WHO WE ARE

PANDAS/PANS Ontario is a not for profit organization founded in Sarnia, Ontario and incorporated on June 4, 2014. The organization is governed by a volunteer board of directors and aims to provide awareness and resources about PANDAS and PANS and to support affected families in communities across Ontario. Our services include individual support sessions, in person and online support groups, community awareness/educational presentations, and coordination of medical and educational resources. It is our mission to ensure that all children who present with the symptoms of PANDAS or PANS are screened for infection in a timely manner and that these families are supported along their child’s path to healing.

CONNECT WITH US

1-844-820-9672
info@pandaspansontario.org
www.pandaspansontario.org

Other Helpful Resources

The PANDAS Physicians Network
www.pandasppn.org

ACN Latitudes
(Association for Comprehensive Neurotherapy)
www.latitudes.org

PANDAS Canada
www.pandascanada.wix.com

The PANDAS Network
www.pandasnetwork.org

National Institute of Mental Health
www.nimh.nih.gov

Moleculera Labs
www.moleculera.com

1 in 200 children are affected by PANDAS/PANS.
Symptoms include OCD, Tic Disorders, and more.

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WHAT IS PANDAS/PANS?

**P.A.N.D.A.S.**
Paediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections
It describes a subset of children or adolescents who have either an abrupt onset of Obsessive Compulsive Disorder or Tic Disorder symptoms or an acute worsening of symptoms following a streptococcal infection.

**P.A.N.S.**
Paediatric Acute-Onset Neuropsychiatric Syndrome
It is the term used to describe the cases where there is a link to symptom onset with other infections, not only streptococcal infections. The more commonly known term P.A.N.D.A.S is a subset of the wider definition of P.A.N.S.

SYMPTOMS
The symptoms experienced by a child affected by P.A.N.D.A.S. or P.A.N.S. may include the following:

- Obsessive Compulsive Behaviours
- Generalized anxiety
- Joint pain
- Restrictive eating
- Tics (motor, vocal, echolalia)
- Emotional lability (including irritability, aggression or depression episodes, inability to control tears or laughter)
- Behavioural regression (baby-talk, temper tantrums)
- Developmental regression (fine motor skills, handwriting)
- Decreased ability to concentrate and/or hyperactivity
- Loss of abilities in mathematics and visual-spatial areas
- Sensory issues (sound, smells, light, clothing)
- Urinary issues (increased frequency, bed wetting or daytime enuresis)

DIAGNOSIS
Pandas/Pans is a clinical diagnosis based on symptomatic presentation. There is blood work that is supportive of a diagnosis but there are too many variables involved to rely solely on the lab results.

The current diagnostic criteria for PANDAS includes the following five symptoms:

- Presence of obsessive-compulsive disorder and/or a tic disorder
- Paediatric onset of symptoms (age 3 years to puberty)
- Episodic course of symptom severity
- Association with group A Beta-hemolytic streptococcal infection (a positive throat culture for strep or history of Scarlet Fever)
- Association with neurological abnormalities (motoric hyperactivity, or adventitious movements, such as choreiform movements)

Since a diagnosis of PANS implies no specific cause, clinicians will have to evaluate and treat each affected youth on a case-by-case basis; however, the current diagnostic criteria for PANS includes the following three components:

- Abrupt, dramatic onset of OCD or anorexia
- Concurrent presence of at least two additional neuropsychiatric symptoms with similarly severe and acute onset. These include: anxiety; mood swings and depression; aggression, irritability and oppositional behaviors; developmental regression; sudden deterioration in school performance or learning abilities; sensory and motor abnormalities; somatic signs and symptoms
- Symptoms are not explained by a known neurologic/medical disorder

TREATMENT
- Antibiotics
- Anti-inflammatory medication and/or corticosteroid therapy
- IVIG (intravenous immunoglobulin)
- Plasmapheresis
- Standard psychiatric medications (very low dose) and Cognitive Behaviour Therapy
- Alternate therapies/diagnostic tools can include a full immunological work up, the Cunningham Panel of tests, MRI/PET Scans, Allergy testing, Nutritional counselling, Genetic testing and Homeopathy and Naturopathic Care
- When running lab tests to look for evidence of infectious triggers Group A Streptococcus should always be considered (which can be asymptomatic and also be present in places other than the throat)
- Other infectious triggers to consider are Mycoplasma, Lyme disease, Herpes Simplex Virus, Coxsackie virus, Epstein Barr virus, Staph infections, Influenza, particularly H1N1

STATISTICS
- 1 in 200 children may be affected by PANDAS/PANS
- This is equivalent to statistics for Paediatric Cancer, Paediatric Diabetes Type 1 & 2, and ALS
- The average age of symptom onset is between 4 and 7 years of age
- Strep is indicated as the primary infectious trigger in 81% of cases
- Other infections are indicated in 19% of cases

Primary symptoms reported by 700 families in the US are:

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Obsessive Compulsive Disorder (OCD)</td>
<td>37%</td>
</tr>
<tr>
<td>Tic Disorders (Tics)</td>
<td>14%</td>
</tr>
<tr>
<td>OCD &amp; Tics</td>
<td>49%</td>
</tr>
<tr>
<td>Family History of both Autoimmune Illness and Strep Related Severity illness</td>
<td>70% of 100 families</td>
</tr>
</tbody>
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* United States stats as reported by the PANDAS Network and derived from the NIH, IOCDF and CDC.