Autism Decoder
What Autism Behaviours and Challenges Tell You

The specific challenges and behaviours common in the autism spectrum don't come out of thin air. They are expressions of internal difficulties, needs, processes, or emotions. You can translate these challenges and behaviours being expressed into not only their underlying meanings, but also their underlying physiology.

When you translate them, those very same behaviours and challenges are directly communicating about what's making an individual's autism challenges worse, and what's helping that individual's autistic gifts to blossom. In short, what has been perceived as "the problem" actually gives you the answer for how to thrive with autism!

Because I have chosen to use the descriptive words of parents, educators, professionals, and spectrum adults, there is some repetition in the explanations of the science and experiences behind the different autism behaviours. At best, I hope that this repetition will help you in spotting patterns. At worst, I hope that you don't allow your annoyance to prevent new insights.

The Five Root Causes of Autism Challenges

Every autistic spectrum individual has some blend of these underlying health issues, to varying degrees, underlying and causing the behaviours and challenges of autism. See the Five Root Causes of Autism Challenges Report, or Webinar, for more information and references on these underlying health issues.

GD – Gut Dysbiosis

The pollution in the air we breathe, the contaminants in the food and beverages we consume, the synthetic chemicals in the skin products we apply, and the pharmaceuticals we ingest can all damage or kill the beneficial species – the probiotics – in the complex, rainforest-style ecosystem which should be in our digestive tracts, full of duplication of tasks, as well as checks and balances.

In North America, the only people who have this kind of healthy, resilient and robust gut ecosystem are people who have never had antibiotics or vaccinations, usually international students or recent immigrants. For most other North Americans, instead of a "rainforest-style" gut ecosystem, we have the rough equivalent of a grassland, something much more vulnerable to disruptions like drought, flood, and climate change. In our digestive tracts, the remaining gut species are the generalists – the pigeons and squirrels – which are able to mop up most of the garbage we surround them with, but don't necessarily help us while doing so.

In those of us with autism (as well as Alzheimer's, Parkinson's, and many other currently-skyrocketing health challenges), the gut ecosystem more closely resembles the limited and dangerous blend of stinky microbes found in a stagnant pond. The closer our autistic gut species are to "grassland", the fewer our gut-related autistic challenges. The closer our autistic gut species are to "stagnant pond", the more likely you are to see extreme behaviours, reflecting the degree of pain and toxicity we are experiencing.

OIF – Overwhelmed Immune Function

Approximately 75% of immune function happens in the gut, which is our main interface with infectious agents, parasites, and poisons. When the immune system doesn't have the supplies or energy to mount a sufficient defence, it can either get stuck in what is called a healing crisis, or it can drop to a much lower level of functioning. Both of these immune states

involve very high levels of inflammation throughout the body, including (and sometimes especially) in the brain.

A healing crisis can be compared to a severe flu. The body shuts down the supplies for thinking, balance, coordination, movement — everything except for fighting the infectious agent, and except for supporting core survival needs, such as keeping the heart beating.

In deer-tick territory, it's becoming apparent that there are large overlaps in symptoms between those children with Lyme's disease from an infectious tick bite, and those children with autism challenges. PANDAS, one of the other immune conditions which can cause autism challenges, is caused by unresolved Strep infections.

IDS — Impaired Detoxification System

All autistics tested to date by the Autism Research Institute have both impaired detoxification mechanisms, and have a resultant much-higher body burden of toxins. If your boat is leaking faster than you can bail or empty it, your travel times and capacity to do anything except bail is significantly reduced.

The high accumulations of toxins, usually in fatty tissues, wreak havoc. First, cell membranes are mostly fat. The more toxins they contain, the harder it is for them to move nutrients into the cells where they're needed, and the harder it is for them to move wastes out of the cells — which are therefore choking on wastes.

Second, brain and nerve tissues are mostly fat. Fetal and early-life blood-brain barriers don't keep fat-soluble toxins out of baby-brains. These toxins impair growth, repair, and proper communication among the brain cells. If gut dysbiosis is also a factor, the leaky and inflamed state of the gut-blood barrier is mirrored by the blood-brain barrier, allowing undesirable gut microbes and gut wastes full access to vulnerable brain tissues.

PNI — Physical Nerve Impingement

In utero movements, the birth process, and normal baby experiences such as falls can pinch nerves, or shift the plates of the skull to put uneven pressure on various parts of the brain, spine, and nerves. When this pressure or pinching is physically alleviated, the tasks which that formerly pinched nerve or brain portion governs can come onstream, or improve significantly.

However, physical alleviation of pressure or pinching may not be comfortable or possible without available repair materials for nerves. A diet without enough anti-oxidants and essential fats may leave nerves and brain rigidly unable to re-configure, and a gut that's leaking toxins into the blood and brain will keep nerve inflammation high. As well, environmentally-sourced toxins in the brain (such as heavy metals and pesticides) can also prevent the rebuilding of neural tissues.

STC — Stress-Trauma Continuum

In cutting edge medical circles, we are currently returning to an indigenous understanding of health — that nothing goes wrong on a physical, mental, or emotional level unless there is an accumulation of spiritual stress or trauma to the degree that health can no longer be sustained. Adults in the autistic spectrum who have achieved some degree of communicative ability are universally aware of the role of most of our repetitive behaviours in soothing our very high degrees of stress.

Fortunately, the research is now beginning to reflect the heightened stress we experience, and the degree of PTSD through which we attempt to function. Deep gratitude to the combat veterans who prompted much of the relevant research!

Your Autism Body Language Decoder

After every autism behaviour or symptom listed below, the acronym for the potential underlying and causal health issue(s) follows, within brackets. This will help you to decode which health issues are most dominant in causing your autistic challenges.

Anxious:

Anxiety is usually a result of high stress/trauma, or of toxic waste products from gut dysbiosis. These toxic waste products can be psycho-active and highly disturbing. Significant data links resolving digestive issues with cessation of anxiety. Stress is one of the fastest and easiest ways to harm gut function.

Avoids Bright Light: See Sensory Sensitivity

Usually a result of malnourishment from sub-optimal foods, sub-optimal absorption of foods from dysbiosis, and/or of toxin accumulation. Think of the process of drinking and then breaking down something addictive like alcohol, with the intoxicated, hangover, and cravings phases.

