Helping All of Us Cope, Heal, and Thrive in Stressful Times

Developmental Disabilities and Neurodiversity Conference April 5, 2024



Introductions

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Integrative Medicine Specialist
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Beth Grady, MD

Pediatrician South San Francisco Clinic San Mateo Medical Center Be kind to yourself.

Take a break if you need it.



Objectives



Describe the science of stress biology.



Identify examples of stress-mitigation strategies that help us cope, heal, and thrive.



Identify examples of community-based support services that help us cope, heal, and thrive.



Adverse Childhood Experiences (ACEs)

Abuse







Physical

Emotional

Sexual

Neglect







Emotional

Household Challenges



Mental Illness



Intimate Partner Violence



Parental Separation or Divorce



Incarceration



Substance Misuse or Dependence

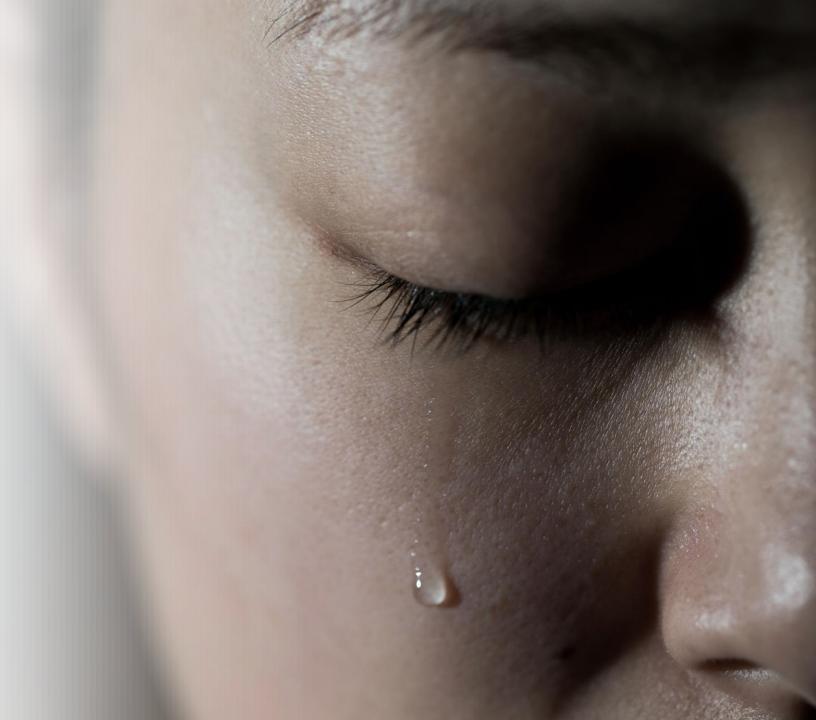
ACEs Dramatically Increase Risk for at least 9 of the 10 Leading Causes of Death in the U.S.

	Leading Causes of Death in the U.S., 2017	Odds Ratios for ≥ 4 ACEs (relative to no ACEs)
1	Heart disease	2.1
2	Cancer	2.3
3	Accidents (unintentional injuries)	2.6
4	Chronic lower respiratory disease	3.1
5	Stroke	2.0
6	Alzheimer's disease or dementia	11.2
7	Diabetes	1.4
8	Influenza and pneumonia	Unknown
9	Kidney disease	1.7
10	Suicide (attempts)	37.5

Source of causes of death: CDC, 2017; Sources of odds ratios: Hughes et al., 2017 for 1, 2, 4, 7, 10; Petrucelli et al., 2019 for 3 (injuries with fracture), 5; Center for Youth Wellness, 2014 for 6 (Alzheimer's or dementia); Center for Youth Wellness, 2014 and Merrick et al., 2019 for 9.

Additional Stressors

- Racism
- Discrimination
- Poverty
- Medical trauma
- Bereavement
- Bullying
- Social isolation
- Climate change
- And more

