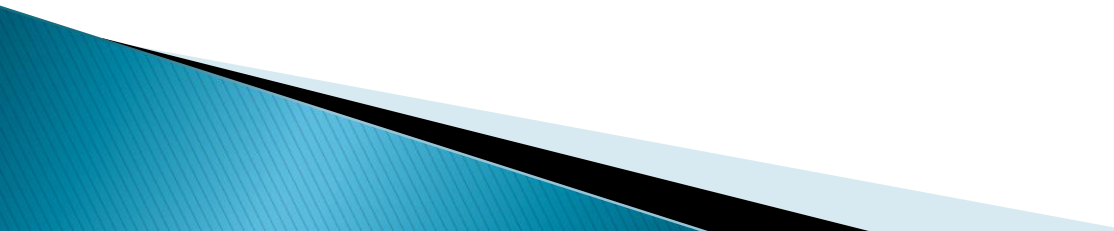


# ADHD

## Attention Deficit Hyperactivity Disorder– Review and Discussion

Kay Malee, PhD and Renee Smith, PhD

# ADHD: What is it?

- ▶ Attention deficit hyperactivity disorder (ADHD) is a condition that affects children's ability to focus and stay "on task," whether it's listening to a teacher or finishing a chore at home.
  - ▶ Recent reports suggest that as many as 11% of school-aged children have been diagnosed with ADHD but only about half received treatment.
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# ADHD Symptoms

## ▶ Inattention

The main symptom of ADHD is the **inability to pay attention.**

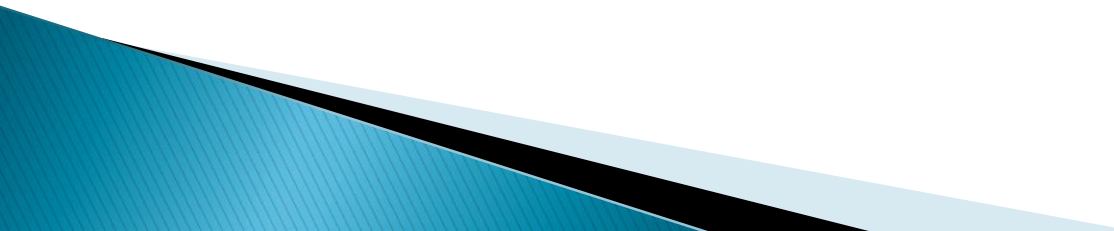
Trouble with:

- listening to someone,
- following directions,
- finishing jobs or tasks,
- keeping track of their belongings,
- daydream often,
- careless mistakes.

◦ They may avoid activities that require a lot of sustained concentration or that are boring to them.

# ADHD Symptoms

## ▶ Hyperactivity

- difficulty sitting still or playing quietly,
  - often running and climbing on things, even when indoors,
  - squirming, fidgeting or bouncing when they are seated,
  - sometimes talking excessively.
- 

# ADHD Symptoms

## ▶ Impulsivity

- cutting in line,
- interrupting others,
- blurting out answers before they should
- difficulty waiting their turn
- acting before they think

# ADHD's impact on daily life

Without appropriate treatment, ADHD can affect a child's development in many areas.

*Social development:* trouble-making, cutting in line, interrupting others can lead to trouble making friends and loss of opportunity to learn age-appropriate social skills

*Academic:* trouble listening and concentrating can lead to problems learning and retaining information

*Emotional development:* peer rejection can lead to poor self-esteem and feelings of isolation.

Long term, these behaviors can increase the risk of childhood depression and anxiety and substance use during adolescence.

# Diagnosing ADHD

**There are no lab tests to diagnose ADHD.**

Instead, doctors and psychologists rely on family descriptions of behavior problems and a school assessment from the teacher.

# Diagnosing ADHD

A child must have:

- at least six symptoms of inattention and/or hyperactivity, and impulsivity
- for at least six months before age 12yrs
- in at least two different settings
- to a degree that is maladaptive and inconsistent with age expectations.  
(five symptoms if 17 or older)



# Types of ADHD

**Combined**—most common type and applies to children with inattention, hyperactivity and impulsivity

**Hyperactive/impulsive type**— children are fidgety and can't control their impulses

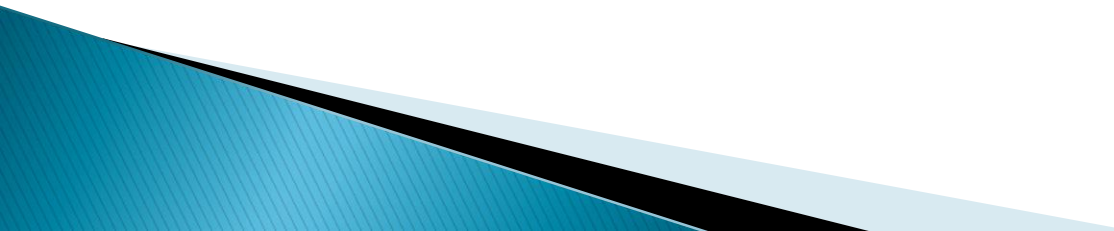
**Inattentive**—children have trouble focusing but are not overly active and do not disrupt the classroom.

