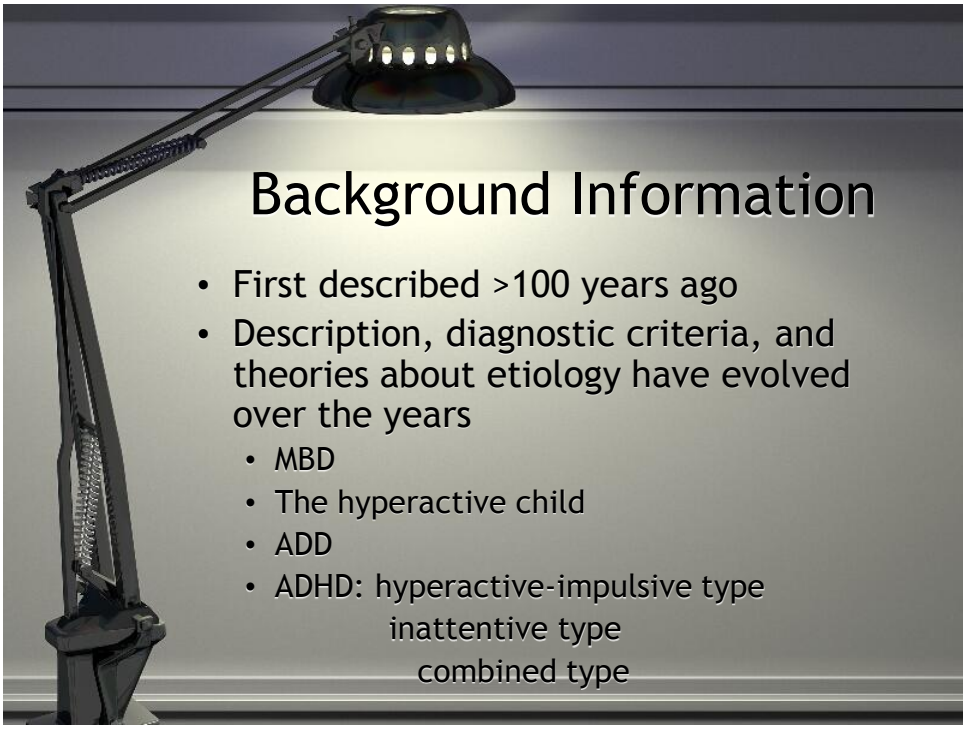
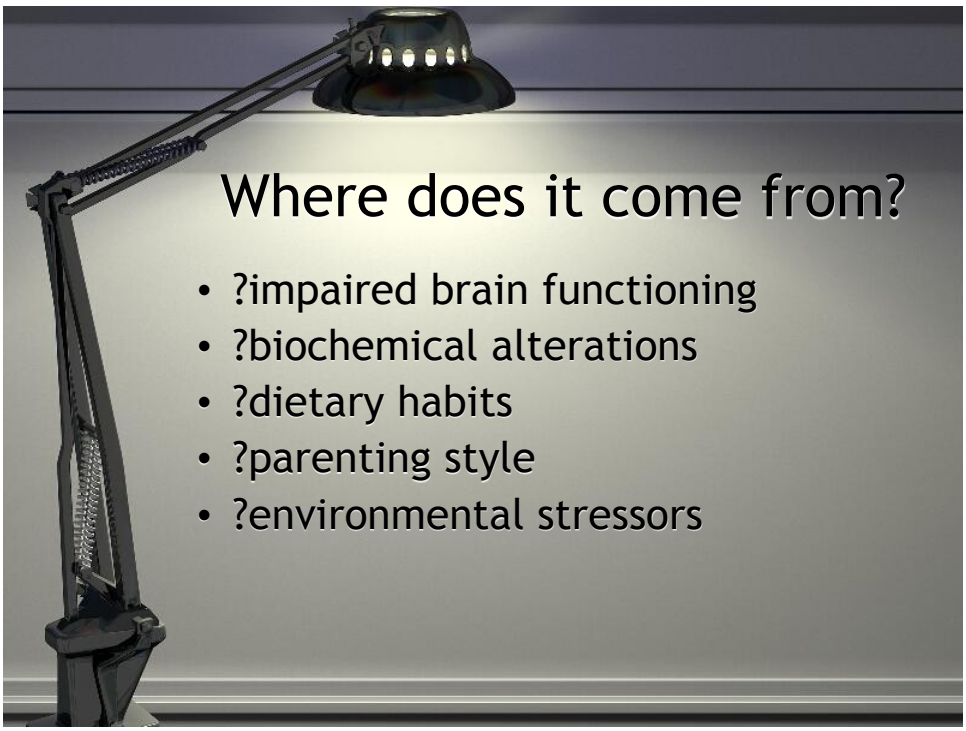
# Attention Deficit Hyperactivity Disorder

