



An Introduction to Autism Spectrum Disorder for Healthcare Interpreters

By Cynthia E. Roat, MPH
Reviewed by Patricia Wright, PhD, MPH, MA;
Lori Williamson Dean, MS, CGC;
Lianne Hasegawa Evans, MS, CGC

This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under Cooperative Agreement #UH9MC30770-01-00 from 6/2017-5/2020 for \$800,000 per award year.

This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

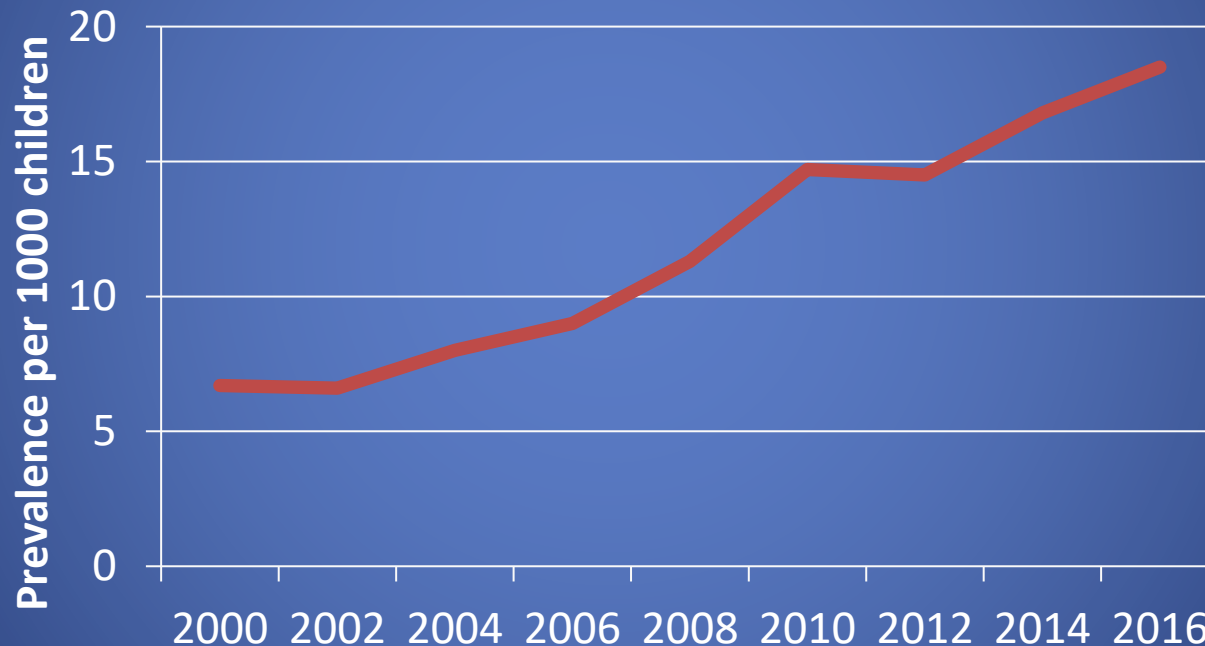
Developed in 2022, reviewed and revised 2025

Housekeeping

- Watch for a second email from me with some documents to print for next week.
- To get a certificate, you must:
 - Attend both classes: arrive on time and stay for the entire class.
 - Keep video on unless instructed to turn it off.

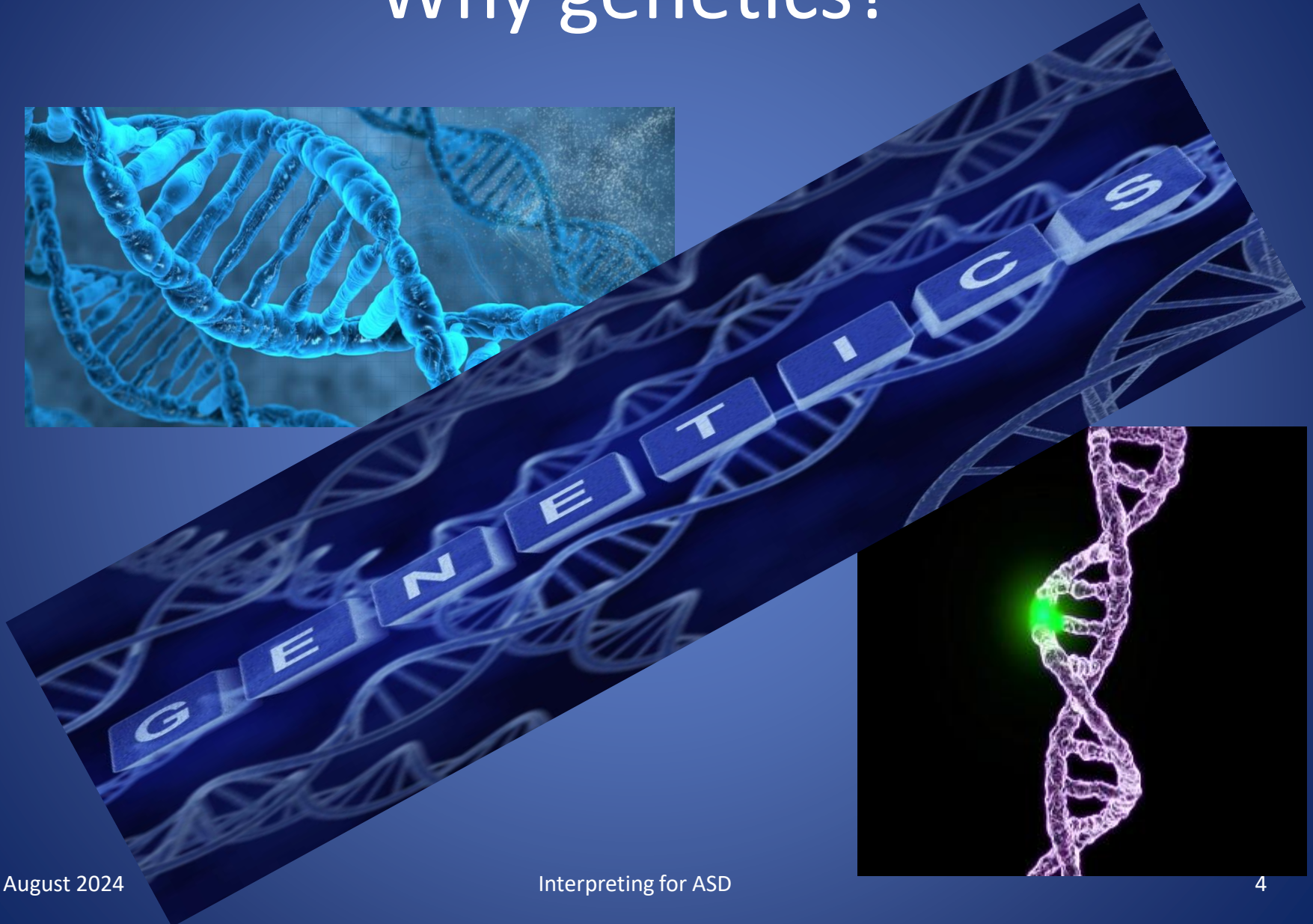
Why Autism Spectrum Disorder?

Prevalence of ASD among 8-year-olds,
USA



Source: Centers for Disease Control and Prevention. Downloaded from <https://www.cdc.gov/ncbddd/autism/data.html> in 09/2021.

Why genetics?



What will we be learning today?