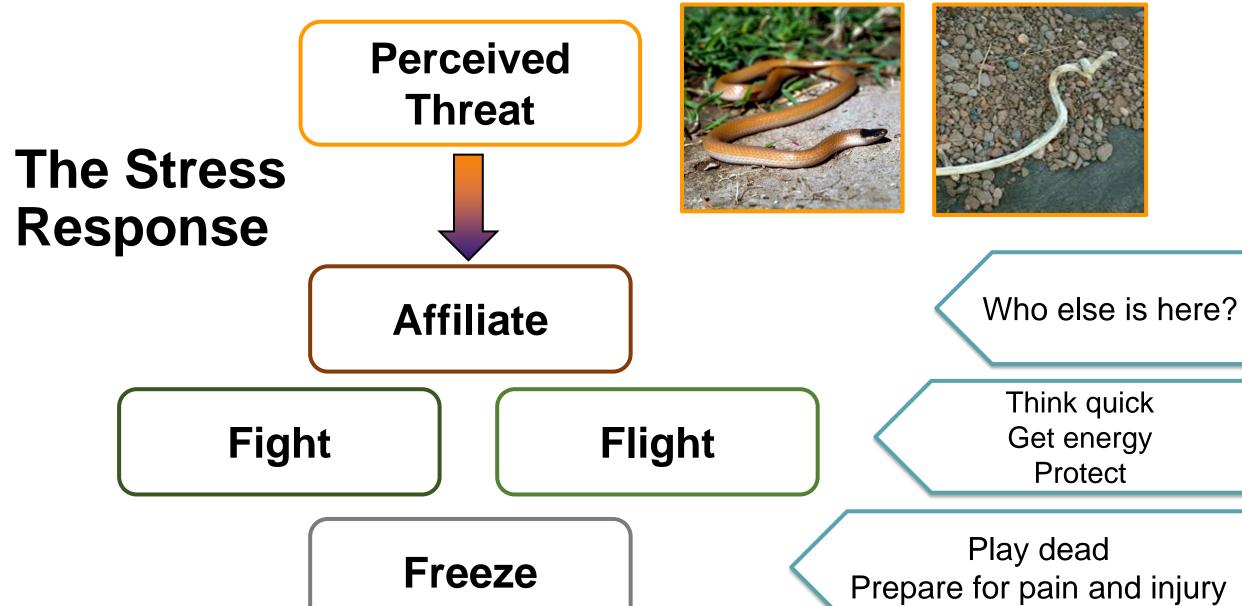




ACEs & Toxic Stress Can Affect Children's Health

- Asthma, Allergies
- · Chronic Pain, Headaches, Stomachaches
- Weight changes
- Sleep disturbances
- Developmental delays
- Learning & behavioral difficulties
- Executive function difficulties
- Self-regulation issues





The Window of Tolerance

Hyper-arousal

High Energy, Anxiety, Anger, Overwhelm, Hypervigilance, Fight/Flight, Chaotic

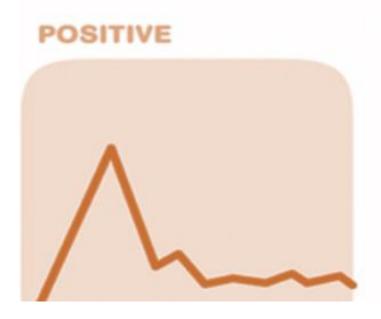
Window of Tolerance

Grounded, Flexiole, Open/Curious, Present, Ready to learn, Able to emotionally self-regulate

Hypo-arousal

Shut down, Numb, Depression, Passive, Withdrawn, Freeze, Shame

Some Stress Builds Resilience



Brief activation of stress hormones which quickly return to baseline



Time-limited activation of stress response results in short-term systemic changes



Prolonged, excessive activation of stress response



Survival/Emotional Brain

On high alert

Trouble regulating emotions

Compromised sense of safety and trust



Thinking/Planning Brain

Trouble focusing

Trouble planning

Learning new things

Endocrine/ Immune

Extra or depleted stress hormones, sugar, proteins

Trouble sleeping

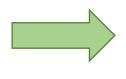
More frequent aches and pains





AND







Address Stressors

 Partner with individuals and communities to lower the stress load

Internal Stress Responses

- Skills to calm the stress response in the moment
- Long-term healing strategies and interventions

Improve

- Health and Wellbeing
- Opportunity
- Equity

Address the Stressors

- Assess current safety and provide any needed resources.
- Anticipate: What are the stressors? Triggers?
 - Es. If loud noises are a stressor, identify quiet spaces, sound canceling headphones
- Find tools and resources on www.acesaware.org/manage stress to support you and your patients.
- Connect to resources using www.findhelp or your local 2-1-1 which can also provide resources such as housing, childcare, and legal services.
- Leverage your networks of care resource list for the resources most often needed in your community.

Trauma-Informed Care Principles

- Establish the physical and emotional safety of patients/clients and staff
- Build trust between providers/staff and patients/clients
- Recognize the signs and symptoms of trauma exposure on physical and mental health
- Provide connections to peer support
- Promote patient-centered, evidence-based care
- Ensure provider and patient collaboration
- Provide care that is sensitive to the patient's/client's racial, ethnic, and cultural background, and gender identity



Strategies to lower stress hormones in the moment:

Hyper-arousal

High Energy, Anxiety, Anger, Overwhelm, Hypervigilance, Fight/Flight, Chaotic

Window of Tolerance

Grounded, Flexible, Open/Curious, Present, Ready to learn, Able to emotionally self-regulate

