

WHAT IS

PANDAS/PANS?

PANDAS IS AN ACRONYM FOR **P**EDIATRIC **A**UTOIMMUNE **N**EUROPSYCHIATRIC **D**ISORDERS **A**SSOCIATED WITH **S**TREP INFECTIONS.

PANS STANDS FOR **P**EDIATRIC **A**CUTE-ONSET **N**EUROPSYCHIATRIC **S**YNDROME.

PANDAS / PANS

PANDAS/PANS is a treatable autoimmune disorder that affects children with the average age of onset between 4 and 7 years. (It is possible that adolescents and adults may have immune mediated OCD, but this is not known.) The condition is believed to be triggered by an infection.

PANDAS/PANS occurs when the antibodies the body has made to fight an infection mistakenly attack healthy tissue in the brain contributing to a host of movement disorders, neuropsychiatric symptoms, and abnormal neurologic behaviors.

Parents often describe the onset of symptoms as the day they “lost” their child. Typically the change is dramatic, with symptoms developing within a 24 to 48 hour period. The OCD symptoms and/or eating restrictions begin so suddenly that most parents can recall the exact day and time that the OCD or restrictive eating began.

DIAGNOSIS / TREATMENT

Often, PANDAS/PANS is misdiagnosed and only its symptoms are treated. To be effective, treatment must properly target the infection and support the underlying immune system. With proper medical care and appropriate medications, PANDAS/PANS can be successfully treated. Testing is the first step to proper diagnosis and treatment.

COMMON DIAGNOSTIC CRITERIA FOR PANDAS ARE:

- Presence of obsessive-compulsive disorder and/or a tic disorder
- Pediatric onset of symptoms (age 3 to puberty)
- Episodic course of symptom severity
- A positive throat culture for strep or history of Scarlet Fever
- Association with neurological abnormalities (motor hyperactivity or choreiform movements)

COMMON DIAGNOSTIC CRITERIA FOR PANS ARE:

- Abrupt, dramatic onset of OCD or severely restricted food intake
- Symptoms are not better explained by a known neurologic or medical disorder
- Addition of at least 2 of the “accompanying” symptoms: anxiety, emotional swings and/or depression, irritability, aggression, behavioral regression, deterioration in school performance, sensory or motor abnormalities, sleep disturbances, bed wetting or urinary frequency changes
- PANS may start with infectious agents other than strep, environmental triggers or immune dysfunction

COMMON SYMPTOMS

VOCAL TICS

OBSESSIONS

MOTOR TICS

BEHAVIORAL REGRESSION

COMPULSIONS

ANXIETY

IRRITABILITY

SLEEP DISTURBANCES

DEPRESSION

IMPULSIVITY

CHANGES IN HANDWRITING

ANOREXIA

AGGRESSION

SENSORY ABNORMALITIES

EMOTIONAL SWINGS



THE CUNNINGHAM PANEL™ OF TESTS

The Cunningham Panel™ of Tests helps physicians identify the autoimmune antibodies associated with PANDAS/PANS and the capability they have to stimulate and trigger neurologic behavior.

This allows physicians to differentiate between a true psychiatric disorder and an infection-triggered autoimmune neuropsychiatric syndrome.

The Cunningham Panel™ measures the level of autoantibodies circulating in your child's bloodstream. Elevated levels indicate the likelihood that your child's symptoms are autoimmune.

Due to the complexity of these tests, please allow 6-8 weeks for your child's results to be available.

WHAT IS THE COST OF THE TESTS?

The full price of the 5-test Cunningham Panel™ is \$925. If you have an employer sponsored or private medical insurance plan, Moleculera Labs can file your insurance on your behalf. If you would like us to file your insurance, we require a \$425 deposit when the test is ordered.

If you have a government sponsored medical insurance plan such as Medicare, Medicaid, Tricare, etc., we are unable to file claims on your behalf. Since we are considered an out-of-network provider for government sponsored plans, the patient will have to file the claim. Generally, we require the full payment of \$925 when the test is ordered. However, if you are unable to pay that upfront, please contact our office to make other arrangements.

