

Dr. Song's 6-Step Approach to PANS/PANDAS

(Please note: The following is my approach to PANS/PANDAS based upon my clinical experience. It is not intended to be an exhaustive list of treatment options, and should not be used as a specific treatment protocol. As always, each patient's plan must be individually tailored with the guidance and clinical judgment of their healthcare practitioner.)

STEP 1: Identify and Treat the Root Cause (infectious/toxic triggers)

GOAL: Know exactly what to treat.

1. Let history be your guide.
2. Testing may include ASO, anti-DNAse B strep antibody, Lyme and tickborne coinfections, HHV-6, HSV 1+2, Mycoplasma pneumonia, EBV, Parvovirus-B19, Coxsackievirus A+B, CMV, influenza, mold and heavy metal testing
3. Throat, nasal, skin and perianal swabs for strep
4. Consider Moleculera Lab's Cunningham panel to assess for brain auto-antibodies
5. Use pharmaceutical and herbal anti-microbials as indicated
6. Consider T&A

STEP 2: Put Out the Fire (anti-inflammatories)

GOAL: Bring down the fire in the brain.

1. Pharmaceutical anti-inflammatories
 - a. NSAIDS (Ibuprofen, Naproxen)
 - b. Corticosteroids
 - i. 2mg/kg/day up to 60mg/day x 3-5 days for flares
 - ii. Longer steroid taper)
2. Natural anti-inflammatories
 - a. Omega-3 Essential Fatty Acids
 - b. Curcumin
 - c. Quercetin
3. Protect the brain
 - a. Phosphatidyl serine, Phosphatidyl choline
4. Antioxidants - EAT A RAINBOW!
5. Eliminate/reduce inflammatory foods (gluten, dairy, sugar, artificial dyes/flavors/preservatives)

STEP 3: Keep the Fire Down (immunomodulators)

GOAL: Keep the fire down.

1. IVIG 2 gram/kg over 2 days
2. Specialized Pro-Resolving Mediators (Metagenics SPM Active)
3. Low-dose naltrexone
4. Vitamin D
5. CBD
6. Chinese skullcap

STEP 4: Address Functional Medicine Core Clinical Imbalances

GOAL: Do everything you can to help the body/brain heal.

1. Optimize diet and nutritional insufficiencies
2. Treat and correct gut dysbiosis and inflammation
3. Address leaky gut and food sensitivities
4. Support methylation – methyl-B12, methylfolate
5. Support mitochondrial function – coQ10, carnitine, ribose
6. Address mast cell activation – luteolin, quercetin, DAO, ketotifen, cromolyn sodium
7. Support neurotransmitter balance – 5-HTP, inositol, GABA, theanine, tyrosine
8. Support detoxification - milk thistle, glutathione
9. Optimize adrenal and thyroid dysfunction
10. Stabilize blood sugar dysregulation

STEP 5: Restore the Body-Mind-Spirit Connection

GOAL: Get the child and family through treatment “WHOLE.”

1. Cognitive-behavioral therapy (CBT) is a must
 - a. Find a CBT psychotherapist knowledgeable of PANS/PANDAS
 - b. Read Dawn Huebner’s “What to Do When” self-help series for kids.
 - i. What to Do When You...
 1. Worry Too Much
 2. Your Temper Flares
 3. You Grumble Too Much
 4. You Dread Your Bed
 5. Your Brain Gets Stuck
2. Support groups and therapy for parents, child, sibling(s)
 - a. Read [In a Pickle Over PANDAS](#) by Melanie S. Weiss
 - b. Work with schools
 - i. Educate staff on PANS/PANS
 - ii. Develop a 504 plan to include immediate notification of strep exposures
3. Consider medications for anxiety, depression, OCD, rages/violent behaviors
4. Support the vagus nerve/parasympathetic nervous system
 - a. Mindfulness/meditation
 - b. Diaphragmatic “belly” breathing
 - c. Gargling, humming
5. LOVE

STEP 6: Integrative Care

GOAL: Support body/brain’s natural desire to get back into balance.

1. Be open to complementary and alternative modalities → homeopathy, essential oils, acupuncture, cranial osteopathy, chiropractic, Reiki, etc.

DR. SONG'S 6-STEP APPROACH TO PANS/PANDAS

Identify the Trigger(s)

- Diagnostic trial of ibuprofen, prednisone, antibiotics
- Throat/Nose/Anus/Skin cultures
- Titters: ASO, Anti-DNAse B, Lyme + coinfections, EBV, HSV 1/2, HHV-6, Coxsackie A+B, Parvo B-19, Influenza, Candida...
- Baseline CBC, CMP, Vit D, RBC Zn, RBC Mg, ferritin
- Comprehensive stool analysis
- Food IgG testing
- Urine Organic Acid test
- Copper, Zinc, Ceruloplasmin (r/o pyroluria)
- +/- Heavy metals
- +/- Mold
- +/- Cunningham panel

Initial Treatment Plan

- ANTI-MICROBIALS
- ANTI-INFLAMMATORIES
 - Ibuprofen, Curcumin, Prednisone
- Omega-3 EFAs
- Vitamin D3
- +/- Probiotics
- GFCF diet
- NO artificial dyes, flavors, preservatives
- Whole foods, organic, phytonutrient-rich diet
- Refer for CBT and other therapies

Treat the Trigger(s)

- Pharmaceutical or Herbal Antimicrobials
- Reduce frequency of secondary illnesses
- Treat close contacts
- Treat non-infectious triggers (allergies, EMF, mold, metals)
- Consider Biofilms & Secondary Hypercoagulability

Put Out the Fire

- For flares: Ibuprofen, Prednisone bursts
- EFAs, Naprosyn, Curcumin, Quercetin, Antioxidants
- Anti-inflammatory diet
- Stress reduction

Keep the Fire Down

- SPM, LDN, CBD Oil, Chinese Skullcap
- Consider IVIG, plasmapheresis, Rituximab

Address Core Clinical Imbalances

- Nutritional Insufficiencies
- Gut dysbiosis, Leaky gut/food sensitivities
- Cell Danger Response
 - > Mitochondrial dysfunction
 - > Mast cell activation/histamine overload
- Methylation stress
- Detoxification concerns

Restore & Rebalance

- Cognitive Behavioral Therapy (CBT)
- Family/sibling counseling
- Mindfulness, meditation, stress reduction

Complementary/Alternative Medicine