Sensory distortions happen the most during the intoxication phase. During the hangover phase, noises are too loud, lights are too bright… Different toxins can mean the body is in both states at once. This sensory sensitivity has been linked to conditions such as hypokaelemia, caused by toxin-clogged cell walls unable to transport potassium into cells.

Brain and nerve compression or damage can also distort sensory messages one way or the other.

Avoids Clean Clothes: See Hygiene Avoidance

There are two reasons for this. The first has to do with what I call our autistic uniforms. We tend to have heightened sensations, including in our skin. As a result, where a non-autistic might notice if a new shoe was rubbing or causing a blister, an autistic with heightened skin sensitivity will notice when seams or tags are rubbing, a shirt fits differently, or a hem falls at a different height. The more we autistics can wear highly similar clothes, the less distracting our clothes are. Every clothing change, details like a different fit take our attention away from what we'd rather pay attention to.

The second reason has to do with laundry practices. Most households and institutions still use detergents, bleaches, and fabric softeners with toxic components. Some of these enter the body in minutes through the skin, affecting the health in a variety of undesirable but non-obvious ways. Some of these enter the body in seconds, through the rapid transport of VOCs (including fragrances) into the bloodstream via breathing. VOCs can take only moments to register as pain in the form of toxin headaches or nausea, to name only the top two indicators of intoxication.

In both cases, the core issue is heightened toxic body burden. Whether the additional toxic stress is from the gut, or from the surroundings, the end result is avoidance of "clean" clothes.

Avoids Eye Contact:

Eyes can very easily offer too much information. When you're already receiving far more sensory information from your nervous system than you can easily translate and integrate, focusing your eyes on something that will help you understand what's important to others (e.g. observing the mouth to supplement hearing) definitely takes precedence.

Some of us, however, have so much extra information to integrate, and so few of the nutrients needed to make that integration possible, that we need to absolutely minimize the information coming in, just to focus on the message we are expected to receive. In this case, we will either look away so that movement is only perceived through much-less-stimulating peripheral vision, or we will close our eyes to shut that sensation off altogether.

Avoids Hair-brushing: See Biting, Chewing, Headaches

When the gut ecosystem is inflamed (93% of autistic children who regress have signs of leaky gut; every single one of over 115 studies found a relationship between autism and oxidative stress), the gut-blood barrier is compromised. And when the gut-blood barrier is compromised, so is the blood-brain barrier — which means that most if not all toxins and inflammation present in the gut is also showing up everywhere the blood travels, including the brain.

Inflammation in the brain is like wearing tight shoes for too long when your feet are swelling, or like wearing a finger-ring that seems to shrink sometimes. As the level of discomfort from that pressure increases, the likelihood that the shoes or ring will get removed also goes up, in order to stop the discomfort.

When the brain is inflamed, it feels several sizes too large to fit in the skull — but the skull just doesn't come off easily. The inflammatory products in the brain leak into the bones of the skull, and into the scalp, causing irritation or pain. Most women have had the experience of wearing their hair differently and having hair follicles get irritated or ache where the pressure or pull has been changed the most.

Avoids Haircuts:

First, most haircuts happen in places with a lot of bright lights (usually flickering — and very visually distracting — fluorescents), a lot of mirrors, and a lot of rapid movements that catch the eye. They are visually overwhelming when your sensory system is turned up to its highest receptive volume.

These places also have a lot of hard surfaces, which echo any noises or chatter, making sounds harder to translate into something with meaning. In addition, the tools of the trade have their own unattractive sounds — the buzz of the electric razor, the rasp of the scissors — which happen very close to the ears. The skin sensations of haircutting are also unusual and sometimes uncomfortable.

That covers sight, sound, and touch as being potentially overwhelming. But the very worst challenge here is scent. Most haircutting establishments use multiple toxic products, most of which linger in the air as VOCs which are immediately and easily absorbed into the bloodstream through breathing. Most synthetic VOCs are toxic to the nerves and the brain; some also dysregulate the body by mimicking hormones. You can even taste the VOCs — no sense is spared discomfort.

When detoxification pathways are clogged, and levels of toxins are higher in the body, the threshold is passed much earlier, in terms of how much additional toxins can be added before toxic impacts (such as pain) are obvious. And finally, when we are under heightened stress, our bodies handle anything except fight/flight/freeze worse.

Avoids Sitting Still: See Bouncing, Rocking, Swinging

Why do seniors often choose chairs which allow them to rock or swing, gently? Why do upset babies calm down, sometimes enough to sleep, when rocked or bounced in arms, strollers, or car seats? When we're uncomfortable, swinging and rocking and bouncing do two things.

First, these motions lull the central nervous system, allowing the sympathetic (stress) response to back down, and the parasympathetic (sleep, digestion, learning, repair) system to get the energy and supplies it needs to do its job. People in the autistic spectrum tend to carry much higher levels of stress in their bodies than non-autistics do. These types of movement allow that stress to dissipate.

Second, these motions get the lymphatic fluid moving. When detoxification is impaired, it's normal for excess toxins to accumulate in places where blood flow and lymphatic flow are most limited: the extremities (the head, the hands, and the feet). Lymphatic fluid doesn't flow unless muscles are moving, pumping it up to the lymph nodes which filter it into the blood for cleaning.

When toxins — both from normal body functions, as well as from gut dysbiosis or absorption from the surroundings — accumulate in the extremities, what begins as vague discomfort in those extremities gradually increases into irritation, and then outright pain. Movement dissipates this pain.

Baby Talk:

Almost everyone loves babies, and is kind and engaging with them. But the older a child gets, the more likely that child is to experience anything from disapproval through shunning through outright cruelty. When a child isn't able to meet other people's expectations, the likelihood that child will experience negative interactions goes up to a much higher level. Autistics have trouble meeting other's expectations — it's why we get diagnosed, after all.

Part of our human motivation to learn and grow is to figure out how to minimize negative interactions (or at worst, to deserve them by believing that we're bad and wrong, and acting accordingly). Because people were often kinder to us autistics when we were younger, because so many of us have intact early memories, and because we desire more kindness than we receive, some autistics choose to keep or mimic younger behaviours.