If you prefer to file the insurance claim yourself, you will need to pay the full price of \$925 when the test is ordered.

If you are unable to pay the full deposit of \$425 upfront or need to make payment arrangements, please contact our office and we will work with you on a case-by-case basis to find a payment arrangement that works for your family.

Although we are the only laboratory that provides this test panel, Moleculera Labs is considered an "out-of-network" provider for all insurance companies. Actions that may help with your insurance claim include:

Some insurance plans will consider the panel as in-network if an in-network physician orders the test. We recommend that you contact your insurance company and inquire about this **prior to testing**.

Because we are out-of-network, we encourage you to contact your insurance company **prior to testing** to request a precertification or an out-of-network waiver for the Cunningham Panel™ of Tests.

To help support a precertification, an out-of-network claim, or filing your own claim, there are tools available online under the patient tab on our website at www.moleculera.com.

TEST EXAMPLE



Cunningham Panel™ Testing Results

Patient Name: Last Name, First Name
Patient DOB: 02/25/2005
Patient ID Number: C000-001-AB
Date of Test Report: 04/20/2015

PATIENT REPORT

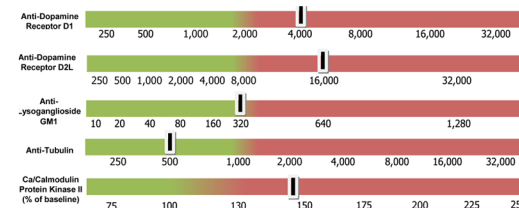
Submitting Physician: Doctor Name, MD
Date of Collection: 05/16/2013
Date of Receipt: 05/17/2013

LABORATORY TEST RESULTS COMPARED TO NORMAL RANGES

	Anti-Dopamine Receptor D1 (titer)	Anti-Dopamine Receptor D2L (titer)	Anti-Lysoganglioside GM1 (titer)	Anti-Tubulin (titer)	CaM Kinase II (% of baseline)
Patient Result	8,000	8,000	80	500	145
Normal Ranges	500 to 2,000	2,000 to 8,000	80 to 320	250 to 1,000	53-130
Normal Mean	1,056	6,000	147	609	95

The Cunningham Panel measures human serum Immunoglobulin G (IgG) levels by Enzyme-Linked Immunosorbent Assay (ELISA) directed against: Dopamine D₁ Receptor (DRD1), Dopamine D₂ Receptor (DRD2L), Lysoganglioside-GM1 (LYSO-GM1) and Tubulin (TUB). The ELISA assays are performed in duplicate using an assay where the colorimetric intensity at a specific wavelength is directly proportional to the amount of antibody in the sample. The fifth assay of this panel is performed in triplicate and measures the specific activity of calcium/calmodulin-dependent protein kinase II (CaM KII) induced by the patient serum in cultured human neuronal cell lines compared to controls. This panel measures the level of these antibodies, and the ability of the patient's sera to stimulate CaM KII at a single point in time. Results may vary depending on the patient's condition and status, whether they are on immunosuppressive agents, corticosteroids or other immune modulatory therapy, and the length of time post treatment.

LABORATORY TEST RESULTS



MORE INFORMATION

Moleculera Labs is the only lab that performs this panel.

As such, we encourage you to ask your insurance company to consider Moleculera Labs as in-network. To help support this request, we have a Sole Provider Letter available on our website which you can provide to your insurance company.

You can also find additional information regarding insurance reimbursement on our website by clicking on the Insurance FAQs button. There, you will find procedure codes (CPT codes), information regarding diagnosis codes (ICD-9 codes), and other helpful information.

MOLECULERA LABS IS COMMITTED TO HELPING PATIENTS IN NEED OF TESTING. PLEASE CONTACT OUR OFFICE AT 405-239-5250 WITH ANY QUESTIONS.



TO LEARN MORE ABOUT **PANDAS/PANS** AND TESTING FOR THIS CONDITION, VISIT **MOLECULERA.COM**, EMAIL **CUSTOMERSERVICE@MOLECULERA.COM** OR CALL US AT **405-239-5250**.