- What “Autism Spectrum Disorder” is and what does and doesn’t cause it.
- How ASD is diagnosed.
- How genetics fits in.
- Basic information about genetics and genetic testing.
- Commonly recommended treatments for ASD.
- How to work effectively with people with ASD.
- Challenges for interpreters.

What will we be doing next week?

- Exercises with English vocabulary.
- Exercises in converting to another language.
- Practice sight translation exercises.
- Post-test.
- Course evaluation.

What do you know already?

Click on the link in the chat box.

You have 10 minutes.

If you don't know the answer, that's fine!

What is autism spectrum disorder?

“Autism spectrum disorder (ASD) is a developmental disability that can cause significant social, communication and behavioral challenges.”

- Centers for Disease Control and Prevention

CDC, downloaded on 9/2021 from <https://www.cdc.gov/ncbddd/autism/facts.html>

Diagnostic criteria

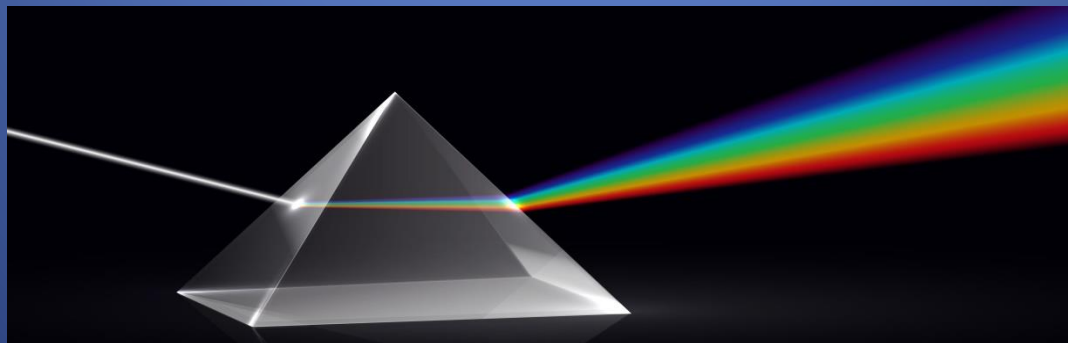
Persistent deficits in social communication



Restricted and/or repetitive interests and behaviors

What's a "spectrum"?

- People with ASD can be very gifted, or they can be severely challenged, or they can be gifted in one area and challenged in others.
- Some people with ASD need a lot of help in their daily lives. Some do not.



“If you’ve met one person with autism,
you’ve met

. one person with autism.”



It used to be called . . .

- * **Autistic disorder**
- * **Pervasive developmental disorder not otherwise specified (PDD-NOS)**
- * **Asperger syndrome**

Now it's called . . .

Autistic disorder

Pervasive developmental disorder not otherwise specified (PDD-NOS)

Asperger's syndrome

- 
- * **Autism spectrum disorder, or**
 - * **Autism, or**
 - * **“On the spectrum”**
 - * **Neurodiverse**

Commonly co-occurring conditions:

- Language delay
- Intellectual disability
- Genetic syndromes
- Seizure disorders
- Other mental health conditions (ADHD, anxiety, depression, etc.)
- Gastrointestinal problems
- Sleep disturbances
- Picky eating
- Aggression
- Self-injurious behavior

Prevalence of ASD

- There are similar rates of ASD across races, cultures, ethnicities, and income level.
- Boys are 4-5 times more likely to be diagnosed with ASD compared to girls.



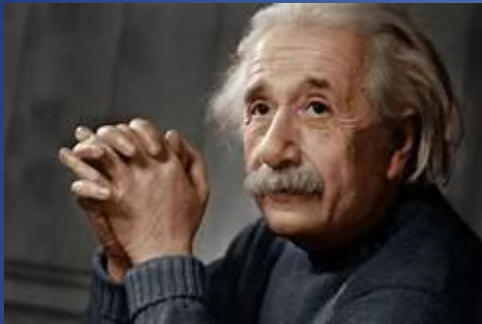
Common strengths of folks with ASD

- Visual learning
- Concrete skills
- Memory
- Consistency
- Following rules
- Attention to detail



Meet Mickle. Mickle works part-time at a pizza parlor. He is a champion pizza box folder.

Famous people “on the Spectrum”





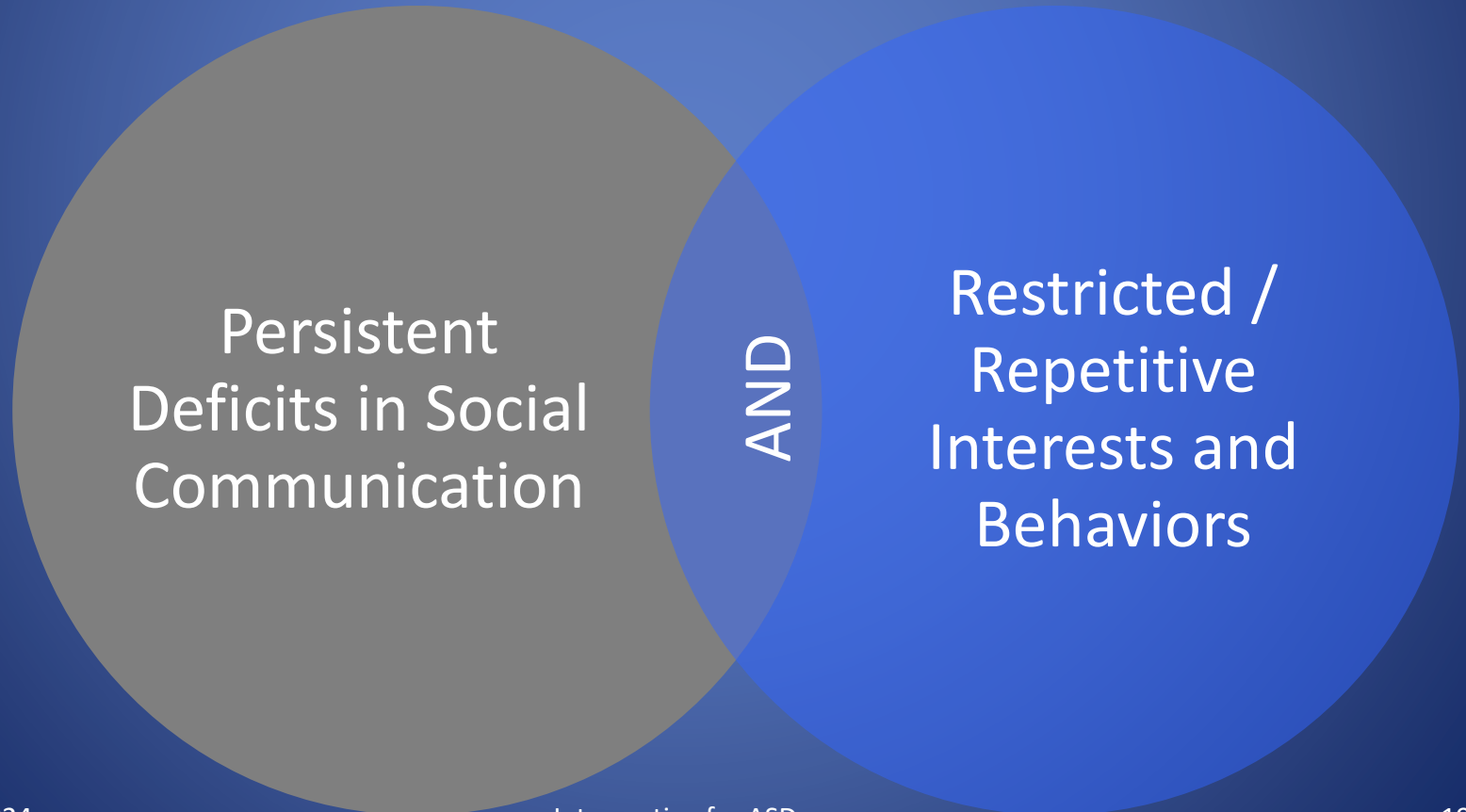
Pop Quiz



1. What is Autism Spectrum Disorder?
2. What are the two broad diagnostic criteria for ASD?
3. What groups are more likely to get ASD?
4. What are some typical strengths of people with ASD?
5. What does the following saying mean?
“When you’ve met one person with autism,
you’ve met ---- ONE person with autism.”

