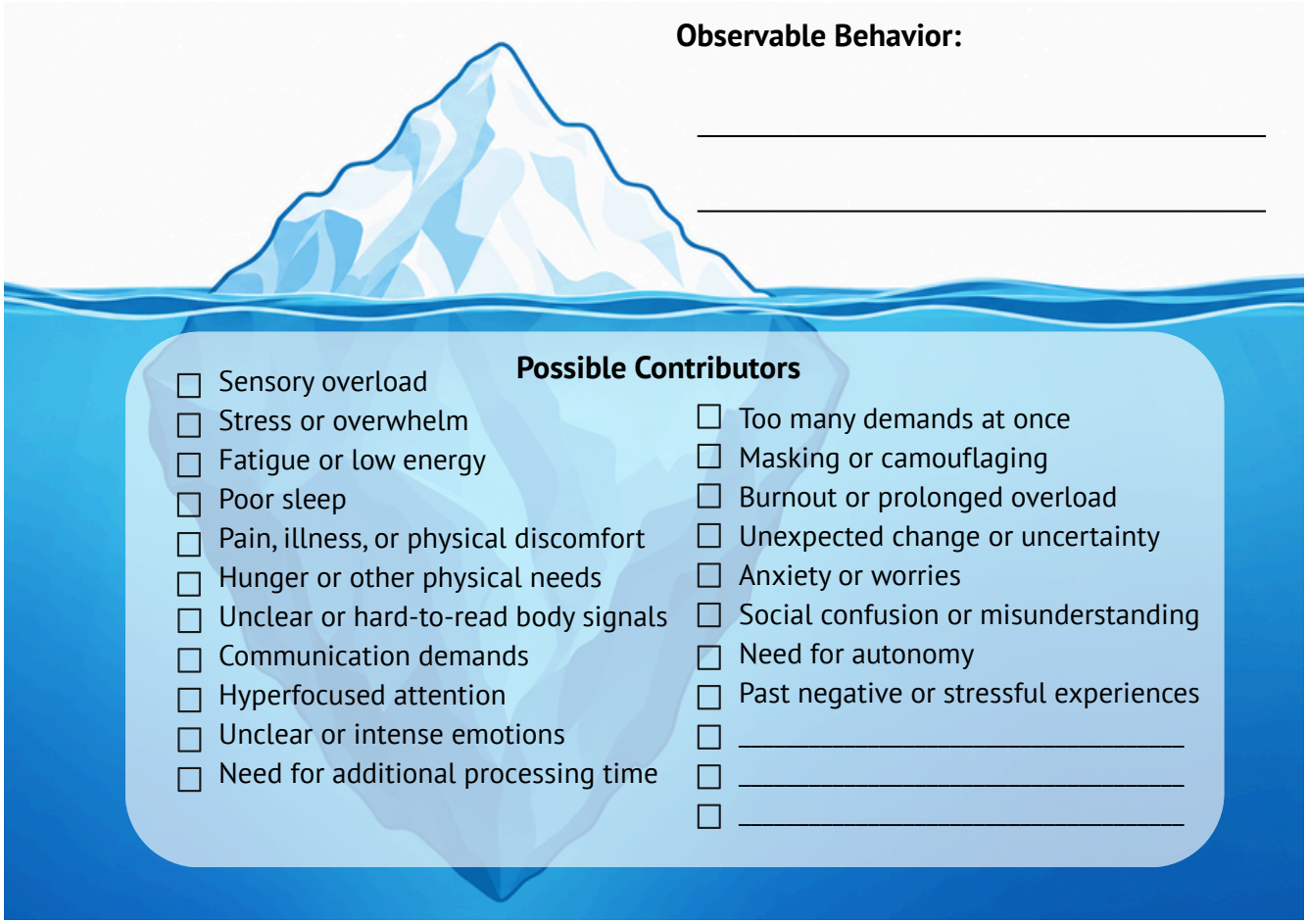
When someone appears to manage well in one setting but becomes exhausted, overwhelmed, withdrawn, or dysregulated afterward, **consider the effort required to maintain that outward appearance.**

TRY THIS: Deepening Understanding

What we can see is only part of the picture. An observable behavior may have many possible explanations, and the same behavior can mean very different things for different people.

What do you notice?
Write one observable behavior or situation at the top of the iceberg.
Examples: leaves the room, doesn't respond, refuses an activity, becomes upset when plans change, talks repeatedly about the same topic.