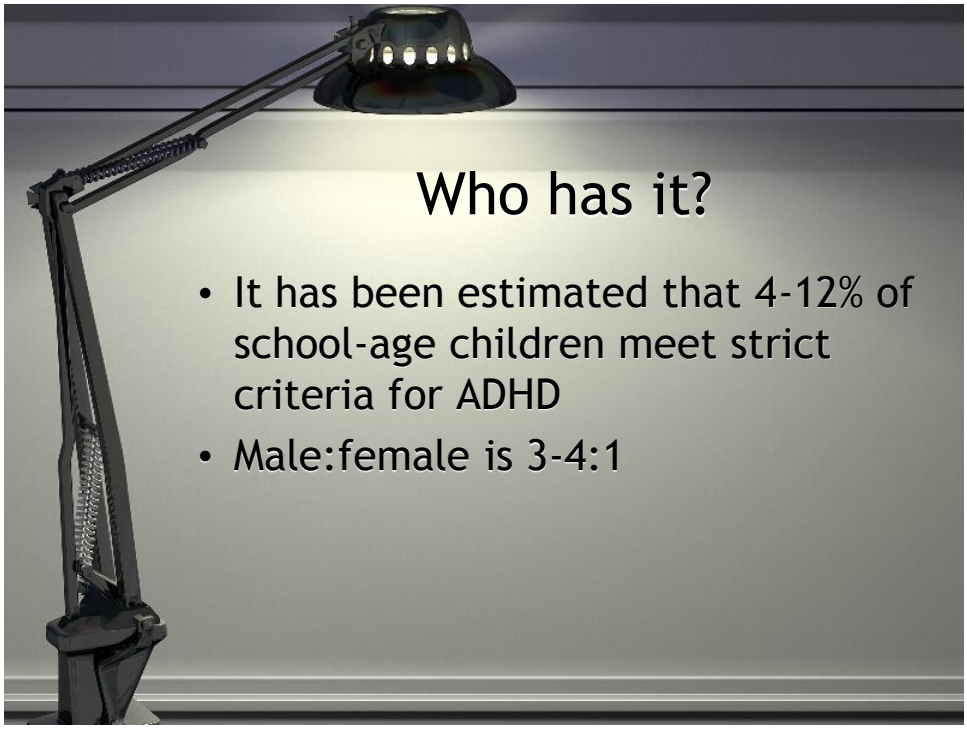
Calvary Baptist Church
Sunday, January 23, 2005

## Initial Discussion

- What do you know?
- What have you heard?
- What do you think?
- What are you worried about?


Background Information
• First described >100 years ago
• Description, diagnostic criteria, and theories about etiology have evolved over the years
• MBD
• The hyperactive child
• ADD
• ADHD: hyperactive-impulsive type
inattentive type
combined type


Where does it come from?
• ?impaired brain functioning
• ?biochemical alterations
• ?dietary habits
• ?parenting style
• ?environmental stressors


Who has it?
• It has been estimated that 4-12% of school-age children meet strict criteria for ADHD
• Male:female is 3-4:1


What does it look like?
• Can't sit still
• "hyperactive"
• Doesn't pay attention/short attention span
• Can't concentrate
• Doesn't seem to listen
• Daydreams
• Acts without thinking
• Impulsive
• Behavior problems
• Not doing well in school

## How is the diagnosis made?

- A school-age child presents with symptoms suggestive of ADHD
- The primary care MD initiates an evaluation
- DSM-IV criteria should be met
- Evidence should be directly obtained from parents/caregivers regarding core symptoms in various settings, age of onset, duration of symptoms, degree of functional impairment, and associated conditions
- Evaluation should include assessment for associated (co-existing) conditions