Bad Breath: See Halitosis, Body Odour, Foot Odour

Western medicine is currently in the midst of switching from a body-as-machine model of human health to a body-as-ecosystem model, so not everything you read or hear will reflect the new model. Our bodies are healthiest when the quantity of microbial cells within us outnumbers our own body's cells by ten times. The more diverse and balanced these microbes are, the better our bodies run.

Our gut ecosystem is one of the most critically important microbial communities within us. Without it, we cannot break foods down to materials our bodies can use for maintenance and repair, we cannot absorb those materials, and we cannot manufacture nutrients our bodies need, such as turning beta carotene into the form of vitamin A our bodies need.

Bad breath is a sign that the gut ecosystem isn't healthy, and needs some support to return to better function. Stress is the most likely cause of changes in the gut microbial balance, but 70% to 80% of immune function happens in the gut.

Bed Wetting: See Constipation, Diarrhea

Research is now clear that 80% or more of bedwetting challenges are caused by occult megarectum, an end-of-the-digestive-tube form of toxic megacolon (from constipation). When sticky, aged, hardened, stinky, and toxic poo has formed a large enough clump at the top of the rectum that it presses on the nerves which signal when the bladder is full, it's a lot easier to miss that signal, especially when you're asleep.

Cleaning out the mucoid biofilm clump of poo almost always resolves the bedwetting. Ironically, diarrhea is often the result of constant inflammation in the gut lining because of these toxic clumps constantly creating and releasing irritants and poisons.

Belching: See Gas

What should be a healthy, rainforest-style ecosystem of gut microbes is under assault from air pollution, beverage pollution, food pollution, and skin pollution. A lack of healthy microbial replacements from healthy air, beverages, food, and skin contacts means that as species die out, the gut is increasingly at risk of damage, and less able to do its job. Most North Americans have a gut ecosystem that looks more like a grassland — much more vulnerable to cold, drought, and other shocks.

When species are wiped out, the job they used to do is no longer getting done. Previously, these species would break down nutrients without toxic waste. Now, those nutrients become food for the versatile rats and pigeons of the gut ecosystem, the scroungers. The scroungers tend to use up materials the body needs, and their waste products often include gas.

Biting: See Avoids Hair-brushing, Chewing

When the gut ecosystem is inflamed (93% of autistic children who regress have signs of leaky gut; every single one of over 115 studies found a relationship between autism and oxidative stress), the gut-blood barrier is compromised. And when the gut-blood barrier is compromised, so is the blood-brain barrier — which means that most if not all toxins and inflammation present in the gut is also showing up everywhere the blood travels, including the brain.

Inflammation in the brain is like wearing tight shoes for too long when your feet are swelling, or like wearing a finger-ring that seems to shrink sometimes. As the level of discomfort from that pressure increases, the likelihood that the shoes or ring will get removed also goes up, in order to stop the discomfort.

When the brain is inflamed, it feels several sizes too large to fit in the skull — but the skull just doesn't come off easily. Fortunately, muscles in the tongue and jaw attach to the membranes inside the skull. And just like the movement of walking in tight shoes can help to dissipate the swelling in feet, and momentarily distract from foot discomfort, so the movement of those brain membranes brings very short term relief to brain discomfort.

Biting, chewing, and sucking momentarily reduce discomfort from brain inflammation by gently tugging on the membranes inside the skull.

Body Language Not Interpreted:

Most autistics have one or more senses on high alert, taking in much more sensory detail than non-autistics would. This detail requires brain nutrients to understand and integrate the information. When brain nutrients are in short supply or are being displaced by toxins, or when nerve messages are being slowed or distorted, it can take a lot longer to sort through all the information — a wait of days, weeks, or months is not unusual, with length of wait reflecting depth of health issues.

As a coping mechanism, and in the hopes of not being left out of interactions entirely, most autistics limit the senses they pay attention to and try to sort. All the information is still coming in, but translation is only being demanded for what is considered highest priority — usually sight or sound. When someone is speaking, autistics may turn off translation of any or all other sensory inputs in order to keep up with hearing and understanding the words.

The result is that, unless an interaction is repeated over and over the way it would be in theatre, or video recordings, giving enough observation time to focus on each of the sensory inputs in turn, and then gradually put them together to see if the collection changes the meanings, an autistic is likely to entirely miss body language until their sensory integration has had a chance to catch up with their real-time experiences.

Body Odour: See Halitosis, Bad Breath, Digestive Stink, Foot Odour

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Body odour is a sign that the gut ecosystem isn't healthy, and that toxic wastes are so thick in the body that even the skin is trying to get rid of them. The gut needs some support to return to better function. Stress is the most likely cause of changes in the gut microbial balance, but 70% to 80% of immune function happens in the gut.

Body Unaware (e.g. forgets to pee):

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The more chaotic an autistic's surroundings are, the more likely that person is to miss some detail that would otherwise be considered important. However, sometimes things like forgetting to pee are the result of constipation pressing on the nerves of the bladder and preventing the "full" signal from getting through.

Bouncing: See Avoids Sitting Still, Rocking, Swinging

Why do seniors often choose chairs which allow them to rock or swing, gently? Why do upset babies calm down, sometimes enough to sleep, when rocked or bounced in arms, strollers, or car seats? When we're uncomfortable, swinging and rocking and bouncing do two things.

First, these motions lull the central nervous system, allowing the sympathetic (stress) response to back down, and the parasympathetic (sleep, digestion, learning, repair) system to get the energy and supplies it needs to do its job. People in the autistic spectrum tend to carry much higher levels of stress in their bodies than non-autistics do. These types of movement allow that stress to dissipate.

Second, these motions get the lymphatic fluid moving. When detoxification is impaired, it's normal for excess toxins to accumulate in places where blood flow and lymphatic flow are most limited: the extremities (the head, the hands, and the feet). Lymphatic fluid doesn't flow unless muscles are moving, pumping it up to the lymph nodes which filter it into the blood for cleaning.

When toxins — both from normal body functions, as well as from gut dysbiosis or absorption from the surroundings — accumulate in the extremities, what begins as vague discomfort in those extremities gradually increases into irritation, and then outright pain. Rocking, bouncing, and swinging movements are most effective at dissipating this pain.