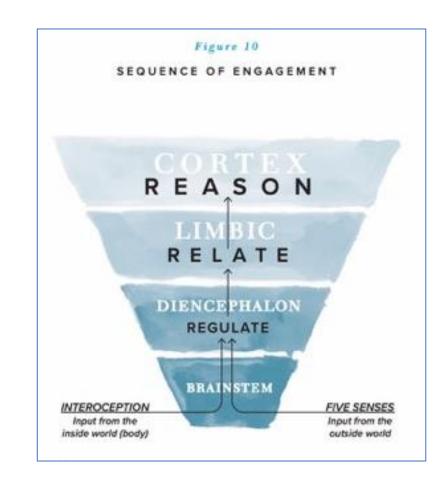
Hypo-arousal

Shut down, Numb, Depression, Passive, Withdrawn, Freeze, Shame

- Grounding techniques.
- Breathing techniques.
- Sensory support.
- Progressive muscle relaxation.
- Exercise.
- Reach out to your support person

Regulate Relate Reason

- 1. First, *regulate* ourselves and coregulate the other person. Help them feel safe and calm, reducing their stress responses.
- 2. Then *relate* to their emotions. Help them feel understood and connected.
- 3. Once the other person feels safe and understood, engage them to process what happened through *reason*.



Skill Building and Collaborative Problem Solving

• Behavior as communication: When children are acting out, they are trying to communicate something.

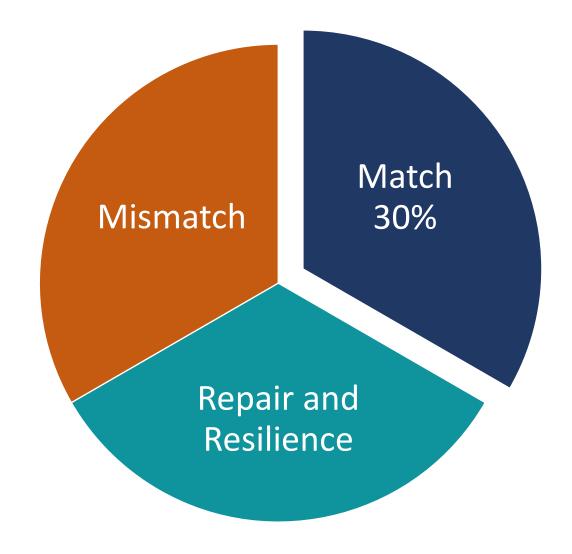
- Teach skills: Often kids who are not doing well, cannot do well because they are missing a skill.
 - Stressors
 - Stress response

"Kids with challenging behavior don't lack the *will* to behave well.

They lack the skills to behave well."

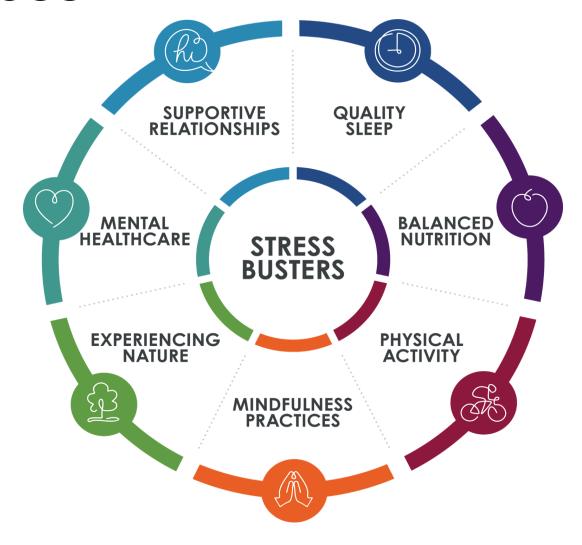
Collaborative Problem Solving

Mismatch + Repair = Connection + Resilience



Long-term healing: Address long-term effects from toxic stress

 Consider strategies and interventions that can improve neurologic, endocrine, immune, and metabolic function.



Trauma Therapies

- Child-Parent Psychotherapy (ages birth to 6 years): Dyadic intervention for young children and their caregivers that supports family strengths and relationships.
- Parent-Child Interaction Therapy (2 to 12 years): Dyadic parent training treatment that emphasizes improving the quality of the parent-child relationship and pattern of parent-child interactions.
- Attachment & Biobehavioral Catch-up (ABC) (Birth to middle school): A strengths-based, focused, brief (10, 1-hour weekly sessions) dyadic, home-visiting program.
- Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) (verbal children and adults): A structured, short-term treatment model for children and adults who have experienced trauma.
- Eye Movement Desensitization Reprocessing (EMDR) (adolescents and adults): EMDR is focused on helping clients resolve unprocessed traumatic memories.
- Family Systems Therapy (verbal children and adults): Supports resolving family conflict or issues.
- Cognitive Processing Therapy (adolescents and adults): A type of cognitive behavioral therapy, generally 12 sessions, that helps modify maladaptive thinking related to their trauma.
- Prolonged Exposure Therapy (adolescents and adults): A cognitive behavioral therapy approach that helps clients gradually approach their memories, feelings and situations of trauma.
- Somatic Therapy (all ages): An approach that focuses on how emotions and stress appear in the body and tools to regulate the autonomic nervous system.
- <u>Biofeedback and Neurofeedback</u> (young children to adults): A type of therapy that allows the client to see their physiology in real-time (e.g. heart rate, coherence, brain wave patterns) to learn strategies to control their physiology.