## Goals of Treatment

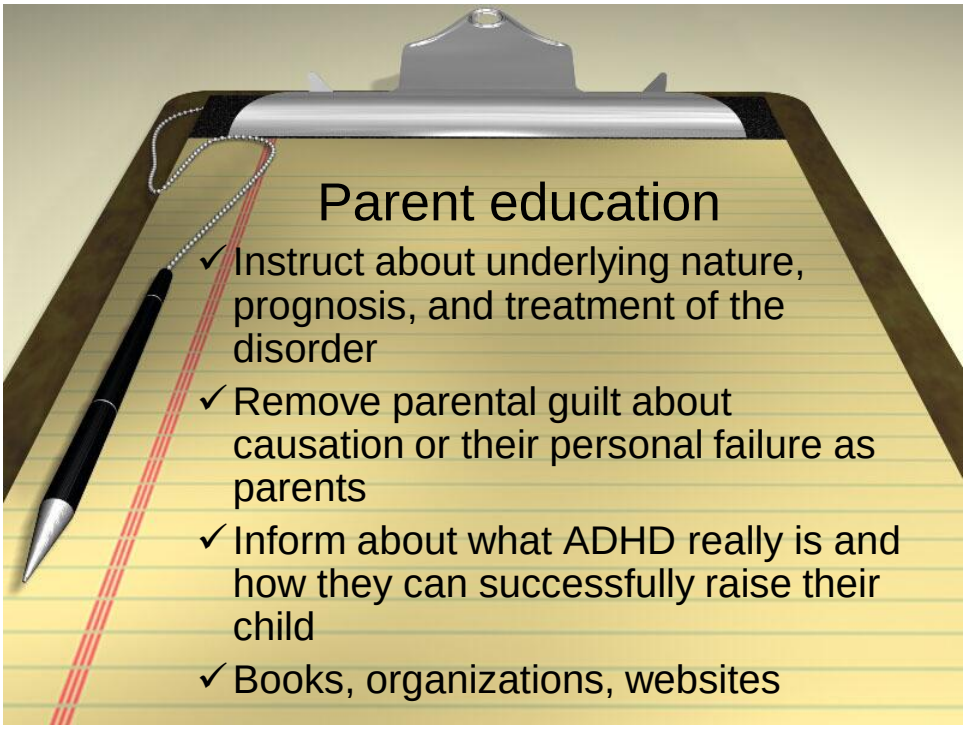
- Alleviate core symptoms: diminish overactivity, inattentiveness, and impulsive behavior
- Lessen accompanying behaviors, such as oppositional behaviors or compliance problems
- Help child achieve normal peer and family relationships

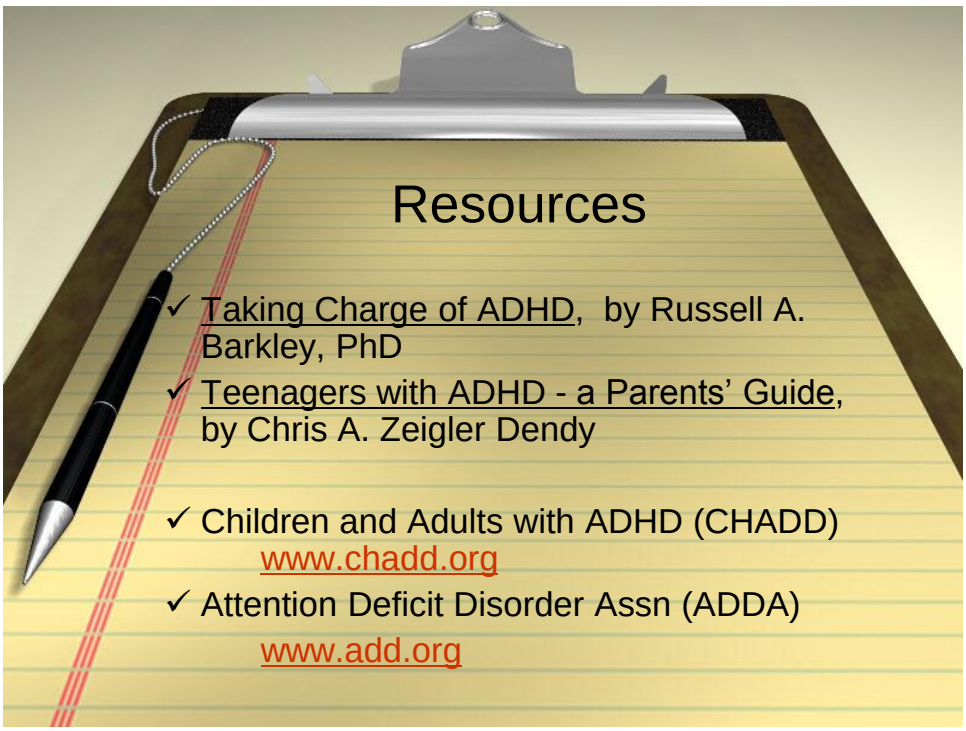
## Goals of treatment (continued)