Chewing Constantly: See Avoids Hair-Brushing, Biting

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Climbing:

Humans relax when they get high enough above their surroundings to be able to see what's coming or going. Whether or not this is a remnant of perceived safety from our presumed evolutionary tree-dwelling past doesn't matter. What does matter is that most autistics carry a higher level of stress in their bodies. As a result, we are much more aware of things that decrease or increase that stress load, and will tend to repeat things that decrease stress.

Colour Defensiveness:

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Constipation:

Digestive issues indicating gut dysbiosis and leaky gut (or Small Intestinal Bacterial Overgrowth, SIBO for short) show up in 93% of autistics with regressive autism, and 100% of autistics have oxidative stress. Oxidative stress is an indicator of malnourishment, whether that be from low-nutrient food, digestive inefficiency, or auto-intoxication (self-poisoning) from putrid wastes kept in the colon too long — otherwise known as constipation.

When the gut ecosystem is inflamed, the gut-blood barrier is compromised. And when the gut-blood barrier is compromised, so is the blood-brain barrier — which means that most if not all toxins and inflammation present in the gut is also showing up everywhere the blood travels, including the brain. This inflammation throughout the body is one of the measurable, physical hallmarks of autism spectrum challenges, though the source of the inflammation can also be injury, toxins from the environment, and stress.

Chronic constipation (a large intestine that moves too slowly), toxic mega-colon (accumulation of old wastes throughout the colon that disrupt the processing of new wastes), and occult mega-rectum (massive blockage accumulated within the ballooned last part of the digestive tract) are all associated with chronic and recurring yeast infections, urinary tract infections, incontinence (including bedwetting), soiling, foul body and faecal smells, skin problems, and other chronic health issues.

Chronic but hidden constipation can also be the primary cause of chronic diarrhea and nausea. In chronic diarrhea, the lining of the colon is constantly assaulted by the toxins from the accumulated wastes, so rushes everything else through, unable to evacuate the offending, hardened, and sticky mass causing the disruptions. In chronic nausea and vomiting, colon microbes have gone upstream and colonized the small intestine.

Many of the worst and most distressing mental, emotional, and physical symptoms of autism are the result of severe gut dysbiosis and resulting constipation.

Conversation Hard to Initiate, Join, or Sustain: See Echolalia, Tuning

Speaking relies on nerves in the brain being able to communicate at lightning-fast speeds. There are 86 billion of these brain neurons, on average, and they're hungry for energy and nutrients. They eat between 20 and 25% of all the energy the body produces. In addition, these brain cells rely on having a very special soup surrounding them, full of the compounds they use to pass messages to each other, and empty of the toxins and wastes (brain cels need repairs and maintenance, too) that can gum up the works.

Toxins penetrate the blood-brain barrier when gut dysbiosis has weakened the gut-blood barrier, allowing undigested food, gut microbes, and microbial waste products — some of which are inflammatory and toxic — into the bloodstream without filtration. When the gut-blood barrier is disrupted, the blood-brain barrier follows closely behind. Unfortunately, this allows not only gut-associated challenges into the brain, but any other toxins arriving in the bloodstream from skin contact and airways into the brain, as well.

If brain energy and/ or brain food is in short supply, brain processing slows down. If toxins and wastes within the brain envelope are more concentrated, brain processing slows down. If stress is heightened, brain processing slows down. Initiating conversations relies on being able to process information in a timely fashion, spotting opportunities to join others, identifying likely topics to expand on, etc.

When any action in the brain is slowed by lack of supplies and too many heaped-up wastes and toxins, conversation is first slowed to rote (memorized) phrases which require less on-the-fly energy and nutrients, and then slowed to a state of barely verbal and not-necessarily conversation-connected words, and then slowed to non-verbal, regretful, wishing that we had words in the moment, never mind the right words. Many of us autistics who are verbal have moments, hours, or days where we are barely verbal, or non-verbal, because of the presence of either heightened stress, heightened toxins, or both.

Conversation Topics Limited: See Limited Conversation Topics

First, review prior entry: Conversations Hard to Initiate, Join, or Sustain. When any action in the brain is slowed by lack of supplies and too many heaped-up wastes, conversation is slowed or stopped. Many of us autistics who are verbal have moments, hours, or days where we are barely verbal, or non-verbal, because of the presence of either heightened stress, heightened toxins, or both.

When human brains are under heightened stress during key developmental stages, they invest more energy into the parts of the brain designed for pattern recognition and problem-solving, and less energy into the parts of the brain designed for socializing. It's my (gaining traction) theory that this is an adaptive response which has supported survival of the human species.

Most individuals in the autistic spectrum have very defined interests. Something that interests one of us is fascinating; something that doesn't interest us cannot hold our attention at all. Our interests tend to go deep into specialized information, rather than broadly into popular non-autistic topics such as human (or TV/ movie/ sports) doings, and the why of interactions.

While we autistics have as profound a desire for positive and caring interactions as any other human, it can be much more difficult for us to find people not only willing to converse about the things we find fascinating, but delighted to do so. Fortunately, two things have been changing.

First, the internet has allowed interest-based community to build across previously daunting geographic and cultural barriers. And second, as more factual information about autism allows more of us to optimize our autism, our interests broaden to allow more varied conversation, and our social skills refine.

Coprolalia:

Coprolalia is closely associated with Tourette's syndrome, an autistic spectrum condition which involves known nutrient deficiencies and varied but heightened toxic body — and brain — burden. It is present in one third of all people with Tourette's. Verbal outbursts are usually a single word, but can also involve complex phrases — they are involuntary outbursts of obscene words or socially inappropriate and derogatory remarks.

Just as unhealthy body chemistry and the presence of cellular, intracellular, and bloodstream toxins can create the physical symptoms of tics, spasms, and seizures (uncontrollable compulsions to move), so can unhealthy brain chemistry and the presence of brain toxins create uncontrollable verbal bursts, along with a variety of types of strokes.

Coprolalic words or phrases do not necessarily reflect the thoughts, beliefs or opinions of the person with coprolalia. Just as people with Tourette's must satisfy the overwhelming urge to twitch, so they must "let out" sounds and words that build up and must be expressed before momentary relief can be felt. The pressure to express those symptoms will recur as increasing urges to twitch, curse or shout cannot be inhibited past a certain threshold.