What might be happening beneath the surface?
Check any possibilities that might be worth exploring. Add your own ideas, too.



Autistic Strengths

Autism research has historically focused more heavily on difficulties than on strengths. More recent research, including studies centered on autistic people's own perspectives, has highlighted strengths related to ways of thinking and perceiving, focused interests, identity, and relationships with others (Chow & Cooper, 2026).

Strengths described across research and autistic accounts include deep focus, expertise, attention to detail, memory, creativity, persistence, honesty, empathy, and a strong sense of fairness or justice. Focused interests can also support learning, skill development, enjoyment, well-being, and social connection (Chow & Cooper, 2026; Lei & Krouzkova, 2025).



Additionally, strengths are often context-dependent. Deep focus, for example, may support expertise and enjoyment while also making interruptions or transitions more difficult. And there is no universal autistic strengths profile. Strengths vary just as much as support needs do.

PUTTING IT INTO PRACTICE

Rather than assuming someone has particular "autistic strengths," ask and observe:

- What comes naturally to them?
- What captures their interest?
- What brings enjoyment or a sense of competence?
- When and where do they thrive?
- How can their strengths and interests support participation and well-being?

Moving Forward

Understanding autism means looking beyond a diagnosis or a list of observable characteristics. Throughout this workbook, we have explored autism as a developmental, biological, and deeply individual way of experiencing the world.

We have also looked beneath the surface. Sensory experiences, attention, body signals, emotional awareness, stress, masking, and accumulated demands can all shape what we see from the outside. Understanding these processes invites us to approach behavior with curiosity rather than assumption.

There is no single autistic experience. Each person brings their own combination of strengths, challenges, interests, identities, relationships, experiences, and support needs. Good support begins with getting to know that individual person. As our scientific understanding of autism continues to evolve, autistic people's perspectives and lived experiences must also remain an important part of that understanding.



PUTTING IT INTO PRACTICE

Understanding autism matters most when it changes how we respond.

As you move forward, consider how you can:

- Stay curious about what may be happening beneath observable behavior.
- Ask rather than assume what a person is experiencing or needs.
- Recognize strengths and support needs together, without allowing one to erase the other.
- Adjust environments and expectations when they create unnecessary barriers.
- Support communication, regulation, participation, and autonomy in ways that are meaningful to the individual.
- Respect autistic ways of communicating, thinking, moving, regulating, and connecting when those differences are not harmful.
- Include autistic perspectives when making decisions that affect autistic people.

Meaningful support is not about making someone appear more typical. It is about helping each person have the understanding, access, support, and opportunities they need to thrive as themselves.



REFLECTION

- What is one idea from this workshop that changed, challenged, or expanded the way you think about autism?

_____

_____

- What is something you may now interpret differently when you see it from the outside?

_____

_____

- What is one question you want to ask more often when trying to understand an autistic person's experience or needs?

_____

_____

- What is one change you could make in your family, classroom, workplace, practice, or community to make it more accessible or supportive for autistic people?

_____

_____

- How might changes in science and diagnostic practices influence what we think we know about autism?

_____

_____

- How can strengths or interests become part of support rather than simply something separate from it?

_____

_____

- What is one thing you want to learn more about?

_____

_____

Resources

Learn More About Autism

There is a lot of information about autism online, and the quality of that information varies considerably. The resources below are good starting points for learning more about autism from research-informed, practical, and autistic perspectives.

autisticadvocacy.org

Autistic Self Advocacy Network (ASAN)
Autistic-led · Autistic people & families · Free

A disability rights organization run by and for autistic people. ASAN offers accessible resources about autism, self-advocacy, communication, disability rights, inclusion, and supporting autistic people.

Especially useful: Welcome to the Autistic Community, a free guide for people learning about autism or receiving a diagnosis.

awnnetwork.org

Autistic Women & Nonbinary Network (AWN)
Autistic-led · Autistic people & families · Free

An autistic-led organization focused on community, advocacy, and resources, with particular attention to autistic people whose experiences have historically been overlooked or underrepresented.

Especially useful for: Learning about diverse autistic experiences, identity, intersectionality, and perspectives beyond traditional descriptions of autism

researchautism.org

Organization for Autism Research (OAR)
Research-informed · Autistic people · Families · Educators · Free

OAR translates autism research into practical, accessible resources. Their free guides cover topics across the lifespan, including understanding autism, school, transition to adulthood, employment, safety, and self-advocacy.