# Causes of ADHD

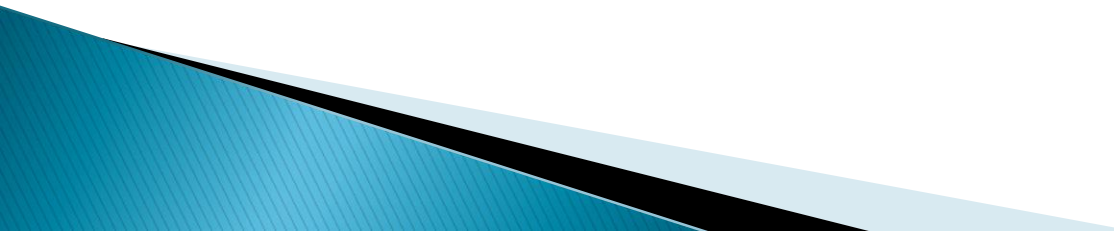
MRI studies show that children with ADHD have less activity in areas of the brain that control attention and planning and motor behavior.

They may also have imbalances in brain chemicals called neurotransmitters.

It's unclear what causes these irregularities but ADHD runs in families so genetics probably plays a role; research supports a genetic basis, with secondary factors (environmental influences) also involved.



# Treatment for ADHD

- ▶ Behavioral Intervention
  - ▶ Medication
  - ▶ Both Medication and Behavioral Intervention
- 

# Behavioral Interventions

- ▶ Who do they help?
  - Parents
    - Parenting quality
    - Parenting self–concept
  - Children
    - Child conduct problems
    - Child social skills
    - Child academic performance.

*Daley et al., 2014*

# Behavior Therapy and Counseling for ADHD

Behavioral training can help parents learn supportive, positive strategies to set limits and respond consistently with appropriate rewards and consequences.

Behavioral intervention helps children understand rules and consequences and helps build social skills and self-esteem.

**\*\*Long term treatment with a combination of drugs and behavioral therapy is more effective than medication alone in many cases.**



# Medications for ADHD

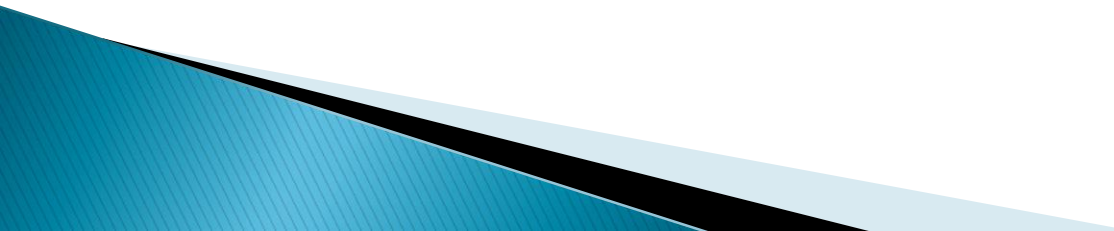
Stimulant medications can help increase a child's attention span and can help control hyperactivity and impulsive behavior. These types of medications work in about 70–80% of patients, although they sometimes have side effects.

Ex.: concerta, metadate, ritalin

Non-stimulant medications are also options for some children.




# Medications for ADHD

- ▶ Side Effects
  - ▶ Adherence
  - ▶ Impact on growth and learning and quality of live
  - ▶ Long-term use
  - ▶ Interaction with other medications
- 

# Special School Services for Children with ADHD

Some children with ADHD do better in a more structured school environment; a **504 plan** can be devised for children with ADHD to provide a positive environment for them while in school:

- close proximity to teacher for frequent reminders/praise
  - reinforcing instructions to child to ensure attention and comprehension
  - positive rewards for task completion and appropriate behavior
- 




# Special School Services for Children with ADHD

Special Education is a type of education that is tailored to meet the needs of children with intellectual or learning disabilities or behavior problems, including ADHD

Not all children with ADHD need or qualify for special education but some do!

If child has LD or other learning problems, special education services may address learning and behavioral needs.




# The Role of Routine

Children with ADHD often benefit from more **structure** at home. This means that parents create very clear routines for them to follow.

Posting a **daily schedule** will remind your child about what he is supposed to do at a certain time. This can help children stay on task.

The schedule could include specific times for waking up, playing, eating, homework, chores, activities and bedtime.



# ADHD Diets

No one knows for sure if certain foods are related to ADHD (e.g., sugar, candy, food with gluten, food additives, preservatives and food coloring, etc.) but research suggests that it is unlikely that these have significant effects on symptoms.