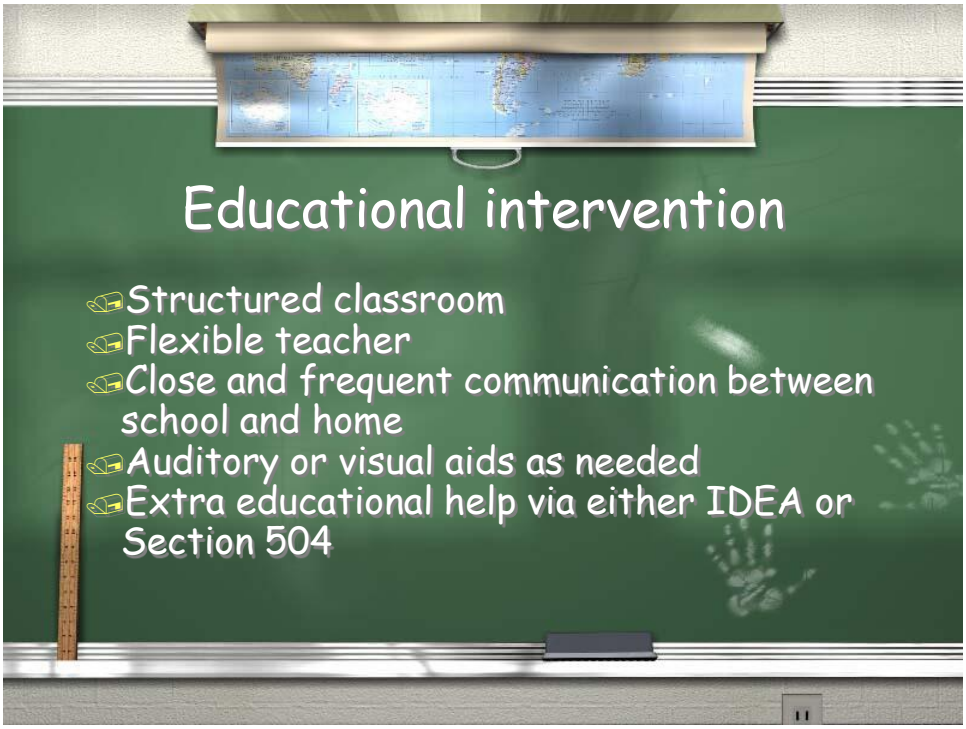
- Enhance academic success - by increasing attention and performance and by recognizing and remediating learning problems
- Recognize and treat any coexisting conditions
- Improve organizational skills and overall executive functioning
- Enhance self-esteem