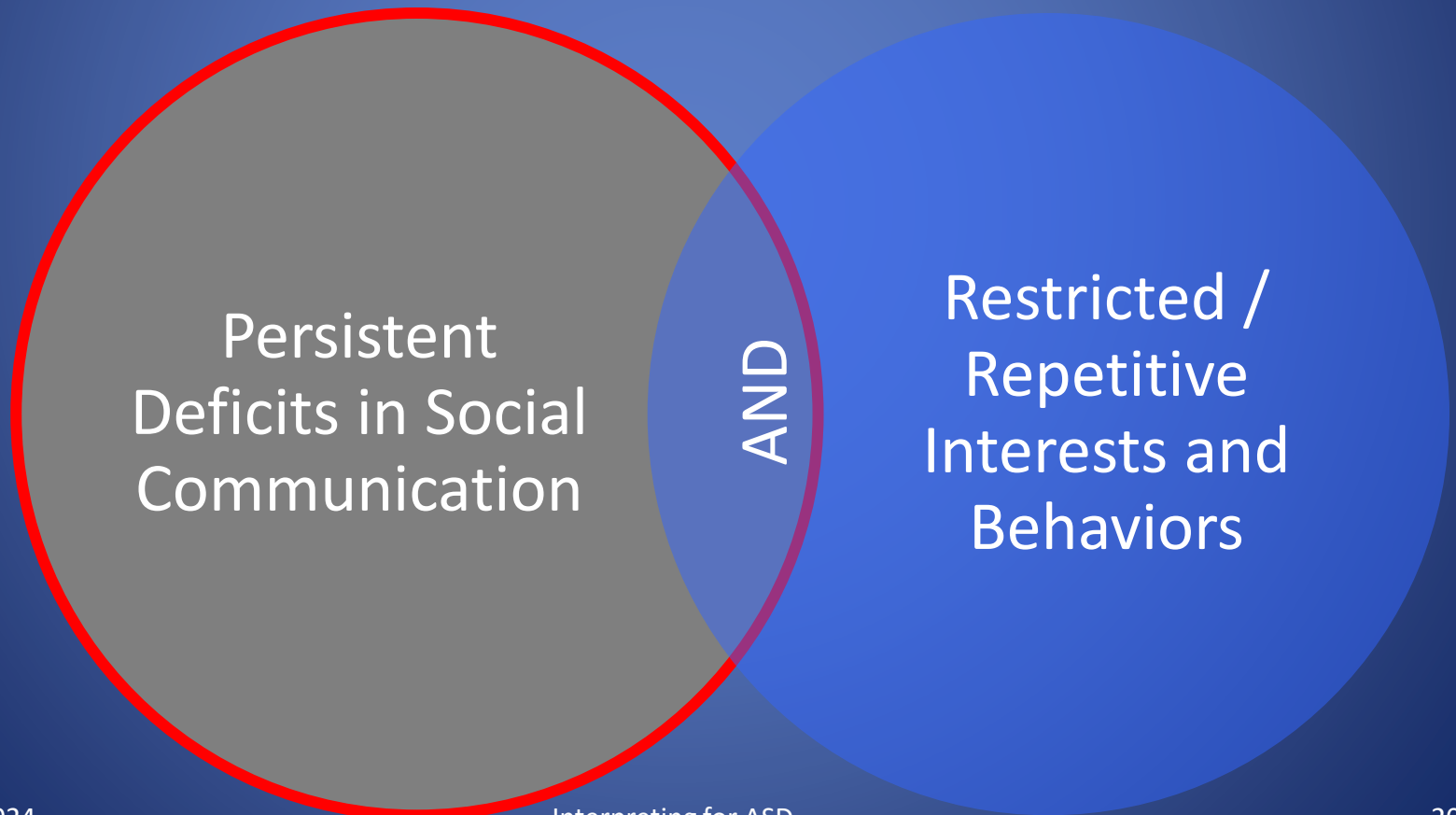
How is autism identified and diagnosed?

ASD is diagnosed based on the presence of:



How is autism identified and diagnosed?

ASD is diagnosed based on the presence of:



Deficits in Social Communication

1. Social-Emotional Reciprocity

- Failure to initiate or respond to social interactions
- Difficulty with two-way conversations
- Reduced sharing of interests or emotions



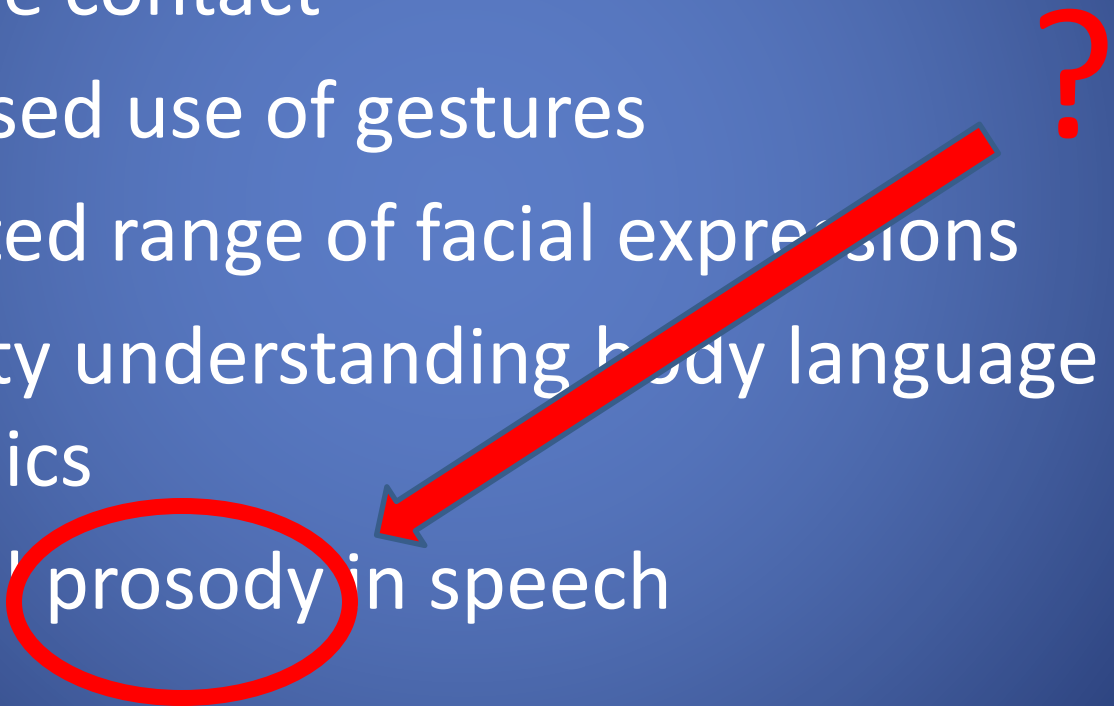
Deficits in Social Communication

2. Nonverbal Communicative Behaviors

- Poor eye contact
- Decreased use of gestures
- Restricted range of facial expressions
- Difficulty understanding body language or proxemics
- Unusual prosody in speech

Deficits in Social Communication

2. Nonverbal Communicative Behaviors

- Poor eye contact
 - Decreased use of gestures
 - Restricted range of facial expressions
 - Difficulty understanding body language or proxemics
 - Unusual **prosody** in speech
- 

Deficits in Social Communication

3. Relationships

- Difficulty in making or keeping friends
- Often do not show typical interest in peers
- Unwillingness to share imaginative play

A person must have deficits in all 3 areas to meet the diagnostic criteria for autism.

