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# PANDAS

— PANDAS and Eating Restrictions —

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## Learning Objectives

- 1- List the symptoms associated with PANDAS
- 2- Describe the biological mechanism for PANDAS
- 3- Explain how PANDAS can be diagnosed
- 4- Describe how eating restriction presents in PANDAS patients
- 5- Create a treatment plan for an individual presenting with eating restriction related to PANDAS

## What is PANDAS?

Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections

(Also, PANS refers to Pediatric Acute-onset Neuropsychiatric Syndrome)

Described by an **Acute Flare** period followed by a relapsing-remitting, chronic-static or chronic-progressive course related to an infectious trigger (e.g. Strep but may be other)

## Definition

Defined as the rapid onset of obsessive-compulsive disorder (OCD) or **eating restrictions** and comorbid symptoms from at least two of seven categories:

- anxiety (particularly separation anxiety);
- emotional lability or depression;
- irritability, aggression, and/or severely oppositional behaviors;

## Definition (continued)

- deterioration in school performance [related to attention-deficit/hyperactivity disorder (ADHD)-like behaviors, memory deficits, and cognitive changes];
- sensory or motor abnormalities;
- somatic signs and symptoms, including sleep disturbances, enuresis, or urinary frequency

Symptoms not explained by a neurologic or medical disorder

## What Little We Know

- Males outnumber females by ~ 2:1
- Symptoms began in early childhood ( $7.3 \pm 2.7$  years)
- Separation anxiety (86–92%), school issues (75–81%), sleep disruptions (71%), tics (60–65%), urinary symptoms (42–81%)

## What Little We Know

### Family History

- autoimmune/inflammatory diseases and psychiatric disorders were common in first-degree family members (71% and 78%, respectively)
- Some very early, anecdotal evidence of family history of epilepsy or seizure disorders

## How it happens

Immune-mediated brain disease, involving the caudate, putamen, and other basal ganglia structures.

TABLE 1: EFFECTS OF BASAL GANGLIA INFLAMMATION

Basal Ganglia is a Relay Station through which Run Neurons that Control:	Inflammation may cause:
Mood & emotion	OCD, Mood lability, Anxiety
Behavior	OCD, Rage, Developmental regression
Procedural learning	Handwriting changes, Clumsiness
Motor movements	Tics, Choreiform movements
Cognition	Slow processing speed, Memory issues, specific Sensory learning deficits (often Math)
Sensory	Sensitivity to light, sounds, smells, tastes, textures

Borrowed from  
<https://www.pandasppn.org/seeingyourfirstchild/>

## Clinical Diagnosis

Clinical Diagnosis and one of Rule Out -- there is no test...

Pandas Physician Network has [great resources](#)

## Key terms

IVIG

Flare

ASO Titer

Cunningham Panel

## Case Example

8 y.o. Female

Sudden onset of OCD symptoms (excessive confessing, concern with right/wrong, contamination fears).

Flu-like symptoms predate onset, but negative GAS throat culture.

Extreme perfectionism and moral concern. Feels guilty, hits head if she makes a mistake, denies herself "treats."

## Case Example

Presents with restrictive eating: not eating foods that taste good or she enjoys. She gives away "treats" and avoids eating anything "pleasurable."

After a treatment of 2 weeks of Amoxillan and IVIG protocol, her food restriction decreased. OCD remitted and food intake was adequate.

## Eating Restriction Presentation

- 1 in 5 kids with PANDAS/PANS have restrictive eating to specific food groups or all groups
- Often with weight loss; sometimes with dehydration
- Often the cause is from OCD obsessions and compulsions

## Eating Restriction Presentation

Obsessions and Compulsions may be:

- Fear of vomiting or choking
- Contamination fears
- Ritualized eating (e.g. at the same time daily)
- Fear something “bad” will happen if he/she eats
- Obsession over body weight/image

## Eating Restriction Presentation

Fits the diagnosis for Avoidant/Restrictive Food Intake Disorder (ARFID):

- Although exclusionary criteria are “The eating disturbance is not attributable to a concurrent medical condition” clinicians are currently using ARFID to capture this symptom of PANDAS/PANS

## Distinguishing PANDAS from Anorexia Nervosa

- PANDAS has an abrupt and acute onset
- Age of onset
- Male prevalence
- Co-morbidities
- Related to recent infectious trigger
- Relapsing/Remitting course related to treatment of infectious agent

## Hypothesized Cause

- In animal studies, antibodies that attack  $\alpha$ -melanocyte ( $\alpha$ -MSH) stimulating hormone affects feeding behavior.
- $\alpha$ -MSH is involved in decreasing brain inflammation, creating appetite, etc.
- Hypothesized that: the body mistakes  $\alpha$ -MSH and fights it, decreasing its production.

## Three Things To Remember

- This is Medical: behaviors, emotions, and pain result from an autoimmune response
- This is a Moving Target (No "cure")
- There are No Experts (You are now the expert!)

## Overview of TX Approaches

During a flare

- Attacking the infection and inflammation
- Attending to safety and family support

Maintenance

- Psychotherapy
- Whole body health (decrease inflammation)
- Put school supports in place

## Example of a Treatment Team

Pediatrician (manages day-to-day care)

Psychiatrist

Infectious Disease

Doctor/Rheumatologist/Neurologist/Allergist

Nutritionist/Dietitian

Feeding Specialist

## Example of a Treatment Team

Individual Counselor (CBT or Trauma)

Family/Parenting coach

In home Behavioral Specialist (as needed)

504 Coordinator/SPED Coordinator

Psychologist (if testing is needed for school supports)

Insurance advocate... support team... parent group...

## First Line of Treatment

1. Treat the infection
  - Antibiotics (oral or IV)
2. Crisis support around behaviors (hospitalization?)
3. Ensure adequate water and food intake

## Second Line of Treatment

Decrease the inflammation

- Anti-inflammatories (NSAIDS, Steroids)
- Diet modifications
- Treat allergies and food sensitivities

## Third Line of Treatment

Treat the Symptoms:

- Behavioral interventions - CBT, ERPs
- Psychiatric Medications - consider antidepressants
- Nutrition - consider supplements such as inisotol, etc.
- Food therapy

Family Support and Education

School Support

## Long Term Treatment during Remissions

Trauma work for parents/siblings; attachment work

Build Coping Skills, Ability to identify onset, trauma work for medical procedures

Identity work as the “sick child”

Maintain a low inflammation diet and lifestyle

Supports for school

## What is Your Treatment Plan?

8 y.o. Female

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Presents with restrictive eating: not eating foods that taste good or she enjoys. She gives away “treats” and avoids eating anything “pleasurable.”

## Closing Questions

## Resources

My resources and recommendations are listed on my website at: (if you would like to be listed as a PANDAS friendly provider, please let me know!)

[www.PsychologyCenterofAustin.com](http://www.PsychologyCenterofAustin.com)

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Offer free clinician consultations or family consultations at my hourly rate