Especially useful: Their *Life Journey Through Autism* resource series and resources developed specifically for autistic self-advocates.

autismsciencefoundation.org

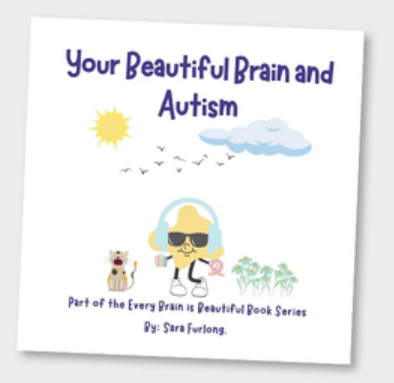
Autism Science Foundation (ASF)
Research & science · Autistic people & families · Professionals · Free

A nonprofit organization that supports autism research and provides accessible information. ASF offers resources on topics including autism biology and genetics, early development, diagnosis, interventions, and emerging research findings.

Especially useful for: Learning about autism through a science-based lens and exploring the research behind what we currently understand about autism.

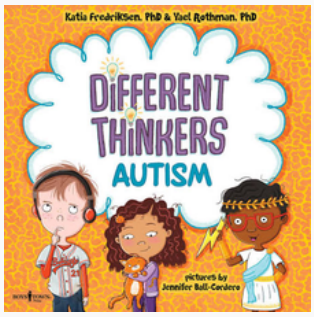
Books for Autistic Readers

Books written directly for autistic people can provide language for understanding autism, exploring identity, recognizing strengths and support needs, and connecting with the experiences of other autistic people. These four offer options across the lifespan.



Your Beautiful Brain and Autism — Sara Furlong
Young children

A gentle, accessible introduction to autism and neurodiversity for younger children. Designed to help children understand their brains, differences, and strengths in an affirming way.



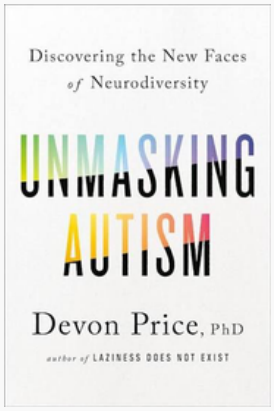
Different Thinkers: Autism — Katia Fredriksen, PhD & Yael Rothman, PhD
Children / Preteens

An illustrated guide that helps children learn about autism and how autistic brains may experience communication, emotions, sensory information, and everyday life differently.



The Awesome Autistic Go-To Guide: A Practical Handbook for Autistic Teens and Tweens — Yenn Purkis & Tanya Masterman
Tweens / Teens

A practical, affirming guide to understanding autistic identity and navigating everyday experiences, including emotions, friendships, sensory needs, school, self-advocacy, and well-being.



Unmasking Autism: Discovering the New Faces of Neurodiversity — Devon Price, PhD
Older teens / Adults

Explores autistic masking, identity, self-understanding, and the experiences of autistic people who may not fit traditional stereotypes of autism. Particularly relevant for people who were identified later in life or are exploring whether autism may help explain their experiences.

PUTTING IT INTO PRACTICE

These books can also be useful for parents, caregivers, educators, and professionals.

Reading resources written for autistic people, rather than only resources about autistic people, can offer another perspective on how autism may be understood and experienced.

For Autistic People and Families

Understanding autism is only one piece of the picture. These resources offer practical information and tools for self-advocacy, navigating supports, understanding rights, and supporting autistic people across the lifespan.

ASAN
AUTISTIC SELF ADVOCACY NETWORK

autisticadvocacy.org

Autistic Self Advocacy Network (ASAN)
Autistic-led · Autistic people · Families · Free

ASAN offers practical guides created with autistic people in mind, covering topics such as self-advocacy, healthcare, college, employment, community living, and transition to adulthood.

Autism Navigator

Families · Early childhood · Professionals

resources.autismnavigator.com

Offers practical, research-informed tools for supporting young children in everyday routines and interactions. Resources include video examples and strategies for building communication, supporting social engagement and play, creating learning opportunities during daily activities, and helping caregivers identify strategies that fit their child and family.

Help Is in Your Hands

Families · Early childhood · Free

helpisinyourhands.org

A free online resource developed through the UC Davis MIND Institute that teaches caregivers practical strategies for supporting young autistic children and children with social-communication differences. Interactive modules use videos and real-life examples to demonstrate ways to increase engagement, build communication, create learning opportunities, and support connection during everyday routines and play.