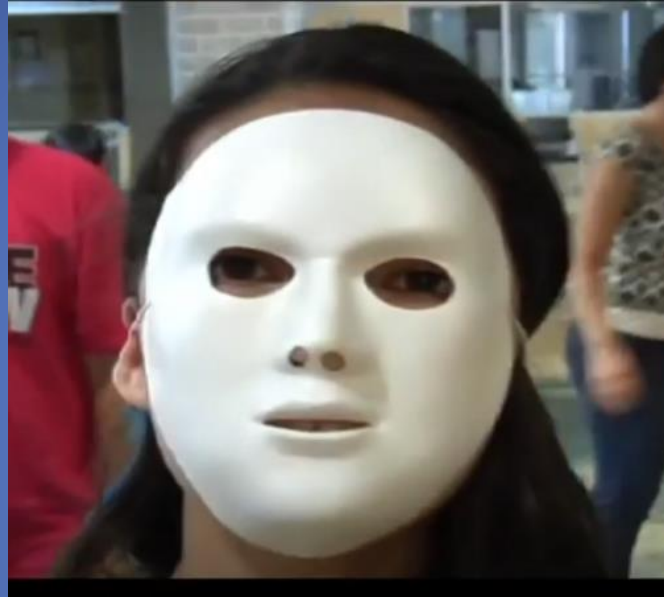
Example of Deficits in Social Communication



Early ASD symptoms

Early Signs of Autism Video Tutorial
Center for Autism and Related Disorders
Kennedy Krieger Institute

Example of Deficits in Social Communication



Reading the Room

Top of the Spectrum News,
produced by Machina Cinema
in partnership with the Urban Film School

Examples



How to smile (with Sam)

NETFLIX original series *ATYPICAL*
Season 1 Episode 1



Pop Quiz

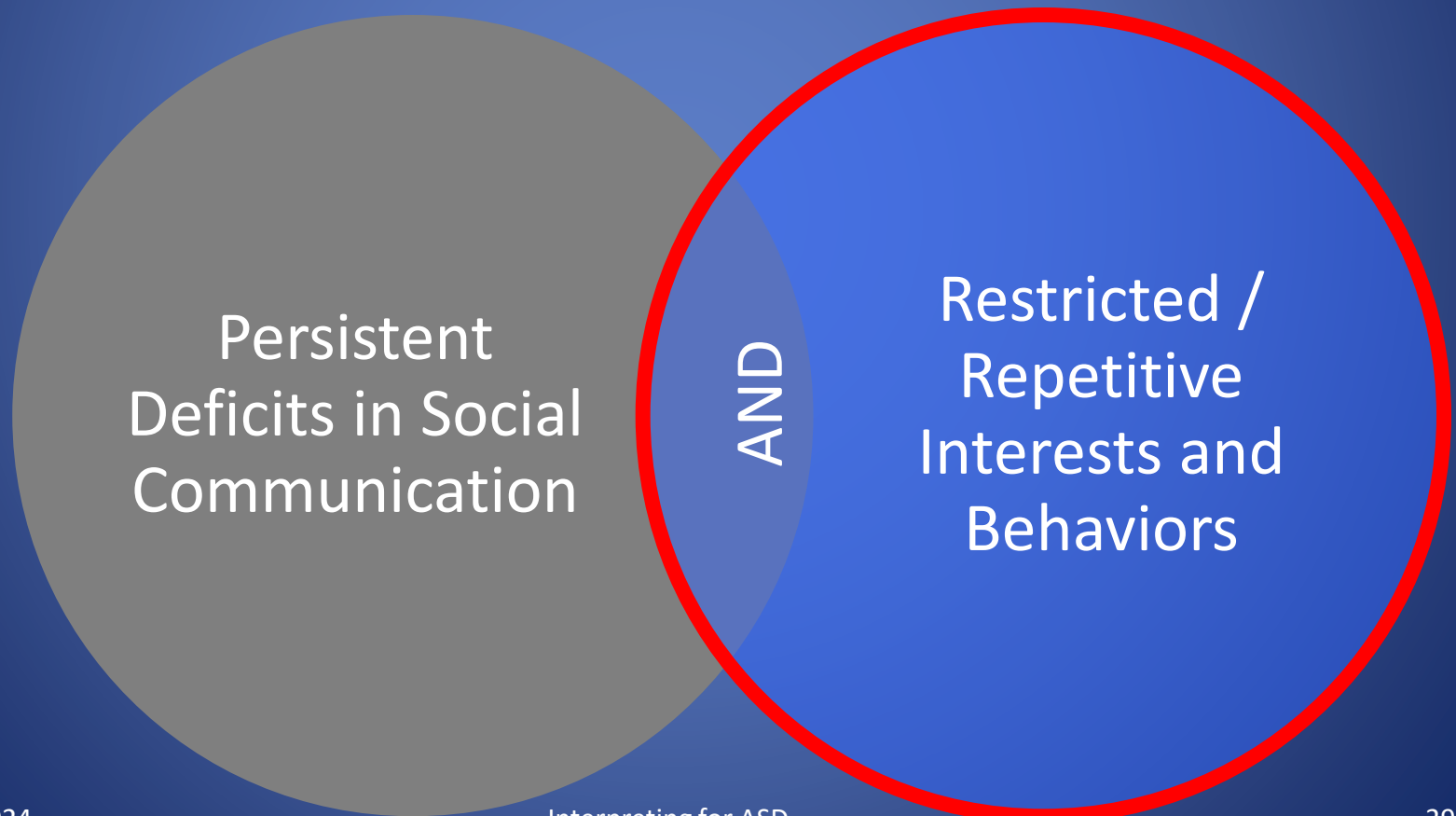


What are some aspects of social communication that might pose a challenge for a person with ASD?

Give an example of each.

Remember this?

ASD is diagnosed based on the presence of:



Restricted/Repetitive Interests/Behaviors

1. Insistence on sameness

- Strong preference for routine
- Ritualized behaviors



Restricted/Repetitive Interests/Behaviors

2. Stereotyped or repetitive behaviors

- Motor movements (e.g., hand flapping)
- Use of objects (e.g., lining of objects)
- Speech (e.g., echolalia, repeating movie lines)



Restricted/Repetitive Interests/Behaviors

3. Restricted/fixated interests

- Typical interests that are abnormally strong
- Interests that are abnormal in focus

Restricted/Repetitive Interests/Behaviors

4. Sensory interests or aversions

- Adverse response to specific sounds or textures
- Visually examining objects, or smelling of objects

A person must have deficits in 2 of the 4 areas to meet the diagnostic criteria for autism.