Stress Phenotyping Framework

Attachment & Relational

Ax: Screen for disruptions in attachment, social support, and social integration. Tx: Support caregivers. Individual, dyadic, and family therapy to build relational skills, provide secure base, process past relational experiences, and increase attachment security.

Sensorimotor

Ax: Screen for sensory processing, pain, balance, and GI symptoms.

Tx: Repetitive, rhythmic, patterned activities, somatic therapies, OT, play, art, and animal-assisted therapies, EMDR, LDN.

Cognitive Processes

Ax: Screen for memory, EF, negative cognitions, dissociation issues. Tx: TF-CBT, DBT, brain training, physical activity.

Stress-Related **Systems**



aEEG. Tx: Neurofeedback, DBR, relaxation techniques, melatonin, CBT-I.

Ax: Screen for sleep and energy levels,

Arousal & Energy

Reward Processing

Ax: Screen for cravings, addictions, and habits.

Tx: Instill healthy coping strategies, TMS, brain training, neurofeedback, psychotherapy, psychedelic-assisted therapy.

Immune

Ax: CBC w/ diff, hs-CRP, fibrinogen, interleukins. Tx: Anti-inflammatory diet, curcumin, omega-3 fatty acids, immune modulator medications.

HPA Axis & Endocrine

Ax: Cortisol, DHEA, glucose, HgbA1c, insulin resistance, lipid panel. Tx: Supportive relationships, mindfulness, physical activity, experiencing nature, intuitive eating interventions.

Autonomic Nervous System

Ax: HR, RR, BP, HRV, salivary alpha amylase.

Tx: HRV biofeedback, yoga, breathing techniques, beta-blockers, quanfacine.

Gilgoff, R.. Stress. In Press. DOI: 10.1080/10253890.2024.2327333

Stress Buster Resources

Becoming ACEs Aware in California Training: https://training.acesaware.org

ACEs Aware Stress Busters Resource Page: www.acesaware.org/managestress

Wellness Corner by the VTA and PACEs Connection: https://vtaplus.org/continuing-education-and-support/wellness-corner/

Stress Busters online curriculum
https://training.acesaware.org/aa/alt/detail?id
=2115

OSG Videos: "What are ACEs" and "How to Manage Stress" https://osg.ca.gov/acestoxic-stress/

