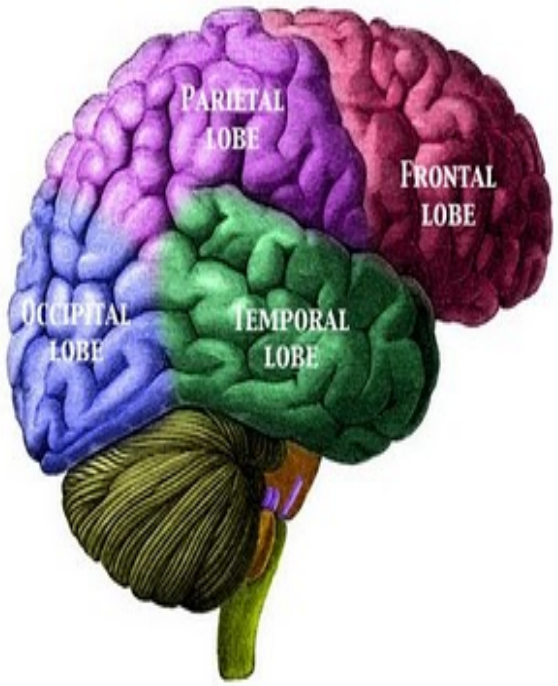

THIS IS YOUR BRAIN …..

This is your Brain on Drugs

Role of the Child and Adolescent Psychiatrist (CAP)

- Education on the effects of various disabilities (neurological and other) on human development, behavior, adaptation and psychopathology, family development and society
- Understand how the ID/DD may modify the presentation of a mental disorder
- Work part of a multidisciplinary team

Role of the Child and Adolescent Psychiatrist (CAP)

- No single discipline possesses all the skills necessary to care for persons with ID/DD or can claim an exclusive "ownership" of this interdisciplinary field.
- CAPs in their clinical, preventive, research and teaching roles, will function as members of an interdisciplinary team of professionals.
- Collaborations with other disciplines such medical (such as pediatrics) and nonmedical (such as psychology, social work, probation, special education, speech and language pathology, occupational therapy, and social service).

Role of the Child and Adolescent Psychiatrist (CAP)

- We are your partners
- Diagnostic Assessment
- Provide Clinical Care
- Psychopharmacological Management
- Advocacy
- Forensic Consultation
- Facilitate Treatment Linkage and Referral

Common Clinical Presentations and Symptoms

- Depression
- Poor Concentration
- Hyperactivity
- Obsessive and compulsive behaviors
- Aggression
- Irritability
- Psychosis
- Self-harm and Self-injurious behaviors
- Anxiety
- Restlessness
- Impulsivity
- Tantrums and Emotional Outbursts
- Rigidity

Common Disorders in Individuals with DD/ID

- ADHD
- Anxiety
- Depression and Bipolar Disorder
- Psychotic Disorders (Schizophrenia, Schizoaffective Disorder)

Medications

- Stimulants
- SSRIs
- Anti-Anxiety Medications
- Antipsychotic Medications

Attention Deficit Hyperactivity Disorder

- A general psychiatric syndrome characterized by the child displaying developmentally inappropriate failures of attention and pervasive impulsivity, along with excessive motor activity.

Medications for ADHD

- ADHD is most commonly treated with psychostimulants
- Increase norepinephrine and dopamine levels (prefrontal, striatal areas) through multiple mechanisms of action
- Methylphenidate (Ritalin, Concerta, Metadate, Methylin) Short acting
- Dextroamphetamine (Adderall, Dexedrine, Dextrostat) Mechanism of Action

Side Effects related to Stimulants

- Usually limited to the beginning in most cases
- Difficulty falling asleep
- Decreased appetite
- Headache
- Activation
- Increase (typical very minimal and not clinical significant) in BP and HR
- Rebound ADHD symptoms as medication wears off

Anxiety Disorders

- Separation Anxiety (infant/toddler)
- School Refusal (school-age child)
- Panic Disorder (adolescent/young adult)
- Selective Mutism
- Tic Disorders
- Obsessive Compulsive Disorder
- Somatoform Disorders
- Social Phobia
- Generalized Anxiety Disorder
- Post traumatic Stress Disorder