Examples of Restricted/Repetitive Interests/Behaviors



Stimming

*Autism Stimming Examples,
Minute 0:00 – 1:00*

Examples of Restricted/Repetitive Interests/Behaviors



Echolalia

An example from *Easy as Pie*
From Pine Heart Productions



Pop Quiz



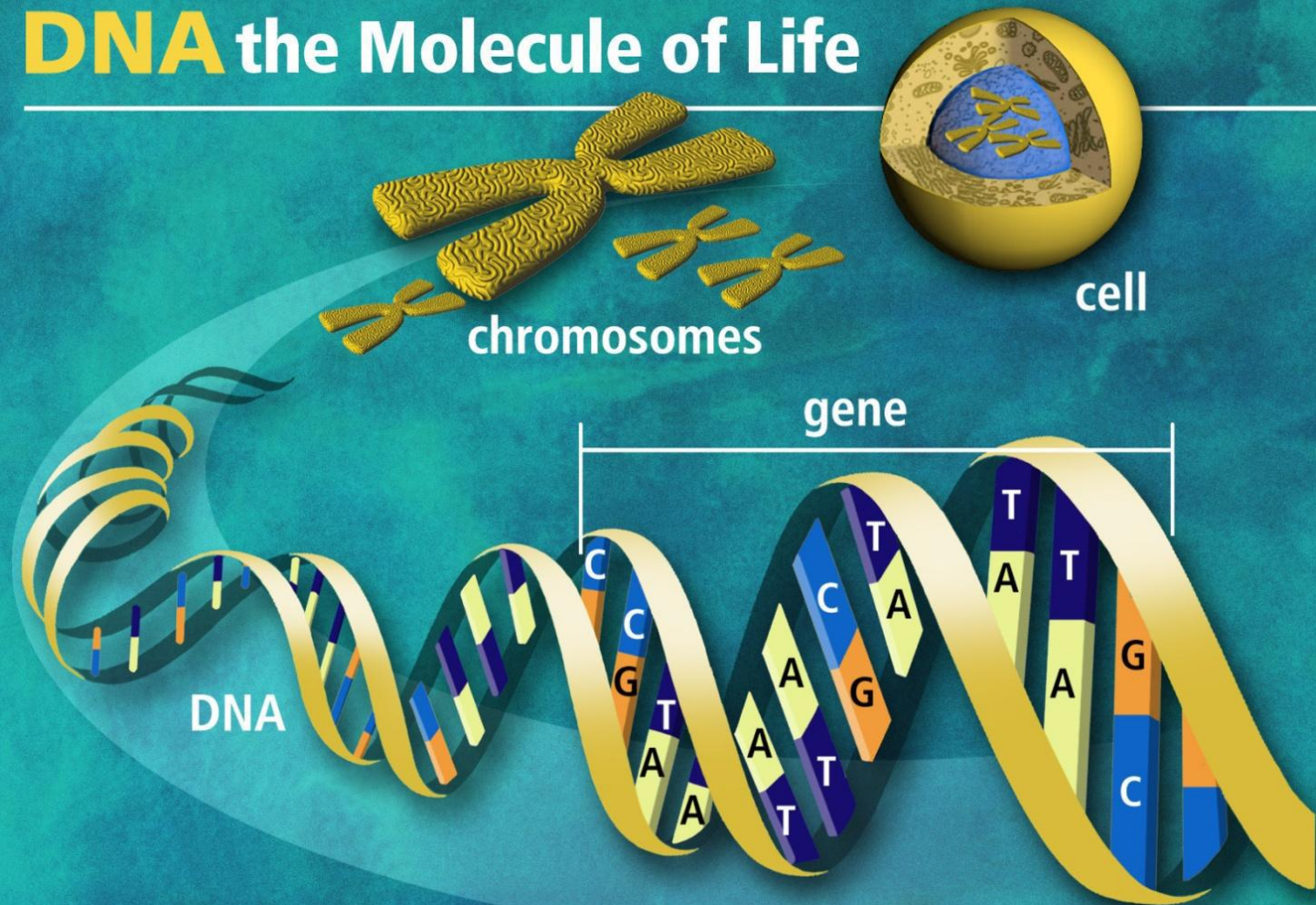
Give an example of:

1. Insistence on sameness
2. Repetitive or stereotyped behaviors
3. Restricted or fixated interests
4. Sensory interests or aversions

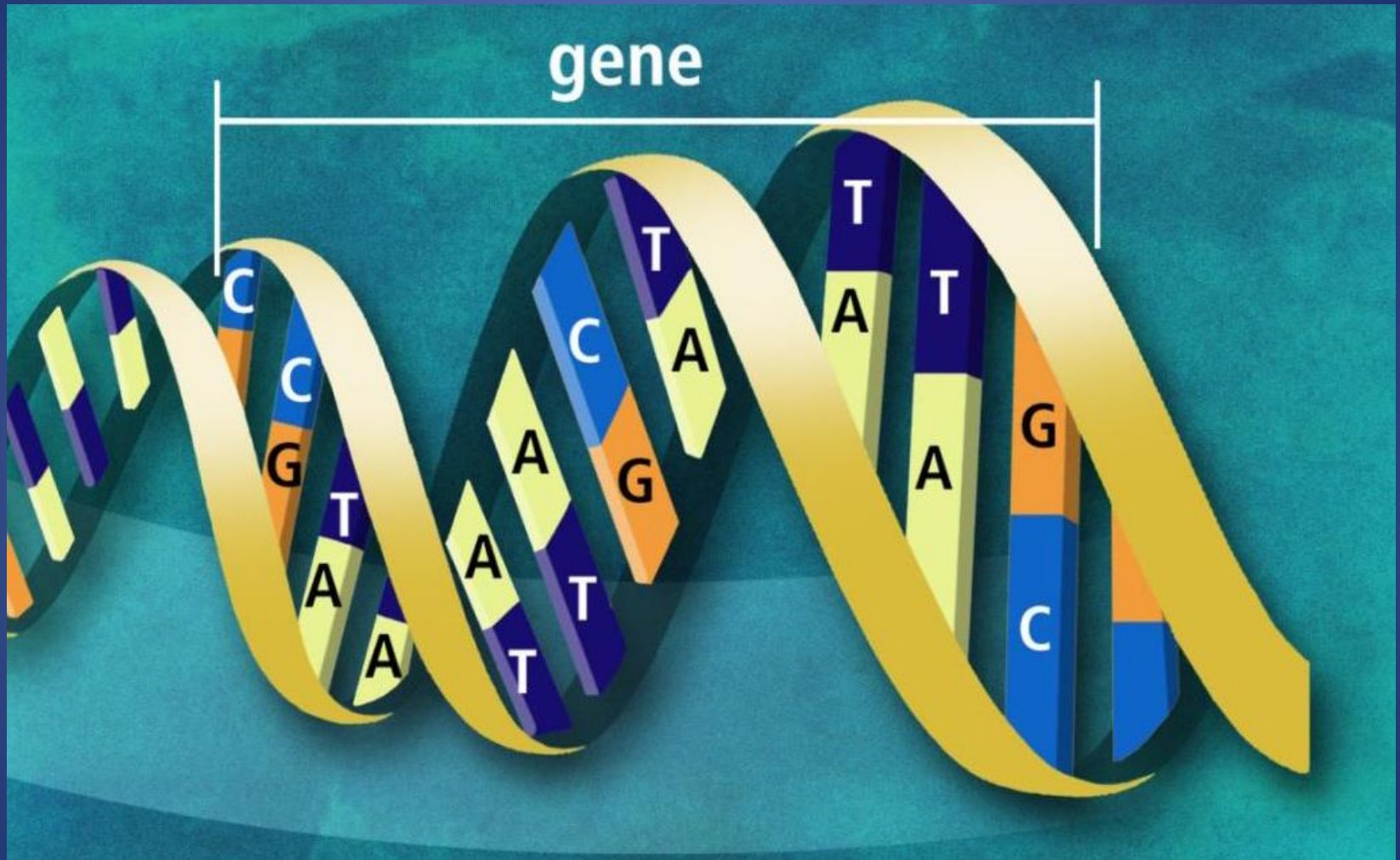
What causes autism?