Coprophagia:

The only reason any of us mammals ever eat our own wastes is because of internal dysbiosis. If the wrong microbes get into the wrong parts of our digestive tracts, this puts us in pain, debility, mental difficulties, and emotional turmoil (dysbiosis is one of the main reasons dementia in seniors is rising). The degree of pain and functional disruption directly reflects the degree of dysbiosis.

This disruption inevitably means that we're losing a lot of nutrients in our wastes, nutrients that our bodies desperately need. Eating faeces can help to move the right bacteria back into where they're needed, and gives a second chance to absorb those lost nutrients. Rabbits do it. Cows do it. And when we're unhealthy (and unrepressed) enough, humans do it too.

In veterinary medicine, animals and livestock with digestive issues are often fed a fresh "poo tea" from healthy animals, which frequently resolves the digestive problems. In humans, liability issues have limited the "poo tea" option. However, faecal transplants — operations with involve the removal of poo from very healthy people and its insertion into the colon of very unhealthy ones — are becoming increasingly common for people with severe gut issues.

Faecal transplants are relatively safe, and effective at restoring gut health. In some parts of the world, they are being performed at home with enema kits. Western medical research has been focusing a lot of effort and resources on:

a) how to remove any potential parasites and pathogens from faecal donations, without killing off the desired microbes that will restore colon health, and on
b) how to deliver the desired microbial community balance and diversity without losing critical species (poopsicles? suppoopsitories?).

Counting Things Repeatedly:

Most people find that they are more tired when they travel. Sometimes this relates to how much harder it is to communicate in a language that's not as familiar. Sometimes this relates to the increased physical stress of an unusual climate, or unusual foods. Sometimes this relates to having to get things done when where and how things are done can be so very different, and require so much investigation.

As a result of this increased exhaustion from learning and doing new things, most people limit the amount of change they are exposed to in their day-to-day lives. The more routine they sustain, the less energy they have to invest in the unfamiliar. This leaves more energy available for the inevitable disruptions to routine.

Autistics are taking in a lot more sensory information, whether from heightened alertness from stress, or heightened irritation from toxins. A lot more energy and constant effort goes into conscious filtering of this extra information in order to identify patterns. As a result, routines become much more valuable. Patterns are soothing, calming, restful. In a body ecosystem of heightened stress, metabolic turmoil, and too little routine, repeating patterns that calm the body, emotions, and mind are invaluable.

Diarrhea:

Short term diarrhea is usually a result of short-term stress or infection. Longer term or chronic diarrhea is usually a result of gut dysbiosis, and far-too-often a result of aged, hardened, sticky, putrid, faecal accumulation in the colon. This aged matter hosts undesirable microbes that produce toxic wastes. These toxins are reabsorbed into the gut lining unless the irritation they cause keeps both the toxins and other, more mobile wastes passing through the colon too quickly for recovery of liquids, or manufacture of necessities such as B12 in the colon.

Diet Restricted:

When your roof needs repairs, you've got to have both the roofing supplies (nails, tiles, ladders, etc.) and the actual labour and energy. If you're missing any one of these, the roof isn't going to get fixed. It's the same with when your body needs repairs. If you're missing even one of the right nutrients, or the energy to actually use those nutrients, your body may not be able to do the maintenance and repairs it is designed to do, or may have to do expensive and temporary patches.

Getting enough food, never mind enough actual nutrients into someone on the autistic spectrum can be a real struggle. Malabsorption and malnourishment are the norm for autistics, versus the exception to the rule. We autistics often limit what we'll eat in drastic ways, sometimes including only two or three foods in our menu. There are three physiological reasons that we autistics can't stand certain foods, avoid certain foods, and crave certain foods to the exclusion of all others.

The first reason is sensory overwhelm. We autistics bring in a lot more information from our sensory system than other people do. And the tongue has a lot more sensory nerves than most other parts of the body. The tongue can bring in a great deal of information about texture, temperature, weight, and all kinds of other things about whatever it's in contact with. When the tongue gives us too much information all at once, this overwhelm can hurt more than the squeal of a train on tracks, right beside your ears.

The second reason we autistics can self-limit our diets is because of a pain response. Because we have the wrong creatures in the different areas of our digestive tract, we are getting some nasty waste products from them (as they use up the nutrients we need) which cause pain in the gut — among other things. When we get worse pain in our digestive systems after eating a certain food, we can begin associating a particular food with pain. Whether it's true or not that a particular food isn't getting broken down right and does cause pain, we start restricting the diet to try to avoid ever experiencing that level of pain again. Over time, this can lead to very unusual and limited meal plans.

The third reason we might have a restricted diet is addictions to particular foods. Most people don't have addictions from normal food, but because we have the wrong creatures in our guts, foods are not breaking down completely. Instead of getting the little components (vitamins, minerals, sugars, fats, amino acids) which we can actually use for body maintenance and repair, we end up with large chunks of undigested stuff, and no way to use them.

The undesirable gut creatures (or "wrong gut bugs" as Dr. Emma Allen-Vercoe, a lead researcher on the human microbiome and its relationship with autism, calls them) will also often create perforations through the gut lining. Undigested chunks of food can then migrate out of the gut, and straight into the bloodstream, where they're treated as invaders by the immune system (hello, allergies and inflammation!). And because we autistics don't have a good blood-brain barrier, these undigested chunks also migrate straight into the brain.

There's an added layer of complication to this, though, and here's an example. Foods like casein (which is the protein from dairy products) and gluten (which is the protein from very common grains such as wheat, rye, barley, triticale, spelt, and kamut) require very specialized and vulnerable "good gut bugs", or probiotics, to be taken apart.

However, because so many autistics have the wrong gut bugs, casein and gluten are only partially broken apart. Without the right creatures to break these down fully, the opiate sequences that are built right into gluten and casein are released straight into the bloodstream, and carried throughout the body.

From both first-hand experience with casiomorphin and gluteomorphin, and from the research, let me tell you what then happens. When you have opiates floating through your bloodstream, you relax, and it becomes hard to focus and pay attention to things. Everything is very peaceful and comfortable, because you also get wonderful pain relief, something tremendously valuable when you're experiencing high levels of inflammation and pain.