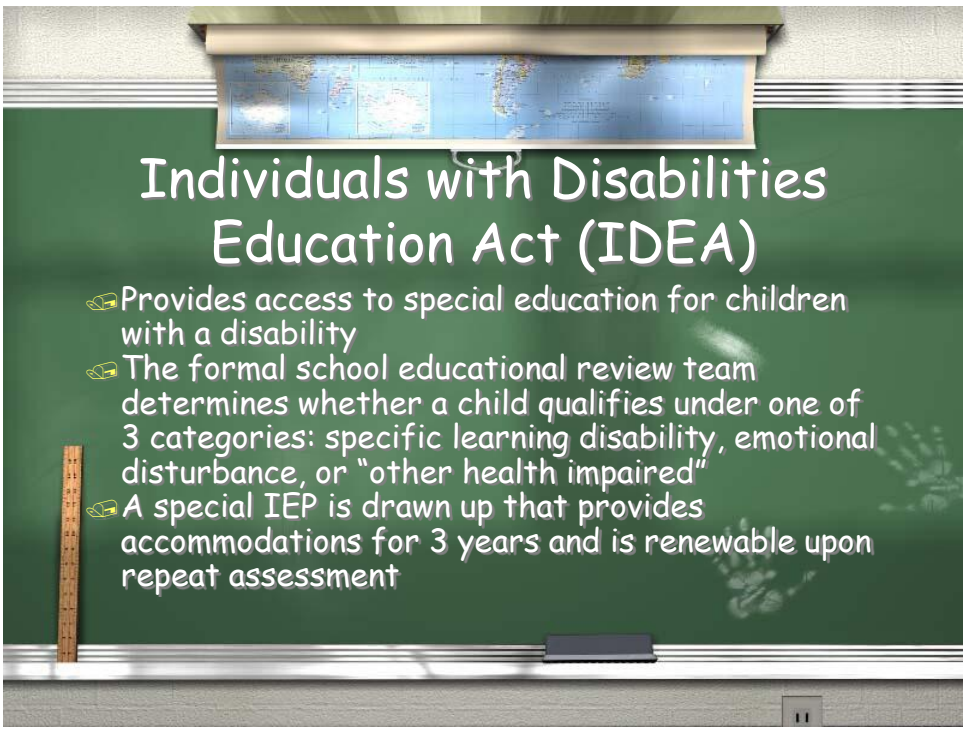
## Treatments available

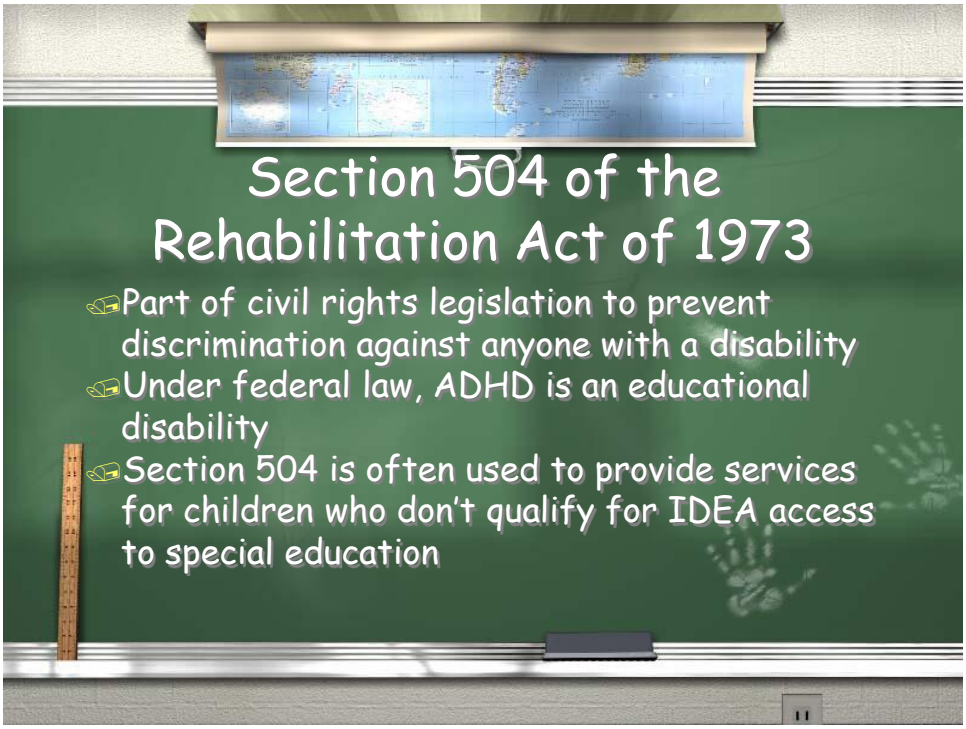
- There is no "magic bullet"
- Treatment should be multi-modal
  - parent education
  - educational intervention
  - behavioral therapy
  - medication