SAFE Spaces: Free, on-line training for educators https://osg.ca.gov/safespaces/



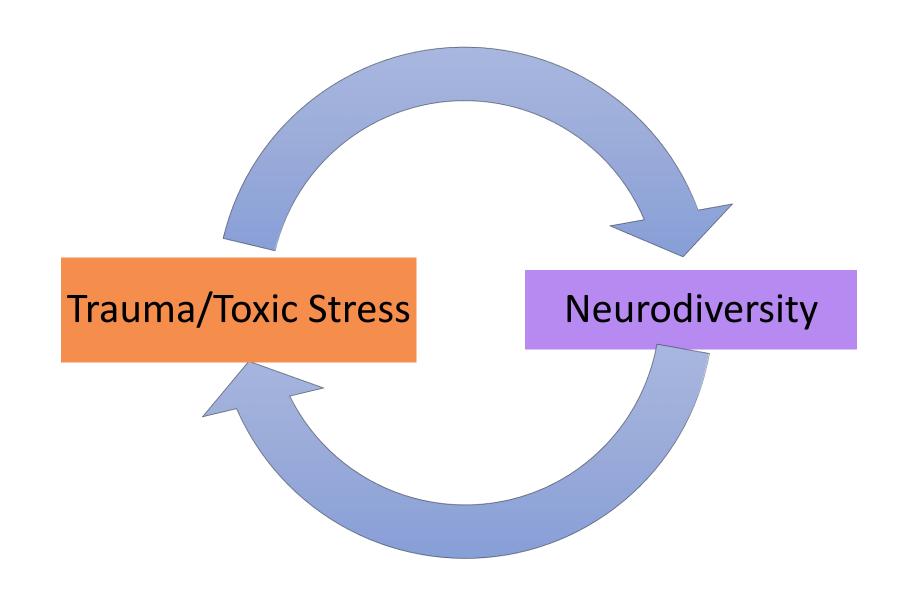
STRESS BUSTERS

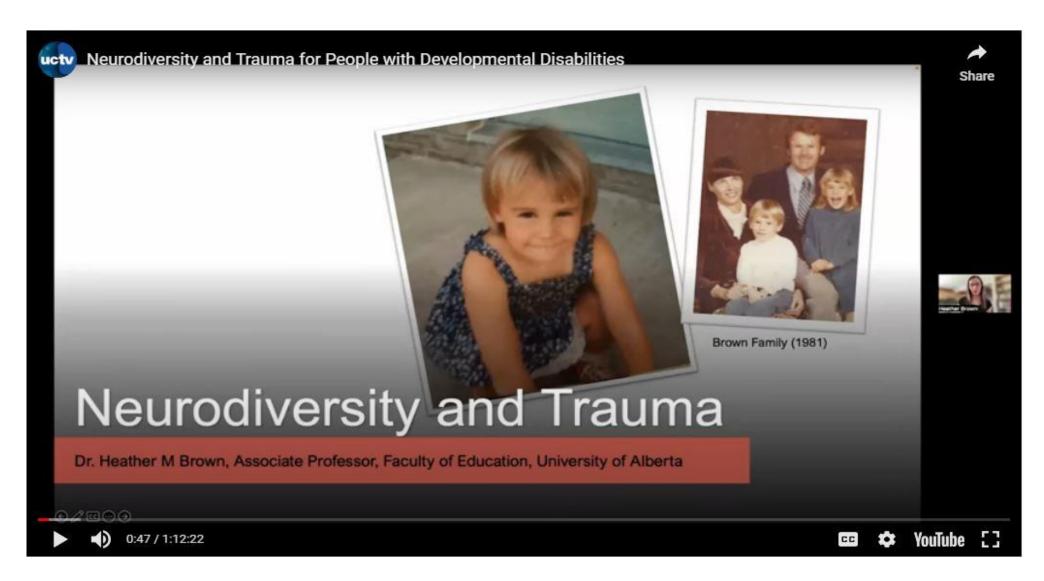
7 Ways to Manage Stress





Stress and Neurodiversity





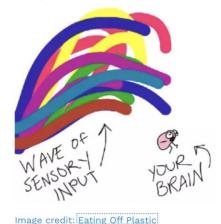
https://www.uctv.tv/shows/38878

What are some aspects of stress and healing specific to neurodivergent people and their allies?

- Some stressors are more common or more intense for ND vs. NT (neurotypical) people
- Healing strategies ("stress busters") can be more difficult to access for ND vs. NT people

Stressors that may be more common or more intense for ND vs. NT people

Sensory Overload



Ableism



https://ds.gmu.edu/inclusive-language/

Bullying



Masking/Camouflaging



Student Support

Awareness and Education Neurodiversity at Work Neurodiversity Wellness

Who We Are SNP-REACH 2022

Stanford Neurodiversity Summit 2022

Neurodiversity Wellness

Mental Health Resources

Neurodiversity Clinic

Clinic Director: Lawrence Fung, MD, PhD

Psychiatrist: Thuc-Quyen Nguyen, MD

Licensed Clinical Social Worker: Hilary Oleon, LCSW

DUE TO THE COVID-19 CRISIS, WE ARE CURRENTLY SEEING PATIENTS VIA

TELEHEALTH ONLY.

WE CONTINUE TO TAKE NEW PATIENTS AT THIS TIME.

Address: 401 Quarry Road, Stanford, CA

Phone numbers:

Scheduling follow-up appointments: 650-498-9111

Medication refills: 650-498-9111, option 5

Referrals from Stanford Providers

Please submit referral via EPIC. Please submit a referral to Psychiatry, choose "Psychosocial Treatment Clinic", and specify that this referral is directed to the Adult Neurodevelopment Clinic.

Referrals from non-Stanford Providers

Please send a referral by Email (ReferralCenter@stanfordhealthcare.org) or fax (650-320-9443)

Primary Care Resources

HEALTHCARE TOOLKIT: Patient Centered Care Tools for Autistic Adults

Independent living skills resources

MoneyMinded, a comprehensive suite of financial education resources for adults

COVID-19 Resources

Selected Presentations

Dealing with Stress and Anxiety during the Pandemic (Speaker: Lawrence Fung, MD,

PhD)

Selected High-Yield Resources

COVID-19 Q&A: Dr. Lawrence Fung on Impacts on the Neurodiverse Community

CDC's Mental Health & Coping with COVID-19

COVID-19 information and resources for adults on the spectrum (Autism Speaks)

Supporting Individuals with Autism through Uncertain Times (University of North Carolina)

COVID-19: Tips for Mindfulness & Coping with Anxiety (Mayo Clinic)

Toolkits

Supporting Individuals with Autism through Uncertain Times (University of North Carolina)

COVID-19 Resources (Autism Society)

Resources for Families of Individuals with Special Needs during Coronavirus Outbreak (Early Support Program for Autism, Stanford)

How to Talk with Kids About COVID-19 (Pediatric Anxiety and Traumatic Stress Clinic, Stanford)

COVID Coach (US Department of Veterans Affairs)

Selected Articles

Feeling anxious about the coronavirus? A Stanford psychiatrist offers tips

How to Talk with Kids About COVID-19 (Lucile Packard Children's Hospital)

AASPIRE Healthcare Toolkit www.autismandhealth.org



HOME • ABOUT • SITE MAP • PARTNERS • CONTACT

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Search

AASPIRE Healthcare Toolkit

Primary Care Resources for Adults on the Autism Spectrum and their Primary Care Providers

This web site has information and worksheets for adults on the autism spectrum, supporters, and healthcare providers. It focuses on primary healthcare, or healthcare with a regular doctor.