Unfortunately, there are some drawbacks. We get addicted to these opiates from dairy and grain products — which are almost impossible to avoid in processed foods. If for some reason the constant and regular supply of grain and dairy food fails, powerful cravings begin to kick in. For me as a child, these cravings were mistaken for hypoglycaemia. If we autistics don't satisfy those cravings, withdrawal symptoms arise as our bodies physiologically react to the missing drug.

Withdrawal symptoms can be pretty awful. Some of the other foods which are likely to cause these kinds of addictive responses are soft drinks, cane sugar, and food additives.

Digestive Stink: See Body Odour, Halitosis, Bad Breath, Foot Odour

Western medicine is currently in the midst of switching from a body-as-machine model of human health to a body-as-ecosystem model, so not everything you read or hear will reflect the new model arising from the human microbiome project. Our bodies are healthiest when the quantity of microbial cells within us out-numbers our own body's cells by ten times. The more diverse and balanced these microbes are, the better our bodies run.

Our gut ecosystem is one of the most critically important microbial communities within us. Without it, we cannot break foods down to materials our bodies can use for maintenance and repair, we cannot absorb those materials, and we cannot manufacture nutrients our bodies need, such as turning beta carotene into the form of vitamin A our bodies need. Unfortunately, poor air quality, poor beverage quality, poor food quality, poor medical choices, and unhealthy skin contacts with toxins all kill off the probiotics, or microbes that keep us healthy.

Digestive stink is a sign that the gut ecosystem isn't healthy, and that toxic wastes are highly enough concentrated in the body that mechanisms to keep us functioning are working poorly. The gut needs some support to return to better function. Stress is the most likely cause of changes in the gut microbial balance, but obvious or occult constipation are also too common.

Dislikes Change:

Most people find that they are more tired when they travel. Sometimes this relates to how much harder it is to communicate in a language that's not as familiar. Sometimes this relates to the increased physical stress of an unusual climate, or unusual foods. Sometimes this relates to having to get things done when where and how things are done can be so very different, and require so much investigation.

As a result of this increased exhaustion from learning and doing new things, most people limit the amount of change they are exposed to in their day-to-day lives. The more routine they sustain, the less energy they must invest in dealing with the unfamiliar. This leaves more energy available for any inevitable disruptions to routine.

Autistics are taking in a lot more sensory information, whether from heightened alertness from stress, or heightened irritation from toxins, or both. A lot more energy and constant effort goes into conscious filtering of this extra information in order to identify patterns. As a result, routines become much more valuable. Patterns are soothing, calming, restful. In a body ecosystem of heightened stress, metabolic turmoil, and too little routine, protesting and minimizing change is an important conservation of energy and resources.

Droning: See Head-Banging, Self-Injury

Droning is humming or singing a single note for long periods of time, taking breaths, and continuing on the same note. I used to do this as a child, to drown out the dissonance of things like the vacuum motor's whines. Autistics drone as a form of white noise, to shut out less pleasant or more distracting sounds and other sensory input (earplugs can also be a real boon). It's a coping mechanism, and it works quite well.

If you had a noisy office or bedroom, you might set up a white noise generator so that you could focus on what you want to focus on, or so you can sleep. Droning is one way of creating your own white noise, background noise to drown out irritating or distracting sounds so that you can focus on what you want to pay attention to.

One of the things that post-Holocaust research discovered is that when someone else is in control of how much pain you're feeling, and how long that pain lasts, you have a lot less tolerance for pain than when you have control over how much pain you're experiencing, and how long it lasts. It's quite a startling difference between the levels and lengths of pain which can be endured.

When we're droning, we are drowning out discomfort that we have no control over with discomfort that we do have control over. Droning feels very empowering and protective. Rather than trying to forcibly stop an autistic from droning, it would be better to investigate dietary, hormonal, detox, and other interventions to decrease pain and inflammation in the body.

Ear Covering: See Sensory Sensitivity

Most autistics have one or more senses on high alert or turned up to high volume, taking in much more sensory detail than non-autistics would. This abundant detail requires extra brain nutrients to understand and integrate the information. When brain nutrients are in short supply or are being displaced by toxins, or when nerve messages are being slowed or distorted, it can take a lot longer to sort through all the information — a wait of hours, days, weeks, or months is not unusual, with length of wait reflecting depth of health issues.

The excess of noise some of us experience can be distracting, overwhelming, and unpleasant. Covering our ears is often an indicator that inflammation is causing heightened hearing, and sometimes sound distortion like ringing in the ears. Sound distortions, particularly discordant sounds, and too much noise volume can make it uncomfortable or painful to listen, especially through headphones.

Eating Non-Foods: See Pica or Coprophagia

The only reason any of us mammals ever eat non-foods is because of internal dysbiosis. If the wrong microbes get into the wrong parts of our digestive tracts, this puts us in pain, debility, mental difficulties, and emotional turmoil (dysbiosis is one of the main reasons dementia in seniors is rising). The degree of pain and functional disruption directly reflects the degree of dysbiosis.

This disruption inevitably means that we're losing a lot of nutrients in our wastes, nutrients that our bodies desperately need. Non-foods often smell of the substances from which they're made. In my grandmother's era, many schoolteachers found themselves eating the classroom chalk when they became pregnant because they smelled the calcium and their bodies told them they needed it, just like dogs, cats, and livestock will eat plants with the nutrients their diets don't provide enough of, or the medicinals their bodies need in that moment.

Eating non-foods can be a prime indicator of malnourishment, usually a result of insufficient diet and/or gut dysbiosis. However, pica can also reflect a need to chew.

Inflammation inside the skull can cause the brain to feel uncomfortably or painfully compressed. As a pre-schooler, I ate the vinyl piping off all of the seats in my parents car because the chewy texture helped to give temporary relief from my discomfort caused by brain inflammation.

Echolalia: See Conversation, Tuning

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Speaking relies on nerves in the brain being able to communicate at lightning-fast speeds. There are 86 billion of these brain neurons, on average, and they're hungry for energy and nutrients. They eat between 20 and 25% of all the energy the body produces. In addition, these brain cells rely on having a very special soup surrounding them, full of the compounds they use to pass messages to each other, and empty of the toxins and wastes (brain cels need repairs and maintenance, too) that can gum up the works.