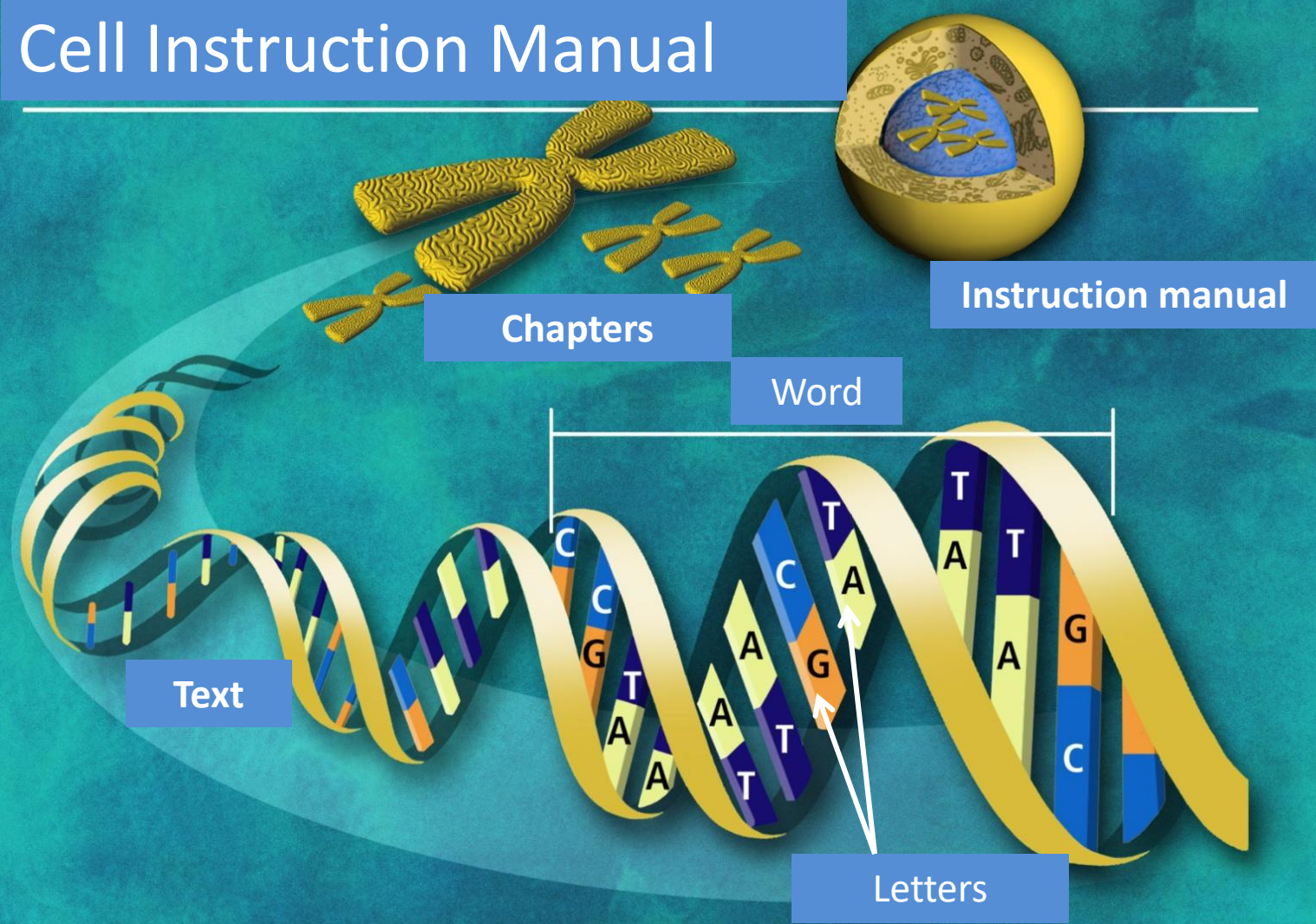
DNA the Molecule of Life



Y-GG 00-0481



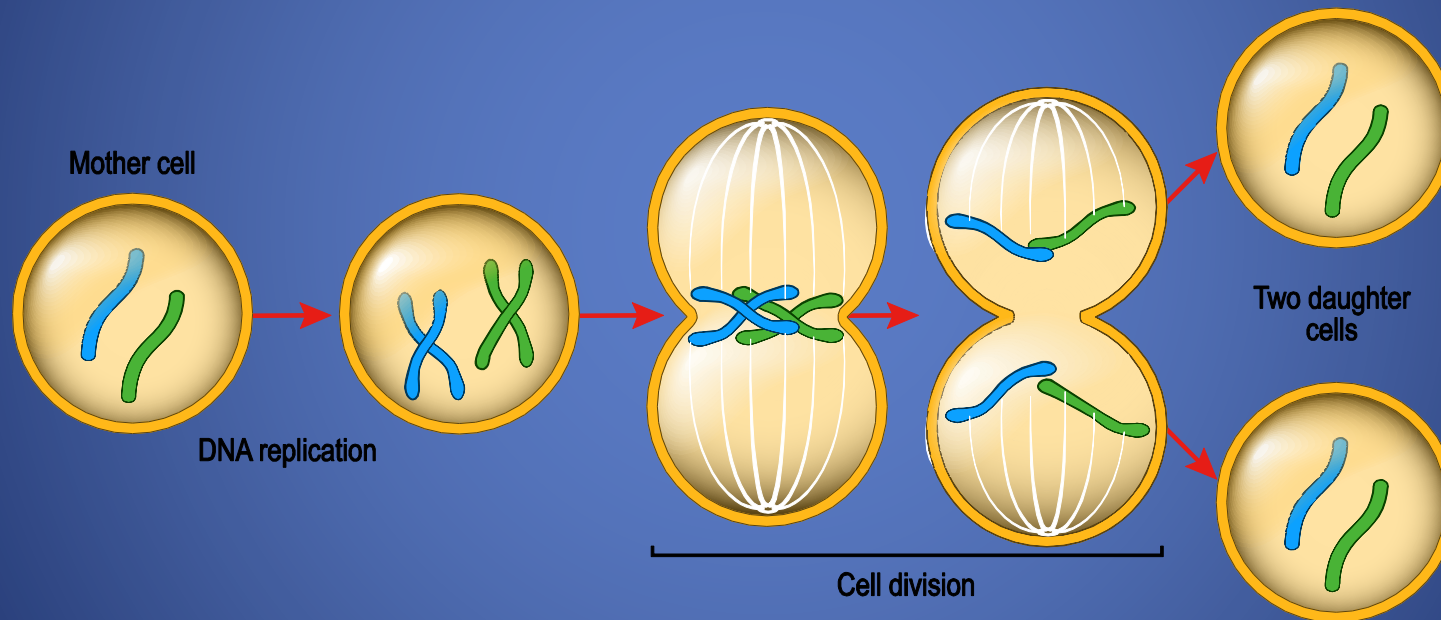
Cell Instruction Manual



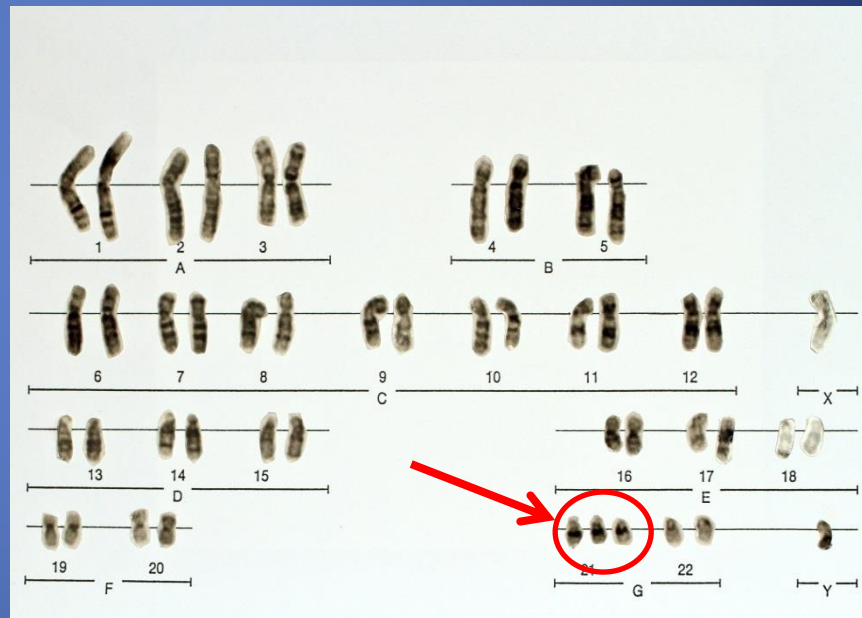
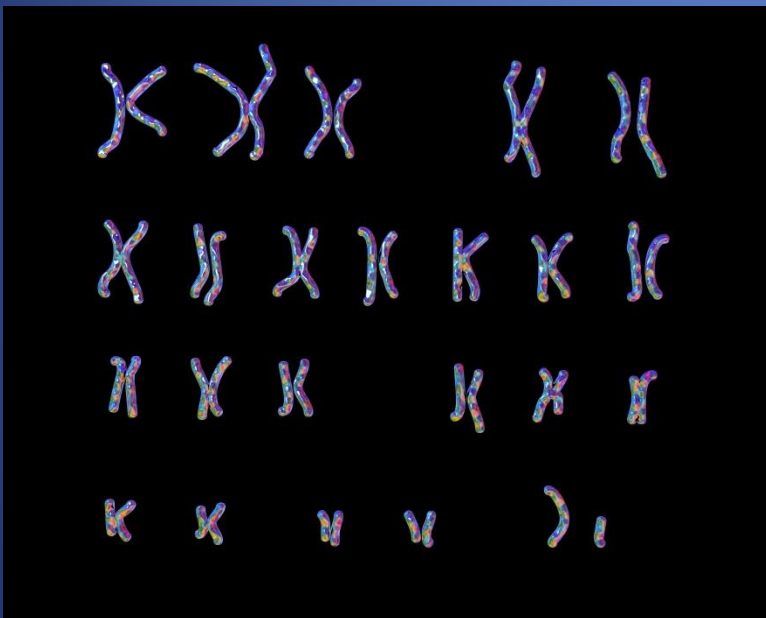
Y-GG 00-0481

Cell replication after that

MITOSIS