The resources on this site are meant to improve the healthcare of autistic adults. They were made by the <u>Academic-Autistic Spectrum Partnership in Research</u> and Education (AASPIRE) through a series of research studies funded by the <u>National Institute of Mental Health</u>. AASPIRE hopes that you will find these resources helpful.



Make a Personalized Accommodations Report for your healthcare provider.

This section also has information on:

- Healthcare
- Staying Healthy
- Your Rights in Healthcare



This section has information on:

- Autism Information, Diagnosis, and Referrals
- Caring for Patients on the Autism Spectrum
- Legal and Ethical Considerations
- Associated Conditions
- Resources and Links

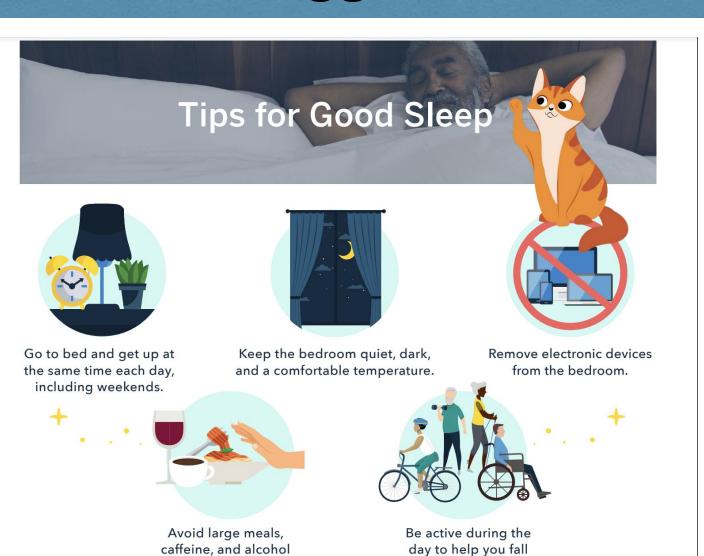
"Stress busters" that help reduce stress



Sleep

- Getting enough good quality sleep is probably the most important thing you can do to stay healthy.
- "Enough" sleep is different for different people but for most teens should be at least 8 hours.
- You should feel rested after sleeping. If not, talk to a doctor.
- When you sleep also matters.

Sleep Suggestions



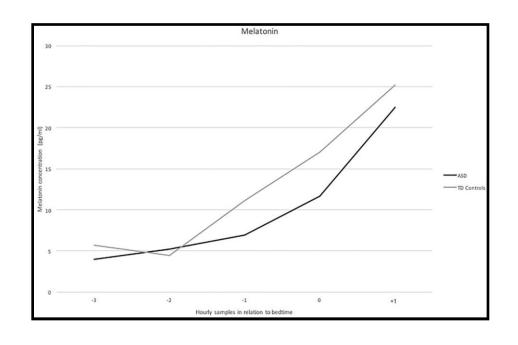
Learn more about good sleep habits at www.cdc.gov/sleep.

asleep at night.

before bedtime.

Sleep and Neurodiversity

Getting enough good quality sleep is challenging for a lot of neurodivergent people.



This study found lower levels of melatonin in autistic people compared with nonautistic people:

Front. Neurol., 14 June 2022 Sec.Pediatric Neurology https://doi.org/10.3389/fneur.2022.8136 92

Sensory sensitivities can make it hard to sleep.

ADHD: sleep problems are common, especially after age 12

Sleep and Neurodiversity

Suggestions

- Light blocking curtains
- Weighted blanket
- Melatonin 30 min before a regular bedtime

Physical Activity/ Movement

The human body is designed to be physically active.



The Hadza tribe of Tanzania lives by subsistence hunting and foraging for berries, honey, baobab fruit and tubers. Brian Wood