Toxins penetrate the blood-brain barrier when gut dysbiosis has weakened the gut-blood barrier, allowing undigested food, gut microbes, and microbial waste products — some of which are inflammatory and toxic — into the bloodstream without filtration. When the gut-blood barrier is disrupted, the blood-brain barrier follows closely behind. Unfortunately, this allows not only gut-associated challenges into the brain, but any other toxins arriving in the bloodstream from skin contact and airways into the brain, as well.

If brain energy and/ or brain food is in short supply, brain processing slows down. If toxins and wastes within the brain envelope are more concentrated, brain processing slows down. If stress is heightened, brain processing slows down. Initiating conversations relies on being able to process information in a timely fashion, spotting opportunities to join others, identifying likely topics to expand on, etc.

When any action in the brain is slowed by lack of supplies and too many heaped-up wastes and toxins, conversation is first slowed to rote (memorized) phrases which require less on-the-fly energy and nutrients, and then slowed to a state of barely verbal and not-necessarily conversation-connected words, and then slowed to non-verbal, regretful, wishing that we had words in the moment, never mind the right words.

Many of us autistics who are verbal have moments, hours, or days where we are barely verbal, or non-verbal, because of the presence of either heightened stress, heightened toxins, or both. Echolalia is a way of conserving energy, of connecting with and relating to the people around you when you don't have the brain resources to find your own words. Autistics who are echolalic or who repeat the same tunes over and over have the capacity to be much more verbal if health issues are effectively addressed.

Elopement: See Climbing, Hyperactive, Runs Away

Because our nervous systems are bringing in lots and lots of information, we autistics often get overstimulated. Also, when we have lots of toxins flowing through our bloodstream, we tend to be much more inflamed, irritable, reactive, and friable than most people are. Anything that happens around us registers louder for us than for non-autistics, and the stimulation affects us more.

Where is this overstimulation coming from? This often relates to the foods we're eating, because the foods we're eating will make us have more or less inflammatory products in our bodies. These inflammatory products will cause us to be more hyperactive, or their lack allow us to be more relaxed, happy, and engaged. Inflammatory products can also enter the body through the skin, and through the breathing.

Many people on the autistic spectrum have post-traumatic stress disorder. There is a close relationship between these two diagnoses. The body language of those of us autistics who are very tense is quite close to the body language of people with post-traumatic stress disorder. There are two reasons for running away. Any child who runs away, autistic or not, will be either running away from something, or running towards something.

Regular autistic runaways are either running away from something that they are overstimulated, afraid, or angry about, or they're running towards something attractive. Many of us autistics will run to green spaces, or run to water. There's a good reason for that. Natural areas — the wilder, the better — are extremely calming. They allow and enable much more comprehension and integration of what's going on around us. In contrast, indoor environments can be toxic and overstimulating.

When we're running from something, you can usually tell if we're afraid, or if we're angry, or if we're upset. Sometimes we run from abusers, or from the places where people have abused us in the past. You can also usually tell if we're running towards something, with an intent or focused look on our faces. If you see that intent kind of look, chances are there's something out there that's calling to us, that we really want to go and engage with. So many environments are ugly and stressful on all of the senses, especially when your senses are turned up to high volume. Things that are fascinating and beautiful are such a relief!

Fearful:

A much higher proportion of autistics are experiencing the stress response (fight, flight, or freeze) for a much greater portion of each day than is usual in the non-autistic population. The more trauma a person has experienced without being able to resolve and release that trauma, the more likely that person is to be traumatized by future experiences. Where does this heightened stress come from? And why isn't it getting resolved?

Dr. Robert Scaer has a 4-decade career in neurology and rehabilitation. In his words, ""The cumulative experience of life's little traumas actually shape our personality, choice of mates, profession, clothes, appetite, pet peeves, social behaviours, posture, and state of physical and mental health… Repeatedly threatened in a state of helplessness, the animal develops learned helplessness… analogous to traumatization in humans".

With often-impaired communication, sensory distortion, and much fewer positive interactions than most non-autistic people, and a resulting much higher sense of helplessness, it's more likely that autistics will experience trauma where others wouldn't, and it's less likely that trauma will be resolved through new understandings.

There is also a growing stack of research papers linking heightened stress during pregnancy with a higher likelihood of autism in the child. Elevated stress hormones such as cortisol freely

pass the placental barrier, and have very significant negative effects on the outcome of the pregnancy and health of the newborn. In fact, there's a direct relationship between the degree of stress a mother experiences (e.g. from tropical storms or violence in the home) and the likelihood and severity of autism in her child.

Fortunately, most autistics find and regularly use self-calming mechanisms — often called stims. As an adult taking a course in Brain Gym, I was stunned to realize that most of the recommended protocols were things I already did naturally, from early childhood. It can also be simple to create a safe and peaceful environment to reduce stress levels and allow greater digestive, healing, learning, and relaxation abilities.

Fiddling with Things:

There are two autism behaviours this might describe, one I call self-calming, and the other I call pattern recognition. Seniors often choose chairs which allow them to rock or swing, gently; why is this? Why do upset babies calm down, sometimes enough to sleep, when rocked or bounced in arms, strollers, or car seats? When we're uncomfortable, gentle and repetitive behaviours do two things.

First, fiddling with things lulls the central nervous system, allowing the sympathetic (stress) response to back down, and enabling the parasympathetic (sleep, digestion, learning, repair) system to get the energy and supplies it needs to do its work. People in the autistic spectrum tend to carry much higher levels of stress in their bodies than non-autistics do. These types of movement allow that stress to dissipate.

Second, autistics tend to organize or align objects around them according to varying criteria. This is a healthy coping mechanism, an active engagement in combing and refining chaotic information for patterns which can be made sense of. Without this skill development, most autistics would never emerge from the sensory overwhelm caused by heightened sensory sensitivity. Finding the "signal" in the "noise" is also a highly useful skill in workplaces.

Fidgeting: See Jiggling and Squirming

Why do seniors often choose chairs which allow them to rock or swing, gently? Why do upset babies calm down, sometimes enough to sleep, when rocked or bounced in arms, strollers, or car seats? When we're uncomfortable, fidgeting does two things.

First, these motions lull the central nervous system, allowing the sympathetic (stress) response to back down, and the parasympathetic (sleep, digestion, learning, repair) system to get the energy and supplies it needs to do its job. People in the autistic spectrum tend to carry much higher levels of stress in their bodies than non-autistics do. These types of movement allow that stress to dissipate.