Chromosome abnormalities



Gene variants

Original sentence

MOVE TO THE LEFT.

Gene Change

MO^V_LE TO THE LEFT. → MOLE TO THE LEFT.

Gene Reversal

MOVE TO THE **LEFT**. → MOVE TO THE ELFT.

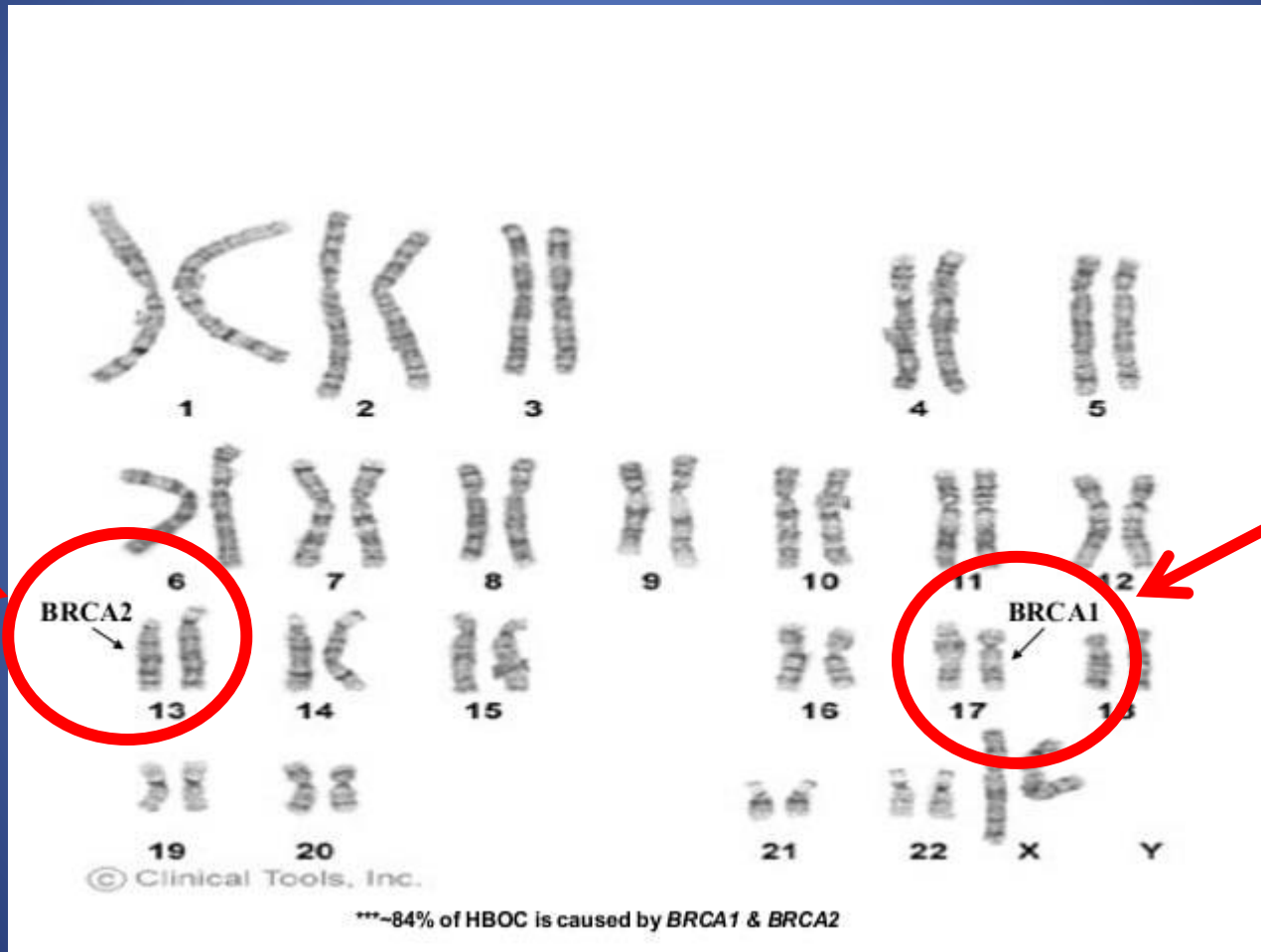
Gene Insertion

MOV_IE TO THE LEFT. → MOVIE TO THE LEFT.