Center for Parent Information & Resources (CPIR)

Families · Education · Disability rights · Free

parentcenterhub.org

Provides family-friendly information about special education, evaluations, Individualized Education Programs (IEPs), accommodations, and rights under the Individuals with Disabilities Education Act (IDEA).

Wrightslaw
Families · Education · Advocacy

wrightslaw.com

A comprehensive resource on special education law and advocacy, including IDEA, IEPs, evaluations, accommodations, and dispute resolution.

Job Accommodation Network (JAN)
Autistic adults · Employment · Professionals · Free

askjan.org

Provides practical information about workplace accommodations for people with disabilities, including examples of accommodations related to communication, sensory needs, executive functioning, attention, and workplace organization.

The Arc
People with disabilities · Families · Advocacy · Free

thearc.org

Provides information and advocacy related to intellectual and developmental disabilities, including disability rights, community inclusion, education, employment, future planning, and navigating services.

Autism and/or Intellectual Disability Knowledge Exchange Network (AIDE Canada)
Autistic people · Families · Professionals · Free

aidecanada.ca

Offers a large collection of practical, evidence-informed resources developed with input from autistic people, families, researchers, and professionals.

Research and Staying Current

Autism research continues to evolve. These resources can help you follow new findings, understand current research, and distinguish emerging evidence from established knowledge.

autismsciencefoundation.org

Autism Science Foundation (ASF)
Research · Families · Autistic people · Professionals · Free

Provides accessible information about autism research, including genetics, brain development, early development, health, and interventions. ASF also highlights new studies and provides opportunities to hear directly from autism researchers.

sparkforautism.org/

SPARK for Autism
Research · Autistic people · Families · Research participation · Free

A large U.S. autism research initiative led by the Simons Foundation. SPARK studies the genetic and biological factors associated with autism and includes autistic people of all ages and their biological family members. Individuals and families can enroll in SPARK to participate directly in autism research and may also have opportunities to take part in additional research studies.

sfari.org

Simons Foundation Autism Research Initiative (SFARI)
Research · Science · Professionals · Free

Supports and shares autism research across genetics, neuroscience, development, and other areas of autism science. SFARI's news and research articles provide deeper coverage of emerging scientific findings.

thetransmitter.org/spectrum/

Spectrum
Research news · Autistic people · Families · Professionals · Free

Spectrum, published by The Transmitter, provides accessible reporting on autism research and related areas of neuroscience. Its articles translate new studies, scientific debates, and emerging findings into understandable language while providing context about what the research does and does not tell us.

Hawai‘i Resources

The resources below can help families and autistic people in Hawai‘i connect with developmental services, family support, education, advocacy, healthcare, and community resources. Eligibility and available services vary by program.

health.hawaii.gov/eis/

(808) 594-0000

Hawai‘i Early Intervention Section
Birth–3 · Families · Developmental services

Hawai‘i’s statewide early intervention system provides developmental evaluation and services for eligible infants and toddlers from birth to age 3 and their families.



spinhawaii.org

(808) 586-8126

Special Parent Information Network (SPIN)
Families · Parent support · Special education · Statewide · Free

SPIN is a Hawai'i parent-to-parent organization that provides information, referrals, and support to families of children and young adults with disabilities, as well as the professionals who support them. Resources include a parent "warm line," newsletters and e-blasts, information about special education and community services, a statewide resource guide, and the annual SPIN Conference.



hilopaa.org

(808) 791-3467

Hilopa'a Family to Family Health Information Center
Families · Peer support · Healthcare navigation

A Hawai'i-based family organization that helps families of children and youth with special healthcare needs navigate healthcare, insurance, services, and community resources. Support is provided by experienced family advocates.



hawaiidisabilityrights.org

(808) 949-2922

Hawai'i Disability Rights Center (HDRC)
Disability rights · Advocacy · Free

Hawai'i's designated Protection and Advocacy organization for people with disabilities. HDRC provides information and advocacy related to disability rights in areas including education, employment, healthcare, housing, accessibility, and community services.

Hawai‘i Developmental Disabilities Division (DDD)
Children & adults · Developmental disabilities · Community supports

health.hawaii.gov/ddd/

(808) 733-1689

The Hawai‘i Department of Health DDD provides and coordinates services for eligible people with intellectual and developmental disabilities, including supports for community participation and independence.

Autism Society of Hawaii
Autistic people · Families · Community · Information & referral

autismsocietyhi.org

(808) 342-0364

A statewide organization providing autism-related information and referral, education, advocacy, community activities, and family support. The organization also hosts sensory-friendly and community events on multiple islands.