Some think that foods that are good for the brain could reduce ADHD symptoms. For example, high protein foods, including eggs, meat, beans and nuts may improve concentration.

**\*\*Talk to your child's doctor before you change diets. Good nutrition is important for all children.**



# ADHD and TV

The link between ADHD and television is not clear.

The American Academy of Pediatrics suggests limiting children's exposure to TV and "screen time"

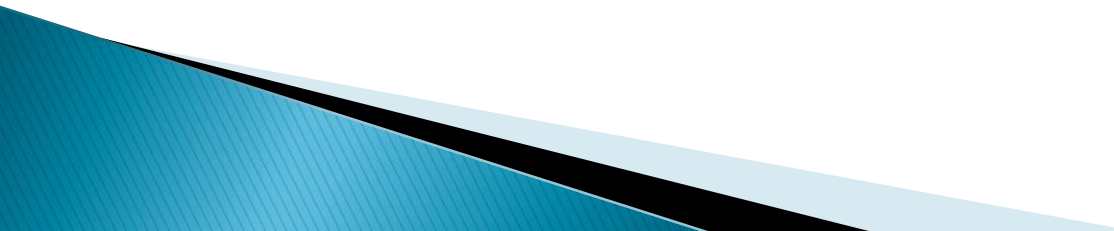
- no TV for children under 2 years

- no more than 2 hours of screen time per day for older children

# Instead of TV, what?

To develop attention skills, encourage activities like games, blocks, puzzles, board or card games, and reading. Read with your child and ask questions about the story as you go along.

Participate with your child in these activities!  
It's good for the whole family.



# Preventing ADHD

There is no absolute way to prevent ADHD but you can take steps to reduce risk:

- ❑ Stay healthy during pregnancy
  - avoid alcohol, drugs, tobacco during pregnancy
- ❑ Monitor your child's behavior
- ❑ Seek help if you have concerns!

**Early intervention makes a BIG difference.**



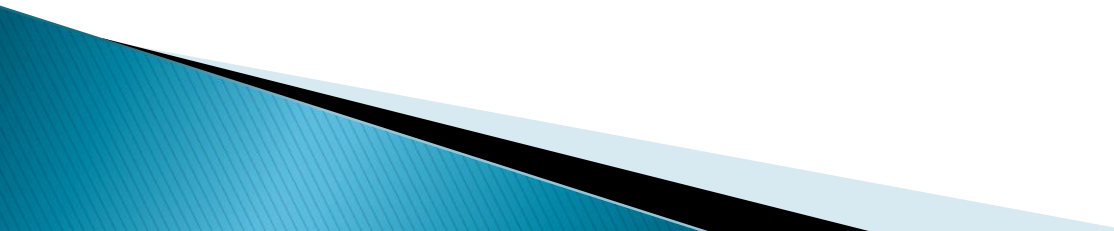
# Outlook for children with ADHD

With treatment, a large majority of children with ADHD improve.

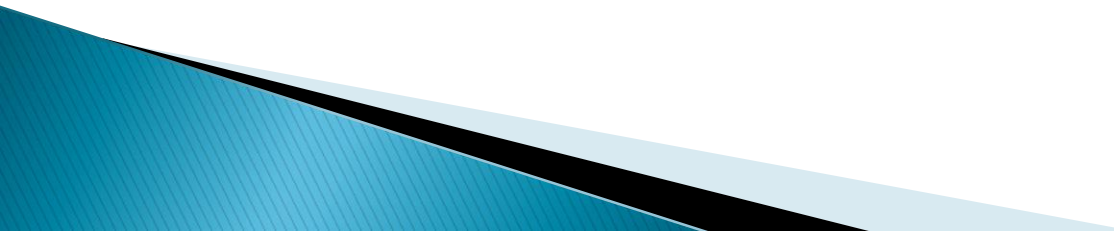
However, they should continue in follow-up throughout adolescence.

Some teens “outgrow” ADHD but some do not; symptoms persist for about 50% of those diagnosed.

Many adults have ADHD and require treatment to be successful at school, work and in relationships with others.




# Outlook for children with ADHD

- ▶ Children with ADHD, especially if untreated, may be at higher risk for substance use/abuse or other mental health problems, including depression and anxiety and conduct problems.
  - ▶ Ongoing monitoring of symptoms and effective treatment are important to diminish other risks.
- 



# The Future

- ▶ Children and teens and young adults with ADHD can have highly successful and happy lives!
  - ▶ Identification of needs and ongoing, appropriate treatment make a BIG difference
  - ▶ Consult your child's pediatrician/health care provider and school staff and initiate evaluation and treatment **early. Communicate regularly!**
  - ▶ Early Intervention helps! Start early, collaborate with physician and school, and modify as your child changes and develops.
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