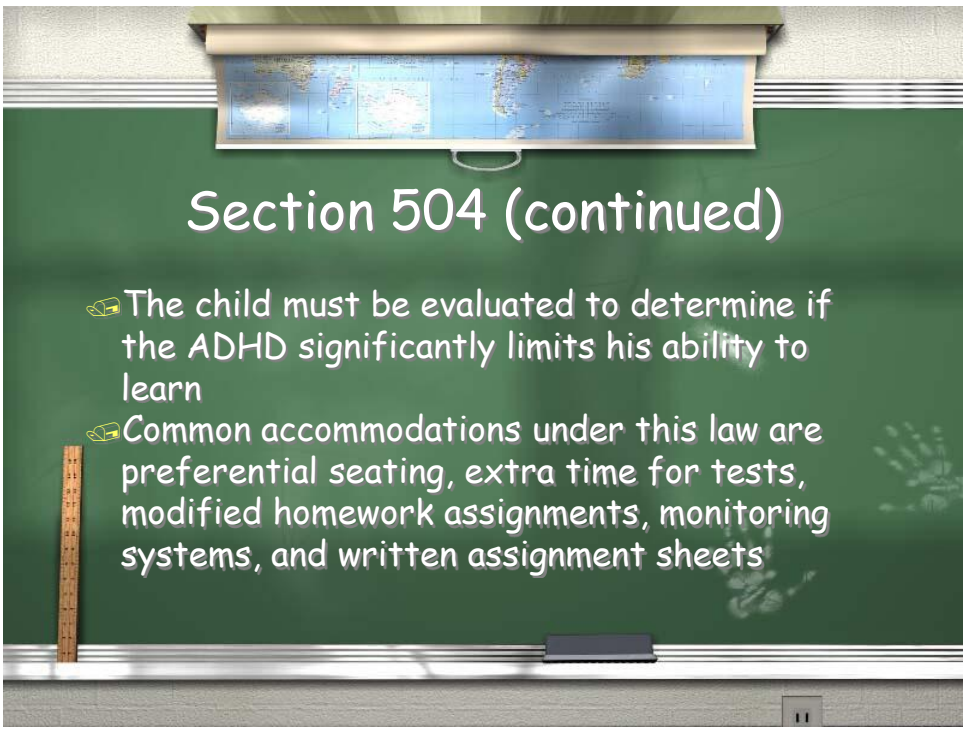

Parent education
✓Instruct about underlying nature, prognosis, and treatment of the disorder
✓Remove parental guilt about causation or their personal failure as parents
✓Inform about what ADHD really is and how they can successfully raise their child
✓Books, organizations, websites