Hawai‘i State Council on Developmental Disabilities (DD Council)
Self-advocacy · Families · Systems advocacy · Community resources · Free

hiddcouncil.org

(808) 586-8100

The DD Council works to promote self-determination, inclusion, and person-centered, family-directed supports for people with intellectual and developmental disabilities across Hawai‘i.

Thank You!

You've completed the Autism 101 Workshop Workbook!

Thank you for your time, curiosity, and commitment to learning more about autism and supporting neurodiverse individuals and families.

We hope the information and resources you gained will be helpful as you continue your learning journey.

References

American Psychiatric Association. (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.). https://doi.org/10.1176/appi.books.9780890425787

Antoun, S., Ellul, P., Peyre, H., Rosenzwajg, M., Gressens, P., Klatzmann, D., & Delorme, R. (2021). Fever during pregnancy as a risk factor for neurodevelopmental disorders: Results from a systematic review and meta-analysis. Molecular Autism, 12, 60. https://doi.org/10.1186/s13229-021-00464-4

Arora, I., Bellato, A., Ropar, D., Hollis, C., & Groom, M. J. (2021). Is autonomic function during resting-state atypical in autism: A systematic review of evidence. Neuroscience & Biobehavioral Reviews, 125, 417–441. https://doi.org/10.1016/j.neubiorev.2021.02.041

Bird, G., & Cook, R. (2013). Mixed emotions: The contribution of alexithymia to the emotional symptoms of autism. Translational Psychiatry, 3, e285. https://doi.org/10.1038/tp.2013.61

Centers for Disease Control and Prevention. (2025). Data and statistics on autism spectrum disorder. https://www.cdc.gov/autism/data-research/

Centers for Disease Control and Prevention. (2026). Measles cases and outbreaks. https://www.cdc.gov/measles/data-research/

Chaste, P., Roeder, K., & Devlin, B. (2017). The yin and yang of autism genetics: How rare de novo and common variations affect liability. Annual Review of Genomics and Human Genetics, 18, 167–187. https://doi.org/10.1146/annurev-genom-083115-022647

Chow, C., & Cooper, K. (2026). What are the lived experiences of strengths in autistic individuals? A systematic review and thematic synthesis. Autism in Adulthood, 8(1), 14–26. https://doi.org/10.1089/aut.2023.0172 the University of Bath's research portal

Cook, J., Hull, L., Crane, L., & Mandy, W. (2021). Camouflaging in autism: A systematic review. Clinical Psychology Review, 89, 102080. https://doi.org/10.1016/j.cpr.2021.102080
Deer, B. (2011). How the case against the MMR vaccine was fixed. BMJ, 342, c5347. https://doi.org/10.1136/bmj.c5347

Doan, S. N. (2021). Allostatic load: Developmental and conceptual considerations in a multi-system physiological indicator of chronic stress exposure. Developmental Psychobiology, 63(5), 825–836. https://doi.org/10.1002/dev.22107

Dwyer, P., Williams, Z. J., Lawson, W. B., & Rivera, S. M. (2024). A trans-diagnostic investigation of attention, hyper-focus, and monotropism in autism, attention dysregulation hyperactivity development, and the general population. Autism in Adulthood. https://doi.org/10.1177/27546330241237883

Ecker, C., Bookheimer, S. Y., & Murphy, D. G. M. (2017). Neuroimaging in autism spectrum disorder: Brain structure and function across the lifespan. The Lancet Neurology, 16(8), 659–668. https://doi.org/10.1016/S1474-4422(17)30114-X

Geschwind, D. H., & Levitt, P. (2007). Autism spectrum disorders: Developmental disconnection syndromes. Current Opinion in Neurobiology, 17(1), 103–111. https://doi.org/10.1016/j.conb.2007.01.009 PubMed

Godlee, F., Smith, J., & Marcovitch, H. (2011). Wakefield's article linking MMR vaccine and autism was fraudulent. BMJ, 342, c7452. https://doi.org/10.1136/bmj.c7452

Gulati, S., Sharawat, I. K., Panda, P. K., & Kothare, S. V. (2025). The vaccine–autism connection: No link, still debate, and we are failing to learn the lessons. Autism. https://doi.org/10.1177/13623613251345281

Halliday, A. R., Vucic, S. N., Georges, B., LaRoche, M., Mendoza Pardo, M. A., Swiggard, L. O., … & van der Velpen, I. F. (2024). Heterogeneity and convergence across seven neuroimaging modalities: a review of the autism spectrum disorder literature. Frontiers in Psychiatry, 15, 1474003.