https://www.nytimes.com/2016/11/23/well/move/born-to-move.html

Physical Activity/ Movement and Neurodiversity

https://www.additudemag.com/exercise-and-the-adhd-brain/?src=embed_link





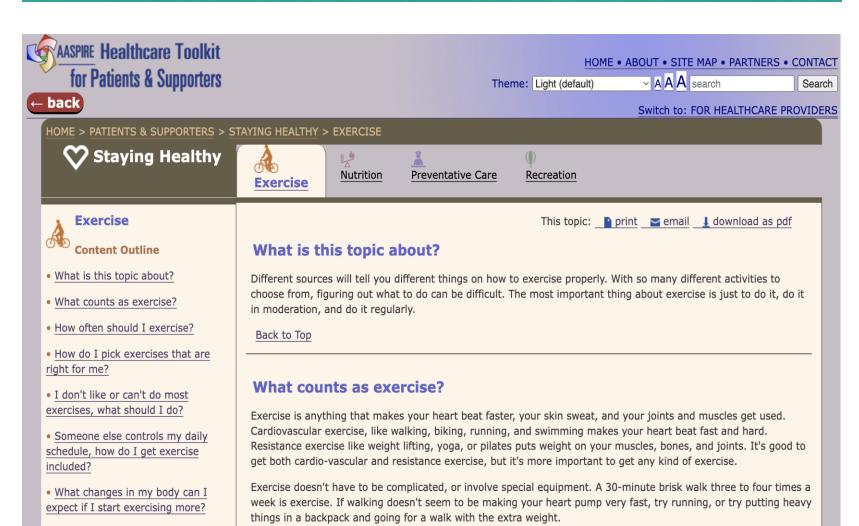
ADHD Medication & Treatment > Natural Remedies for ADHD

EXERCISE & GREEN TIME

Exercise and the ADHD Brain: The Neuroscience of Movement

Research shows that physical activity sparks real, positive changes in the brain that increase attention and improve mood. What's more, exercise is an inexpensive, self-prescribed, and accessible supplemental treatment option for adults and children with ADHD.

Physical Activity/ Movement and Neurodiversity



Food (nutrition)

Tips

- Avoid ultra-processed foods
- Eat more fruits or vegetables





Eat less of these

Eat more of these

https://www.theguardian.com/food/2020/feb/13/how-ultra-processed-food-took-over-your-shopping-basket-brazil-carlos-monteiro

Food and Neurodiversity

- For some people, it's hard to notice when they are hungry or to remember to eat.
- Omega 3 1000-2000 mg/day supplement can help
- Individual differences: some people feel better when avoiding dairy and/or gluten. Everyone is different—you are the expert on you!
- There is some evidence that neurodivergent people may be especially susceptible to the adverse health effects of ultraprocessed food (e.g. corn syrup, artificial colors) Dufault RJ, Crider RA, Deth RC, et al. Higher rates of autism and attention deficit/hyperactivity disorder in American children: Are food quality issues impacting epigenetic inheritance?. World J Clin Pediatr. 2023;12(2):25-37. Published 2023 Mar 9. doi:10.5409/wjcp.v12.i2.25

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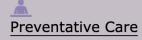
Switch to: FOR HEALTHCARE PROVIDERS

HOME > PATIENTS & SUPPORTERS > STAYING HEALTHY > NUTRITION











Nutrition

Content Outline

- What is this topic about?
- What kind of diet is healthy for me?
- How do I eat healthy on a budget?
- Tips for Using the Grocery Store
- Cooking is hard for me, what are some ideas to make it easier?
- How do I cook safely?
- Someone else makes my food, how can I make sure it's healthy?
- I don't like or can't eat most food, what should I do?

What is this topic about?

A healthy diet can help improve or keep up good health. A healthy diet may also lower the risk for some chronic health problems such as heart disease, diabetes, and cancer. A healthy diet means eating the right amounts of the right nutrients, and drinking the right amount of water. Nutrients can come from many different foods. Everyone's bodies are a little different, and there are many ways to have a healthy diet.

This section gives some links to basic information about healthy diet and nutrition.

Back to Top

What kind of diet is healthy for me?

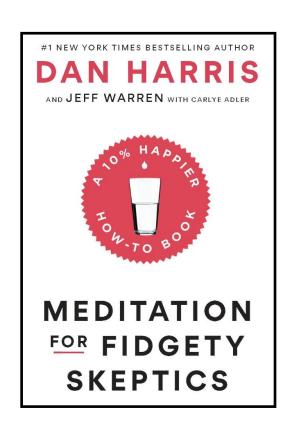
There is no single diet that is best for all people. Some people like to stick to a particular diet, like a vegan, low carbohydrate, paleo, anti-inflammatory, or Mediterranean diet. It's okay if you do not want to follow are particular diet. Following some general healthy eating guidelines is all you need to do.

General Guidelines

Music

- Rhythmic, repetitive ("regulate")
- Can enjoy alone or with others ("relate")
- For some neurodivergent people, singing is easier than speaking

Mindfulness/Meditation



- Empathetic guide to learning meditation from the perspective of someone who describes himself as "fidgety."
- Tips include "give yourself permission to fail" and "one minute counts."
- Recommended by Dr. Heather M. Brown, autistic educational psychologist and researcher on autistic wellness, U of Alberta

Nature and Neurodiversity

- Autistic children score high on measures of "naturalist intelligence" (one of Howard Gardener's "multiple intelligences")
- 13 year old autistic boy: "However often we're ignored and pushed away by other people, nature will always give us a good big hug, here inside our hearts."