Anxiety Symptoms

- Worries about things before they happen
- Constant worries or concerns about family, school, friends, or activities
- Restlessness
- Difficulty concentrating
- Irritability, constantly on edge
- Sleep disturbance
- Easily fatigued

Anxiety Symptoms

- Some individuals are more likely to manifest anxiety **somatically** (headaches, stomachaches, bowel/ bladder control problems)

Obsessive Compulsive Disorder

- Frequent and intense obsessions and/or compulsions that the minor feels are difficult to control and
- Severe enough to interfere with the activities of daily life and day to day functioning

Obsessive Compulsive Disorder

Obsessions

- Unwanted thoughts
- These thoughts can be repeated and intrusive

Compulsions

- Repeated purposeless behaviors
- Typically performed to relieve the anxiety caused by the obsessive thoughts

Obsessive Compulsive Disorder

Obsessions

- Fear of dirt or germs
- Need for order, things must be in a certain place
- Thoughts of nonsense words or images
- Religious obsessions
- Sexual or aggressive thoughts/fears
- Fear of harm to self of family member
- Preoccupation with body waste

Compulsions

- Excessive hand washing, showering, bathing toothbrushing
- Touching rituals
- Ordering and arranging
- Repetition of rituals
- Hoarding and collecting
- Counting rituals
- Checking

Obsessive Compulsive Disorder

- Cognitively most Minors (especially those with ID/DD) do not have the cognitive skills or life experiences to recognize that the obsessions or compulsive behavior are unreasonable

Anxiety Treatment

- Not all sedatives treat anxiety (Benadryl)
- Not all anxiolytic agents treat sleep (sertraline)
- Mainstay for medical management of anxiety disorders are **"antidepressants"** (SSRIs, SNRIs)
- Sometimes SSRIs are supplemented with benzodiazepines (BDZ) used at the start (while waiting for SSRI to "kick in")
- Cautions about addiction potential, and withdrawal seizures of BZDs

Anxiety Treatment

- Is the anxiety coming from a discreet source? (Parent[s], bullying, learning problems, trauma)
- Can you use social means: education of parents, modification of environment?
- Non-pharmacological: Cognitive behavior therapy, exposure response prevention, psychotherapy
- Medication (bio. treatment): SSRIs, SNRIs

Benzodiazepines

- Act on GABA receptors
- Indicated for early treatment of severe anxiety (while waiting for SSRI to work),
- Seizures
- Detoxification from ETOH, benzo, or barbiturates
- Rapid development of tolerance
- Abuse/addiction potential, amnesia

Common Benzodiazepines

- Lorazepam (Ativan)
- Temazepam (Restoril)
- Diazepam (Valium)
- Clonazepam (Klonopin)
- Alprazolam (Xanax)

Common Manifestations of Depression and Anxiety

- Depression
- Can present as irritability
- Changes in Sleep and Appetite
- Crying spells
- Poor concentration
- Low energy
- Change in Self-care habits
- Social Withdrawal and Isolation
- Can be associated with Menses (Premenstrual Dysphoric Disorder)

- Anxiety
- Worrying all the time
- Nervousness
- Inflexibility when it comes to shift in routines
- Low energy, easily fatigued
- May have change in sleep pattern
- Poor Concentration
- Obsessive and compulisve behaviors and rituals

Other Anxiety Treatments

- Antipsychotic medications (low doses)
- Gabapentin (Neurontin)
- Antihistamines (Benadryl) - short term
- Beta-blockers (propranolol)
  - "performance anxiety"

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Common SSRIs

- Fluoxetine* (Prozac) 20-80 mg/d
- Sertraline* (Zoloft) 50-200 mg/d
- Paroxetine* (Paxil) 20-60 (CR 25-62.5) mg/d
- Fluvoxamine* (Luvox) 50-300 mg/d
- Citalopram* (Celexa) 20-40 [60] mg/d
- Escitalopram (Lexapro) 10-20 mg/d