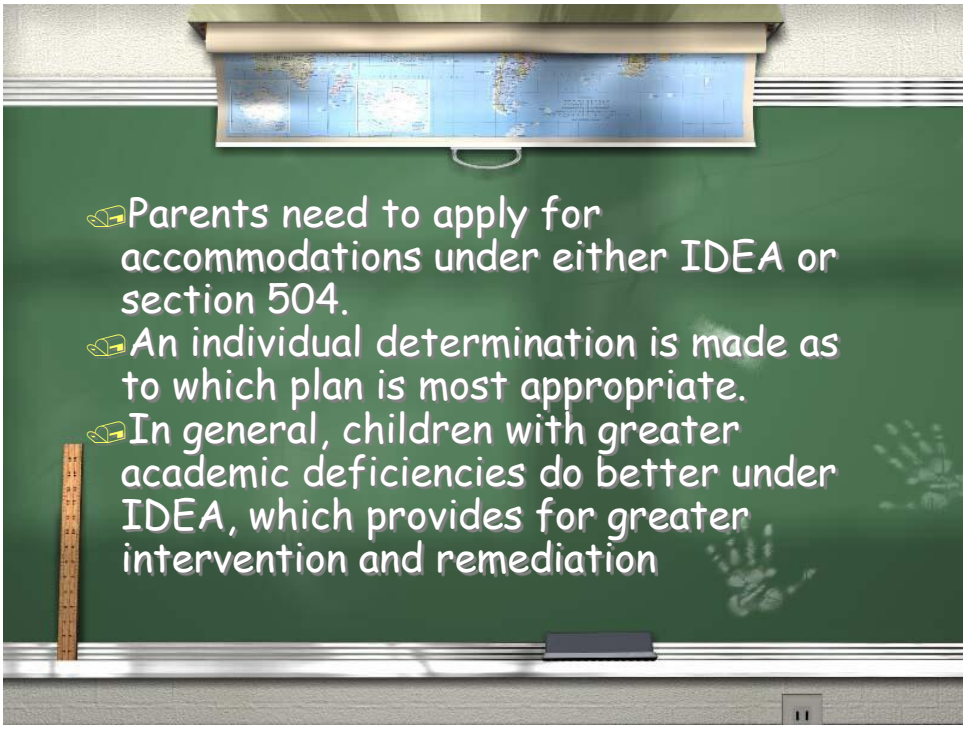

Resources
✓ Taking Charge of ADHD, by Russell A. Barkley, PhD
✓ Teenagers with ADHD - a Parents' Guide, by Chris A. Zeigler Dendy
✓ Children and Adults with ADHD (CHADD) www.chadd.org
✓ Attention Deficit Disorder Assn (ADDA) www.add.org


Educational intervention
Structured classroom
Flexible teacher
Close and frequent communication between school and home
Auditory or visual aids as needed
Extra educational help via either IDEA or Section 504


Individuals with Disabilities Education Act (IDEA)
Provides access to special education for children with a disability
The formal school educational review team determines whether a child qualifies under one of 3 categories: specific learning disability, emotional disturbance, or "other health impaired"
A special IEP is drawn up that provides accommodations for 3 years and is renewable upon repeat assessment


Section 504 of the Rehabilitation Act of 1973
Part of civil rights legislation to prevent discrimination against anyone with a disability
Under federal law, ADHD is an educational disability
Section 504 is often used to provide services for children who don't qualify for IDEA access to special education


Section 504 (continued)
The child must be evaluated to determine if the ADHD significantly limits his ability to learn
Common accommodations under this law are preferential seating, extra time for tests, modified homework assignments, monitoring systems, and written assignment sheets




## Behavioral therapy

- Emphasis is not on ADHD symptoms but on functional impairments that ADHD causes in the child's daily life, such as not completing assignments or not complying with parents' requests.
- Effective programs include one or more of the three following components:

## Behavioral therapy (continued)

- Parent training:
  - giving clear and concise commands
  - Using praise, time-out, reward and consequence systems, token economies
  - Usually via one-on-one training with a counselor or with parenting classes

## Behavioral therapy (continued)

- Daily report card
  - Focuses on classroom behaviors and goals for changing behaviors as needed
  - Completed daily by child's teacher
  - Reviewed daily by parents
  - Weekly rewards given for accomplishing set goals

## Behavioral therapy (continued)

- Summer camp programs
  - 6-8 hours daily, for several weeks
  - Include academics and recreation
  - High staff:child ratio ensures immediate and appropriate behavioral intervention
  - Very expensive
  - Few in number (NYU has one, however)

## Medication

- Medications for ADHD alleviate symptoms only when they are taken
- Symptoms return immediately when medication is discontinued
- Include stimulants (60 years experience) and non-stimulants (since 2002)

# MTA study

- Large Multimodal Treatment Study of Children with ADHD (MTA) was sponsored by the federal govt and published findings in 1999
- Offers insight into the relative benefits of various types of ADHD therapy
- Included 579 subjects, 7-9 years old, with combined-type ADHD (all 3 core symptoms present)

# MTA study (continued)

- Assigned to one of 4 treatment groups:
  - Medication only
  - Behavior therapy only
  - Combined behavior and medication therapy
  - Community-based care (control group)

## MTA study conclusions

- Medication was the most effective single treatment
- Adding behavioral therapy to medication did not improve therapeutic effectiveness to a statistically significant extent, but it did evoke greater parental satisfaction, appeared to work better if anxiety and oppositional behaviors were present, and may have led to use of less medication

## Starting and maintaining stimulants

- Amphetamines and methylphenidate
- Take into account child's age, desired duration of effect, med availability
- Each is about 70% effective in alleviating symptoms of ADHD, but collective effectiveness =/>90%; I.e. give both types in succession before giving up on stimulants
- Start low and titrate up, monitoring response and side effects

# Common side effects

- Decreased appetite
  - Dose after meals, offer frequent snacks, give drug holidays
- Sleep problems
  - Establish bedtime routine, reduce or eliminate afternoon dose, move dosing regimen to earlier time, restrict/eliminate caffeine
- Transient headache
- Transient stomachache
- Behavioral rebound
  - Try sustained-release stimulant medication, add reduced dose in the late afternoon