Hansen, S. N., Schendel, D. E., & Parner, E. T. (2015). Explaining the increase in the prevalence of autism spectrum disorders: The proportion attributable to changes in reporting practices. JAMA Pediatrics, 169(1), 56–62. https://doi.org/10.1001/jamapediatrics.2014.1893

Havdahl, A., Niarchou, M., Starnawska, A., Uddin, M., van der Merwe, C., & Warrier, V. (2021). Genetic contributions to autism spectrum disorder. Psychological Medicine, 51(13), 2260–2273. https://doi.org/10.1017/S0033291721000192

Hazlett, H. C., et al. (2017). Early brain development in infants at high risk for autism spectrum disorder. Nature, 542(7641), 348–351. https://doi.org/10.1038/nature21369

Higgins, J. P. T., Thomas, J., Chandler, J., Cumpston, M., Li, T., Page, M. J., & Welch, V. A. (Eds.). (2024). Cochrane handbook for systematic reviews of interventions (Version 6.5). Cochrane. https://training.cochrane.org/handbook

Hyman, S. L., Levy, S. E., & Myers, S. M. (2020). Identification, evaluation, and management of children with autism spectrum disorder. Pediatrics, 145(1), e20193447. https://doi.org/10.1542/peds.2019-3447

Hyman, S. L., Levy, S. E., & Myers, S. M. (2020). Identification, evaluation, and management of children with autism spectrum disorder. Pediatrics, 145(1), e20193447. https://doi.org/10.1542/peds.2019-3447

Jacquemont, S., et al. (2014). A higher mutational burden in females supports a "female protective model" in neurodevelopmental disorders. The American Journal of Human Genetics, 94(3), 415–425. https://doi.org/10.1016/j.ajhg.2014.02.001

Khudiakova, V., Russell, E., Sowden-Carvalho, S., & Surtees, A. D. R. (2024). A systematic review and meta-analysis of mental health outcomes associated with camouflaging in autistic people. Research in Autism Spectrum Disorders, 118, 102492. https://doi.org/10.1016/j.rasd.2024.102492

Kim, J. Y., et al. (2019). Environmental risk factors and biomarkers for autism spectrum disorder: An umbrella review of the evidence. The Lancet Psychiatry, 6(7), 590–600. https://doi.org/10.1016/S2215-0366(19)30181-6

King, M., & Bearman, P. (2009). Diagnostic change and the increased prevalence of autism. International Journal of Epidemiology, 38(5), 1224–1234. https://doi.org/10.1093/ije/dyp261

Kinnaird, E., Stewart, C., & Tchanturia, K. (2019). Investigating alexithymia in autism: A systematic review and meta-analysis. European Psychiatry, 55, 80–89. https://doi.org/10.1016/j.eurpsy.2018.09.004

Klein, M., Witthöft, M., & Jungmann, S. M. (2025). Interoception in individuals with autism spectrum disorder: A systematic literature review and meta-analysis. Frontiers in Psychiatry, 16, 1573263. https://doi.org/10.3389/fpsyt.2025.1573263

Leblond, C. S., et al. (2024). A genetic bridge between medicine and neurodiversity for autism. Annual Review of Genetics, 58, 487–512. https://doi.org/10.1146/annurev-genet-111523-102614

Lei, J., & Krouzkova, D. (2025). What do we know about character strengths in autistic people? A systematic review. Current Developmental Disorders Reports, 12, Article 33. https://doi.org/10.1007/s40474-025-00342-1

Litman, A., Sauerwald, N., Green Snyder, L., et al. (2025). Decomposition of phenotypic heterogeneity in autism reveals underlying genetic programs. Nature Genetics, 57, 1611–1619. https://doi.org/10.1038/s41588-025-02224-z

Liu, Q., Lai, H., Le, J., et al. (2025). Identifying brain functional subtypes and corresponding task performance profiles in autism spectrum disorder. Molecular Psychiatry, 30, 5034–5044. https://doi.org/10.1038/s41380-025-03086-x

Loomes, R., Hull, L., & Mandy, W. P. L. (2017). What is the male-to-female ratio in autism spectrum disorder? A systematic review and meta-analysis. Journal of the American Academy of Child & Adolescent Psychiatry, 56(6), 466–474. https://doi.org/10.1016/j.jaac.2017.03.013