SSRIs- Side Effects

- Common Side Effect Issues
  - GI upset, esp when taken on an empty stomach
  - "Activation" or sedation, depending on agent and pt
  - Sexual - delayed orgasm, erectile dysfunction
  - Weight gain - esp mirtazapine & paroxetine, but can occur with any of them
  - Generally, Side Effects are most pronounced in the first 1-2 weeks of administration ... ironically, prior to onset of clear improvement in depressive symptoms, *so instruct patients about what to expect in order to minimize self-discontinuation from frustration*

Examples of Medication Use by Symptoms

- Stimulants (examples: Ritalin, Adderall)
  - Often used to address hyperactivity and impulsivity
  - Issues in concentration
  - Difficulty staying on Task or completing work
  - Distractibility and Focus
  - Impulsivity can result in errors or danger

Antidepressant Agents

- First line medication treatment for Depressive disorder and for Anxiety disorders are **SSRIs** (selective serotonin reuptake inhibitors) and **SNRIs** (selective serotonin & norepinephrine reuptake inhibitors)
- Examples include: Prozac, Zoloft, Celexa, Lexapro, Paxil
- Lots of Research that shows Serotonin and Norepinephrine play a role in regulating mood
- Need 4-6 weeks at a therapeutic dose before determining whether or not it works

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Antidepressant Agents

FDA "Black Box" warning about suicide risk -
need for monitoring (particularly in children and adolescents)

Discontinuation syndrome - taper off gradually
(weeks-to-months), not "cold turkey"

Some bipolar patients may "flip" into mania or
mixed state if given AD as monotherapy - one
must ask about bipolarity in patient and family (and
h/o "bad rxn" to ADs)

Other uses - anxiety (including OCD), PMDD, pain

Antipsychotic Agents

- Not just for psychosis
  - Bipolar disorder
  - Severe OCD
  - Treatment resistant depression
  - Delirium

FDA approved for slef-ijurious behavior, aggression and irritability in PDDs.

Antipsychotics

- Aggression
- Irritability
- Emotional Outbursts
- Self-injurious behavior
- Head banging, hitting, aggressive or self-stimulating behavior that is harmful
- Auditory Hallucinations
- PRN (as needed) basis for Agitation or Acute episodes of Aggression
- Sedation

Common Antipsychotics

- •Olanzapine (Zyprexa, Zydis)
  - Risk of weight gain, metabolic syndrome
- Risperidone (Risperdal, M-Tabs)
  - EPS risk = typical at doses >6mg
  - Hyperprolactinemia - greater D2 antagonism than other agents (similar to Haldol)

Quetiapine (Seroquel)

  - sedating
  - risk of hypotension, rare cataracts

- Ziprasizone (Geodon)
  - Prolonged QTc
  - Tends to be activating - tolerability issues

Common Antipsychotics

- Aripiprazole (Abilify)
  - mixed DA agonist/antagonist
  - Serotonergic effects as well
  - Less sedating
  - Probably less weight-gain concerns
  - May be activating - not as commonly used on inpatient settings
  - Consider for non-agitated patients
  - Consider if TD or other SEs have been an issue

Antipsychotic Side Effects

- Weight Gain
- Increase in Appetite
- Metabolic Changes (Changes in Cholesterol, Triglycerides, Fasting Blood Sugar)
- Sedation
- Muscle Stiffness
- Movement Disorders

Questions for Medication Visits

- *Prior to starting any new psychotropic medication*
  - Informed consent for medication treatment is documented
- *When a new psychotropic medication is prescribed,*
  - At least one target symptom that medication treatment is anticipated to address is documented.
- Client education about reason for medication and possible side effects
  - Clinical rationale for selection or for use of antipsychotic medication
- *When a new atypical antipsychotic medication is prescribed,*
  - Baseline height and weight or BMI
  - Baseline laboratory tests to screen for metabolic abnormalities are ordered or results are recorded
- Baseline assessment for extrapyramidal symptoms
- ***For adults,*** if **2 or more** antipsychotic medications are **concurrently** prescribed, the clinical rationale use is documented.

Vignette I

- 9 year old
- No history of medication
- Can't keep hands to self, always touching other children and "bothering them"
- Irritable
- Moving all over the place

Vignette II

- Down's Syndrome
- Depression
- Poor Self Care
- Apathy
- Low motivation
- Doesn't' want to shower or get dress
- Sometimes talking to self