(Armstrong T. The healing balm of nature: Understanding and supporting the naturalist intelligence in individuals diagnosed with ASD: Comment on: "Implications of the idea of neurodiversity for understanding the origins of developmental disorders" by Nobuo Masataka. Phys Life Rev. 2017 Mar;20:109-111. doi: 10.1016/j.plrev.2017.01.012. Epub 2017 Jan 12. PMID: 28117238).

Many studies have shown benefits of "green time" in ADHD

Bolanis D, Orri M, Vergunst F, Bouchard S, Robitaille É, Philippe F, Ouellet-Morin I, Girard A, Paquin V, Gauvin L, Côté S, Geoffroy MC. Increased urban greenspace in childhood associated with lower inattention deficit among adolescents. Soc Psychiatry Psychiatr Epidemiol. 2023 Oct 14. doi: 10.1007/s00127-023-02575-0. Epub ahead of print. PMID: 37837487.

Donovan GH, Michael YL, Gatziolis D, Mannetje A', Douwes J. Association between exposure to the natural environment, rurality, and attention-deficit hyperactivity disorder in children in New Zealand: a linkage study. Lancet Planet Health. 2019 May;3(5):e226-e234. doi: 10.1016/S2542-5196(19)30070-1. PMID: 31128768.

"Relational Health"

- Since 2021, endorsed by the American Academy of Pediatrics as a way children heal from toxic stress
- Defined by "safe, supportive and nurturing relationships (SSNRs)."
- SSNRs are based on "empathetic understanding and acceptance."
 Another word used is "attunement."
- Not "What's wrong with you?" but rather "What happened to you?" or "What's going on for you?"
- Represents a shift from a pathology model to a diversity model

Pathology Model vs. Diversity Model

Why do doctors use the Pathology Model?

- That's what they are taught in medical school.
- Most doctors, like most teachers, are neurotypical.
- A lot of doctors think that their job is to "fix."

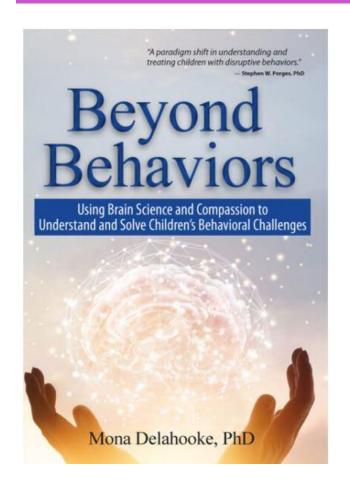
Areas where doctors have switched from a pathology to a diversity model in the past century:

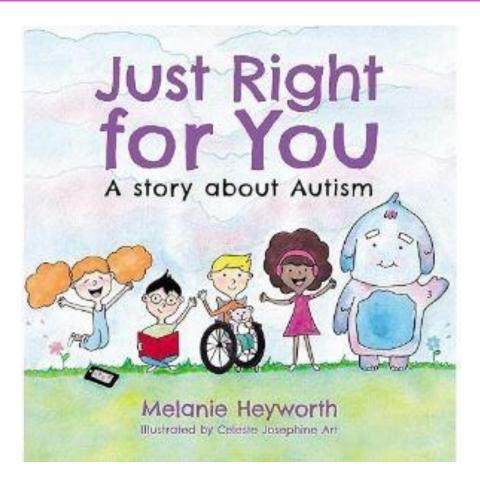
- Handedness
- Cultural health beliefs
- SOGI (sexual orientation and gender identity)
- Trauma Informed Care

Challenges

- Many "supports" do not use an intentionally "relational" approach and can even cause trauma in ND people whose behavior is not understood, for example "compliance based" therapies where privileges are withheld if child is not able to do a requested task, and this is interpreted as "behavioral (willful)," not as a consequence of sensorimotor dysregulation.
- People with undiagnosed neurodiversity, such as dyslexia or ADD, may be told to "just try harder"
- These are two examples where the lack of "attunement" can work against what may be otherwise good intentions.

- There are evidence based behavioral supports that are intentionally relational, e.g. DIR Floortime, P.L.A.Y. Project, although these may not currently be widely available.
- Due to a technicality in the law mandating that MediCal cover behavioral therapy for autism, currently only "ABA" (behavioral therapy delivered by a BCBA certified therapist) is covered by MediCal.
- SB 805, signed into law by Gov. Newsom this summer, will change this—extends recommendation to cover all evidence based behavioral therapy including intentionally relational, attunement-based therapies.





- Communication: a human right and essential to feeling "understood"
- Communication can take many forms.
- Nonspeakers may benefit from techniques available at https://communication4all.org/c4a-academy/

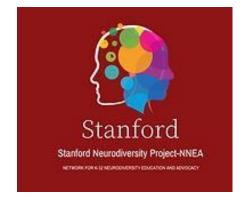
Community







NEUROINCLUSIVE HEALTHCARE & COMMUNITY





The Network for K-12 Neurodiversity Education and Advocacy (NNEA)