Mahony, C., & O'Ryan, C. (2022). A molecular framework for autistic experiences: Mitochondrial allostatic load as a mediator between autism and psychopathology. Frontiers in Psychiatry, 13, 985713. https://doi.org/10.3389/fpsyt.2022.985713

Matheis, M. (2018). Examining the sex ratio in autism spectrum disorder [Doctoral dissertation, Louisiana State University]. LSU Doctoral Dissertations. https://repository.lsu.edu/gradschool_dissertations/5022/

McEwen, B. S. (1998). Stress, adaptation, and disease: Allostasis and allostatic load. Annals of the New York Academy of Sciences, 840(1), 33–44. https://doi.org/10.1111/j.1749-6632.1998.tb09546.x

Micai, M., et al. (2023). Prevalence of co-occurring conditions in children and adults with autism spectrum disorder: A systematic review and meta-analysis. Neuroscience & Biobehavioral Reviews, 155, 105436. https://doi.org/10.1016/j.neubiorev.2023.105436

Murray, D., Lesser, M., & Lawson, W. (2005). Attention, monotropism and the diagnostic criteria for autism. Autism, 9(2), 139–156. https://doi.org/10.1177/1362361305051398

National Academies of Sciences, Engineering, and Medicine. (2019). Reproducibility and replicability in science. The National Academies Press. https://doi.org/10.17226/25303

National Academies of Sciences, Engineering, and Medicine. (2025). The comprehensive autism care demonstration: Solutions for military families. The National Academies Press. https://doi.org/10.17226/29139

National Autistic Society. (2026, September 15). Autism is genetic. https://www.autism.org.uk/what-we-do/news/autism-is-genetic

Ozonoff, S., Young, G. S., Carter, A., et al. (2011). Recurrence risk for autism spectrum disorders: A Baby Siblings Research Consortium study. Pediatrics, 128(3), e488–e495. https://doi.org/10.1542/peds.2010-2825

Ozonoff, S., Young, G. S., Bradshaw, J., et al. (2024). Familial recurrence of autism: Updates from the Baby Siblings Research Consortium. Pediatrics, 154(2), e2023065297. https://doi.org/10.1542/peds.2023-065297

Pang, T., Zheng, X., Liu, J.-J., et al. (2026). Transcriptomic analysis in autism spectrum disorder suggests three molecular subtypes with distinct phenotypic profiles and functional pathways. Communications Biology, 9, 883. https://doi.org/10.1038/s42003-026-10059-5

Pagani, M., Zerbi, V., Gini, S., et al. (2026). Autism subtypes identified using cross-species functional connectivity analyses. Nature Neuroscience, 29, 1476–1487. https://doi.org/10.1038/s41593-026-02287-z

Pellicano, E., & den Houting, J. (2022). Annual Research Review: Shifting from 'normal science' to neurodiversity in autism science. Journal of Child Psychology and Psychiatry, 63(4), 381–396. https://doi.org/10.1111/jcpp.13534

Schaefer, G. B., Mendelsohn, N. J., & Professional Practice and Guidelines Committee. (2013). Clinical genetics evaluation in identifying the etiology of autism spectrum disorders: 2013 guideline revisions. Genetics in Medicine, 15(5), 399–407. https://doi.org/10.1038/gim.2013.32

Shaw, K., Williams, S., Patrick, M., et al. (2025). Prevalence and early Identification of autism spectrum disorder among children aged 4 and 8 years — Autism and Developmental Disabilities Monitoring Network, 16 Sites, United States, 2022. MMWR Surveill Summ 2025;74(No. SS-2):1–22. DOI: http://dx.doi.org/10.15585/mmwr.ss7402a1

Shen, M. D., et al. (2017). Increased extra-axial cerebrospinal fluid in high-risk infants who later develop autism. Biological Psychiatry, 82(3), 186–193. https://doi.org/10.1016/j.biopsych.2017.02.1095

Simons Foundation Autism Research Initiative. (2026). SFARI Gene [Database]. Retrieved September 25, 2026, from https://gene.sfari.org/

Singer, J. (1999). Why can't you be normal for once in your life? From a 'problem with no name' to the emergence of a new category of difference. In M. Corker & S. French (Eds.), Disability discourse (pp. 59–67). Open University Press.