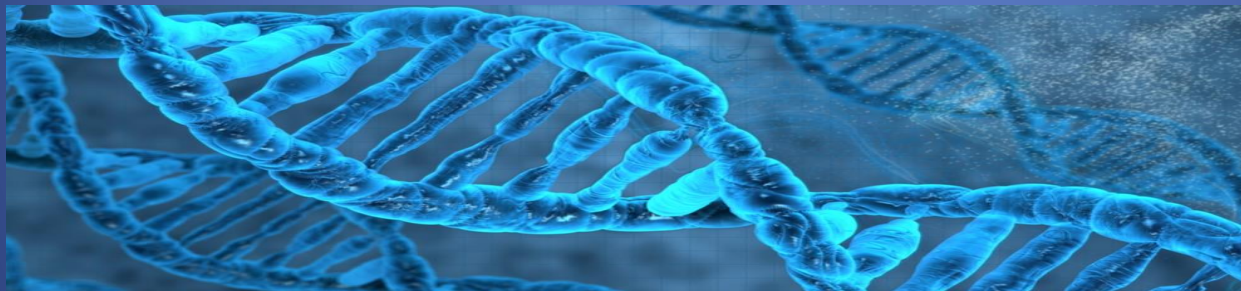
Gene Deletion

MOVE TO THE **LE**FT. → MOVE TO THEFT.

Genetic links to breast cancer



Genetic links to ASD



0%
responsible

80%
responsible



100%
responsible

Bai, D et al. *Association of Genetic and Environmental Factors With Autism in a 5-Country Cohort.* *JAMA Psychiatry*, 2019 Oct 1;76(10):1035-1043. doi: 10.1001/jamapsychiatry.2019.1411.



Pop Quiz



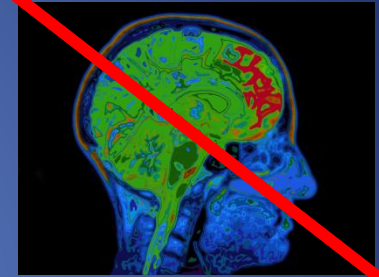
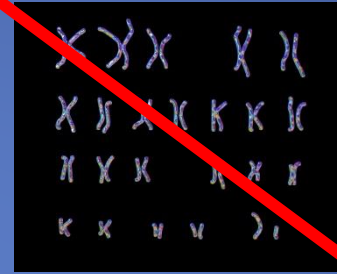
Poll

When can ASD be diagnosed?

- Reliable diagnosis can be made at age 2 by experienced clinicians.
- Average diagnosis is at 4.5 years.
- Behaviors will be certainly be noticed in school-age children.
- Others may not be diagnosed until adulthood.



How is ASD diagnosed?



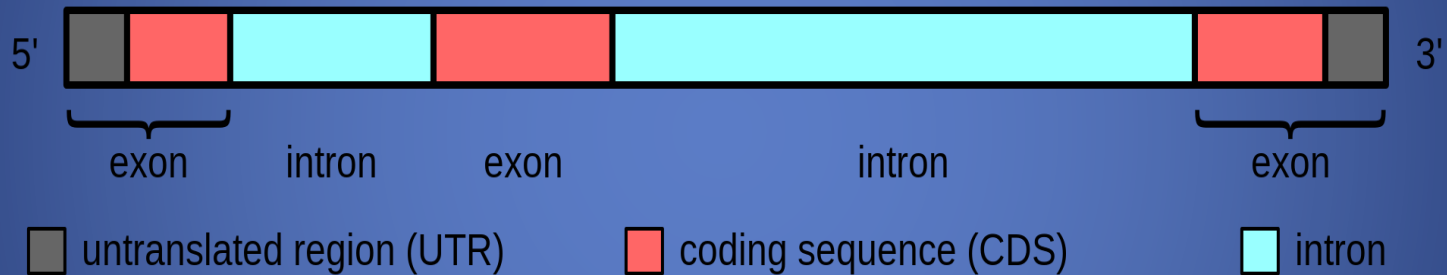
The Diagnostic Evaluation

Evaluation typically involves:

- Detailed medical and developmental history.
- Review of school, medical and therapy records.
- Structured observational assessment (typically the Autism Diagnostic Observation Schedule – ADOS).

Genetic Testing

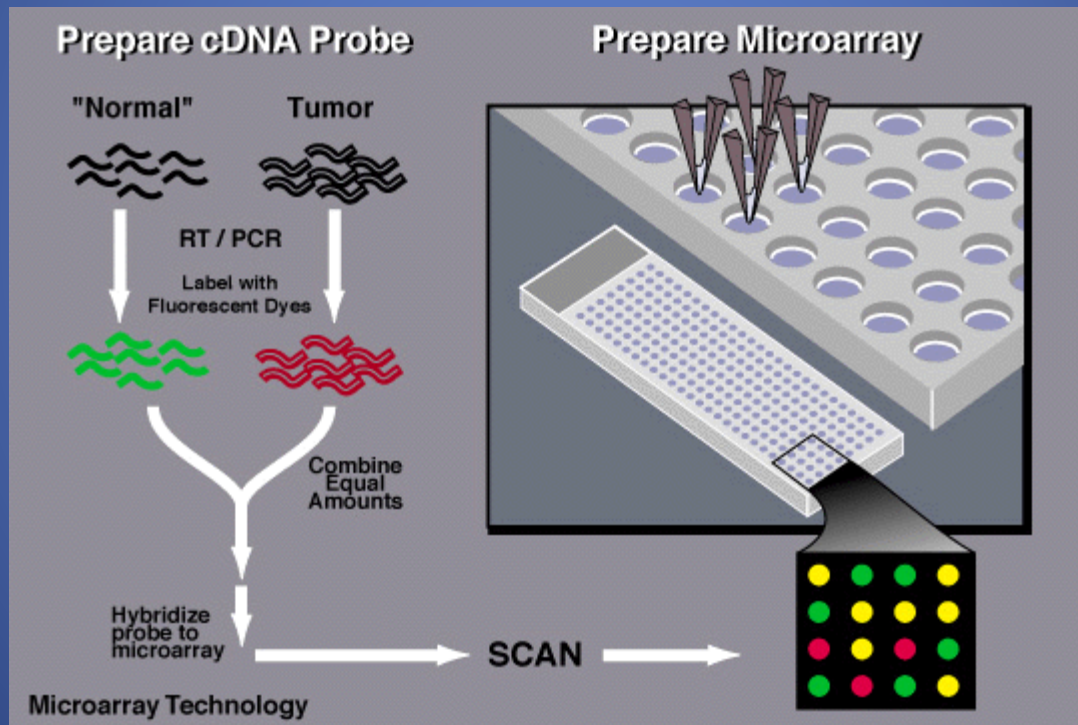
- Exome sequencing:



[Daycd](#), at the English Wikipedia Project

Genetic Testing

- Chromosomal microarray analysis (CMA)



National Human Genome Research Institute

Fragile X Syndrome

Gene FMR1 (on the X chromosome) makes a protein used in brain development.

A gene variant in FMR1 interferes with the making of that protein.

This can result in

- developmental delays
- learning disabilities
- social and behavior problems.

More serious in boys than in girls.



Rett Syndrome

Gene MECP2 (on the X chromosome) makes a protein that switches other genes on or off. A gene variant in MECP2 means that the protein it makes is abnormal.

This can result in the loss of control over all motor functions, including hands, legs and speech.

Exclusively found in girls; boys with a similar variant typically die immediately after birth.

Is there a cure?

No.

But not everyone
with ASD wants one.



Treatment?

Yes. ASAP.

Speech therapy?

ABA?

Occupational therapy?

Counseling?

Social skills group?

Medication?



Pop Quiz



Poll