

# PEDIATRIC USE OF ANTIPSYCHOTICS

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# THE CHANGING LANDSCAPE

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- Rising prescribing rates in youth
- Limited access to child psychiatry
- High prevalence of off-label use
- Increased vulnerability to side effects in children

# WHAT ARE ANTIPSYCHOTICS?

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## **First Generation Antipsychotics (Typical)**

- Treatment for schizophrenia
- Examples: Haloperidol, Perphenazine, Pimozide
- Mechanism of action: Dopamine 2 antagonist
- Higher risk of abnormal movements

# ATYPICAL ANTIPSYCHOTICS

## **Second Generation Antipsychotics**

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- Examples: Risperidone, Olanzapine
- Treatment for schizophrenia, Bipolar Disorder, treatment-resistant depression, treatment-resistant anxiety, other off-label conditions
- Mechanism of action: Dopamine and serotonin antagonist
- Higher risk of metabolic side effects

## **Third Generation Antipsychotics**

- Example: Aripiprazole
- Mechanism of action: Partial serotonin and dopamine agonist
- Lower risk of movement and metabolic side effects

# FDA-APPROVED PEDIATRIC INDICATIONS

Medication	Ages	FDA Approved Indications
Aripipazole	6 – 17yo	Irritability in autism; tourette's; schizophrenia (13-17); bipolar I mania/mixed (10-17)
Asenapine	10 – 17yo	Bipolar I mania/mixed
Lurasidone	10 – 17yo	Schizophrenia (13-17), bipolar depression (10-17)
Olanzapine	13 – 17yo	Schizophrenia; bipolar I mania/mixed
Paliperidone	12 – 17yo	Schizophrenia
Quetiapine	10 – 17yo	Bipolar I mania/mixed; schizophrenia (13-17)
Risperdal	5 – 16yo	Irritability in autism; schizophrenia (13-17); bipolar I mania/mixed (10-17)

# COMMON OFF-LABEL USES

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- Severe aggression
- Disruptive behavior
- ADHD with severe aggression after stimulant optimization
- Mood dysregulation
- Tic disorders
- Acute agitation

# ADVERSE EFFECTS: METABOLIC RISKS

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- Weight gain
- Hypertension
- Dyslipidemia
- Insulin resistance
- Elevated glucose or HbA1c

# ADVERSE EFFECTS: NEUROLOGIC, ENDOCRINE AND CARDIAC RISKS

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- EPS and akathisia
- Tardive dyskinesia (rare but possible)
- Hyperprolactinemia
- QT prolongation (agent-specific)
- Sedation
- Orthostasis

# BASELINE MONITORING

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- Weight/BMI
- Blood pressure
- Fasting glucose or HbA1c
- Lipid panel
- Family history
- Movement screening
  - Abnormal Involuntary Movement Scale

# FOLLOW-UP MONITORING

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- Weight/BMI at each visit
- Blood pressure
- Movement screening
- Review appetite, sleep, mood
- Periodic metabolic labs

# PRESCRIBING PRINCIPLES

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- Confirm diagnosis and impairment
- Ensure psychosocial interventions have been attempted
- Use the lowest effective dose
- Avoid polypharmacy
- Reassess need regularly
- Coordinate with psychiatry

# SPECIAL POPULATIONS

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- **Autism Spectrum Disorder**
  - Risperidone and aripiprazole reduce irritability and aggression
- **ADHD with Severe Aggression**
  - Consider only after stimulant optimization and behavioral therapy
- **Foster Care / High-Risk Youth**
  - Higher prescribing rates; careful oversight needed
- **Substance Use**
  - Obtain history

# COUNSELING FAMILIES

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- Explain target symptoms
- Discuss potential side effects
- Reinforce monitoring
- Emphasize behavioral interventions
- Set expectations for follow-up

# KEY TAKEAWAYS

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- Antipsychotics can be effective for severe symptoms but require structured monitoring.
- Pediatricians play a central role in safety oversight.
- Collaboration with psychiatry improves outcomes.
- Regular reassessment helps ensure ongoing need and safety

**THANK YOU!**

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# CURRENT RECOMMENDATIONS: MONITORING OF METABOLIC-SIDE-EFFECTS IN YOUTH PRESCRIBED ANTIPSYCHOTICS

- **initial** height, weight, BMI/BMI%, fasting plasma glucose and/or HbA1c, and lipid profile (total cholesterol, LDL, HDL, triglycerides)
- height, weight, BMI/BMI% **at each visit**
- **repeat labs** in three months, six months then yearly or more often depending on results



# METABOLIC MONITORING FOR CHILDREN & ADOLESCENTS ON ANTIPSYCHOTICS (APM)

- The percentage of HUSKY Health youth\* who had two or more antipsychotic prescriptions filled per year (could be the same antipsychotic) and had metabolic testing.
  - Three rates are reported:
    1. The percentage of youth on antipsychotics who received blood glucose testing (including A1c or standard glucose testing).
    2. The percentage of youth on antipsychotics who received cholesterol testing.
    3. The percentage of youth on antipsychotics who received blood glucose and cholesterol testing.
- Metabolic side-effects of antipsychotics in children and adolescents are a growing concern.
- CT testing completion rates are consistently **below** national and regional benchmarks.
- **Only one third** of all CT HUSKY Health youth are completing the monitoring needed for the medications they are prescribed.
- For youth less than age 12, **only one fourth** receive the recommended monitoring.

# COLLABORATION WITH PEDIATRICS

- While the primary responsibility for monitoring metabolic side effects\* lies with the prescriber of the antipsychotic, **effective communication and collaboration with pediatric primary care are essential**
- **Medication reconciliation:** CHN CT Provider Portal – provides access to daily pharmacy report and monthly pharmacy claims report
- Collaboration can:
  - enhance overall care
  - boost adherence to medication and treatment plans
  - improve consistency and accuracy of metabolic monitoring