Stoner, R., et al. (2014). Patches of disorganization in the neocortex of children with autism. The New England Journal of Medicine, 370(13), 1209–1219. https://doi.org/10.1056/NEJMoa1307491

Tan, C., Frewer, V., Cox, G., Williams, K., & Ure, A. (2021). Prevalence and age of onset of regression in children with autism spectrum disorder: A systematic review and meta-analytical update. Autism Research, 14(3), 582–598. https://doi.org/10.1002/aur.2463

Tavassoli, T., Marco, E. J., & Puts, N. (2026). Sensory reactivity in autism: Integrating behavioural, affective, physiological, and neural dimensions. Current Psychiatry Reports, 28, Article 36. https://doi.org/10.1007/s11920-026-01682-4

Thapa, R., Pokorski, I., Ambarchi, Z., Thomas, E., Demayo, M., Boulton, K., Matthews, S., Patel, S., Sedeli, I., Hickie, I. B., & Guastella, A. J. (2021). Heart rate variability in children with autism spectrum disorder and associations with medication and symptom severity. Autism Research, 14(1), 75–85. https://doi.org/10.1002/aur.2437

The White House. (2025, September 22). ICYMI: Trump Administration "Going bold to tackle autism." https://www.whitehouse.gov/releases/2025/09/icymi-trump-administration-going-bold-to-tackle-autism/

Tick, B., Bolton, P., Happé, F., Rutter, M., & Rijsdijk, F. (2016). Heritability of autism spectrum disorders: A meta-analysis of twin studies. Journal of Child Psychology and Psychiatry, 57(5), 585–595

U.S. Congress. (2024). Autism Collaboration, Accountability, Research, Education, and Support (CARES) Act of 2024, H.R. 7213, 118th Congress.

U.S. Department of Health and Human Services. (2025, April 15). 'Autism epidemic runs rampant,' new data shows 1 in 31 children afflicted. https://www.hhs.gov/press-room/autism-epidemic-runs-rampant-new-data-shows-grants.html

U.S. Department of Health and Human Services. (2025, September 22). President Trump, Secretary Kennedy announce bold actions to tackle autism epidemic. https://www.hhs.gov/press-room/hhs-trump-kennedy-autism-initiatives-leucovorin-tylenol-research-2025.html

U.S. Food and Drug Administration. (2025, September 22). FDA responds to evidence of possible association between autism and acetaminophen use during pregnancy. https://www.fda.gov/news-events/press-announcements/fda-responds-evidence-possible-association-between-autism-and-acetaminophen-use-during-pregnancy U.S. Food and Drug Administration

Wakefield, A. J., et al. (1998). Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children. The Lancet, 351(9103), 637–641. [Retracted].

Wang, B., et al. (2026). Autism mutations rewire protein interaction networks to drive neurodevelopmental pathology. Science, 393(6814), eady4523. https://doi.org/10.1126/science.ady4523

Wigdor, E. M., et al. (2022). The female protective effect against autism spectrum disorder. Cell Genomics, 2(6), 100134. https://doi.org/10.1016/j.xgen.2022.100134

Williams, Z. J., et al. (2023). Characterizing interoceptive differences in autism: A systematic review and meta-analysis of case-control studies. Journal of Autism and Developmental Disorders, 53(3), 947–962. https://doi.org/10.1007/s10803-022-05656-2

Willsey, A. J., et al. (2013). Coexpression networks implicate human midfetal deep cortical projection neurons in the pathogenesis of autism. Cell, 155(5), 997–1007. https://doi.org/10.1016/j.cell.2013.10.020

Wolff, J. J., Gu, H., Gerig, G., et al. (2012). Differences in white matter fiber tract development present from 6 to 24 months in infants with autism. American Journal of Psychiatry, 169(6), 589–600. https://doi.org/10.1176/appi.ajp.2011.11091447

World Health Organization, Global Advisory Committee on Vaccine Safety. (2025, December 11). Statement of the WHO Global Advisory Committee on Vaccine Safety (GACVS) on vaccines and autism. https://www.who.int/news/item/11-12-2025-statement-gacvs-vaccines-autism

Zhu, M., Yang, H., Feng, B., Jiang, Y., & Zhang, Y. (2026). Maternal pregnancy complications and offspring autism spectrum disorder risk: An umbrella review. Psychiatry Research, 358, 116987. https://doi.org/10.1016/j.psychres.2026.116987

Zhuang, S., Tan, D. W., Reddrop, S., Dean, L., Maybery, M., & Magiati, I. (2023). Psychosocial factors associated with camouflaging in autistic people and its relationship with mental health and well-being: A mixed methods systematic review. Clinical Psychology Review, 105, 102335. https://doi.org/10.1016/j.cpr.2023.102335



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