Second, these motions get the lymphatic fluid moving. When detoxification is impaired, it's normal for excess toxins to accumulate in places where blood flow and lymphatic flow are most limited: the extremities (the head, the hands, and the feet). Lymphatic fluid doesn't flow unless muscles are moving, pumping it up to the lymph nodes which filter it into the blood for cleaning.

When toxins — both from normal body functions, as well as from gut dysbiosis or absorption from the surroundings — accumulate in the extremities, what begins as vague discomfort in those extremities gradually increases into irritation, and then outright pain. Fidgeting movements are effective at dissipating this pain.

Flapping: See Jumping, Pacing

When things happen which we care deeply about, or when we're trying to express things that are very important to us, our nervous systems may accumulate a high degree of charge. We

then need a way to let that charge out. Letting the charge out through physical actions allows us to calm ourselves enough to continue doing what we're doing.

Have you ever been to a rock concert, or seen film footage from one? Often, there's a group of people standing up right in front of the stage, eagerly anticipating the band's arrival. And when the band comes on stage, members of this group (and sometimes the whole group) begin jumping up and down, flapping their hands as though they're drying their fingernails, and letting out strange shrieks. While they might look autistic, they're not. They're so wound up, they have to physically release that charge in their nervous systems.

When autistics flap, it's rarely to do with a loud band! We autistics can deal with really loud noises or other sensory overwhelm by developing the skill of using our focus on a single thing to exclude every other sensory input. That's called monotropism. It's a coping mechanism — not a pathology or problem.

The only way an autistic could get anywhere near the loud-speakers at a noisy concert is by focussing on something to the exclusion of everything else. For example, John Elder Robison pulls one instrument's melody out of a medley of other instruments. The volume of noise would be too overwhelming, without that kind of crutch.

When you see someone pacing, or jumping, or flapping, you know that they've got so much 'zing' going through their nervous system, they need extra physical ways to let that 'zing' out. That 'zing' can be coming from both internal and external sources of overstimulation.
Flapping can make the difference between being able to stay present, learn, and interact, or having to leave or lose self-control (which none of us enjoys). Allowing us to self-monitor and self-sustain in this way lets us participate more and better.

Focused: See Hyper-Focused

Some autistics have a lot of trouble paying attention to anything, especially in crowded or otherwise chaotic and unfamiliar environments. We autistics can learn to deal with sensory overwhelm by developing the skill of using our focus on a single thing to exclude every other sensory input. That skill is called monotropism. It's a coping mechanism — not a pathology or problem.

Foot Odour: See Bad Breath, Body Odour, Digestive Stink, Halitosis

Western medicine is currently in the midst of switching from a body-as-machine model of human health to a body-as-ecosystem model, so not everything you read or hear will reflect the new model. Our bodies are healthiest when the quantity of microbial cells within us out-numbers our own body's cells by ten times. The more diverse and balanced these microbes are, the better our bodies run.

Our gut ecosystem is one of the most critically important microbial communities within us. Without it, we cannot break foods down to materials our bodies can use for maintenance and repair, we cannot absorb those materials, and we cannot manufacture nutrients our bodies need, such as turning beta carotene into the form of vitamin A our bodies need.

Strong foot odour is a sign that the gut ecosystem isn't healthy, and that toxic wastes are so thick in the body that even the skin is trying to get rid of them. Since the feet have the greatest density of pores, they are a prime location for sweating out toxins. Stress is the most likely cause of changes in the gut microbial balance, but 70% to 80% of immune function happens in the gut. (GD +/ OIF +/ STC)

Gas: See Belching

What should be a healthy, rainforest-style ecosystem of gut microbes is under assault from air pollution, beverage pollution, food pollution, and skin pollution. A lack of healthy microbial replacements from healthy air, beverages, food, and skin contacts means that as species die out, the gut is increasingly at risk of damage, and less able to do its job. Most North Americans have a gut ecosystem that looks more like a grassland — much more vulnerable to cold, drought, and other shocks.

When species are wiped out, the job they used to do is no longer getting done. Previously, these species would break down nutrients without toxic waste. Now, those nutrients become food for the versatile rats and pigeons of the gut ecosystem, the scroungers. The scroungers tend to use up materials the body needs, and their waste products often include gas. (GD)

Hair-Tie Removal: See Biting, Chewing, Hat Removal, Headaches

Many of us autistics won't wear hats, headbands, earmuffs, barrettes, ponytails, or anything else that either pulls our hair, or sits too tightly around our heads. Have you ever had the experience of a new hat, a new pair of glasses, or a new way of tying back your hair causing gradually-increasing discomfort, maybe where it tugged or pulled? Turn up the volume on that discomfort, and you'll get a sense of why we avoid these things.

When we're autistic, we tend to have neither a good gut-blood barrier (so the gut leaks all kinds of nasties into the bloodstream), nor a good blood-brain barrier (so the nasties from the gut and blood are getting into the brain). Toxins — which make their way into our bloodstream, whether from the airways, the gut, or the skin — get into autistic brains much more easily. Because many of the worst toxins are fat soluble, and the brain is the largest accumulation of fat in most bodies, these toxins then lodge both in the brain tissues, and in the membranes surrounding, and intended to cushion the brain.

These toxins then cause brain inflammation. All through my life, I have had what I call a perma-headache. The pain moves up and down on the discomfort scale, but never entirely goes away; my head feels sore, aggravated, and hot. At its worst, there are cicadas constantly going in the background in my ears. This kind of perma-headache is a constant in my life, and in the lives of many other autistics. When anything aggravates that headache, it gets worse fast.

If your skull feels like it's too small for your head, you can't take your skull off the way you would a pair of tight shoes. When you're experiencing that kind of compression on the inside of the skull, the sutures of the skull (where the skull plates meet) can ache a lot, too. Anything which puts any pressure, even very light, on the outside of the head can aggravate the pressure inside the head, and on the sutures.

I'll often notice babies and toddlers taking clips, elastics, headbands, and hats off just as soon as their parents put them on, and wonder how much brain inflammation they're experiencing. If you see this kind of behaviour in someone, take action to bring down inflammation in the body overall. While my headaches have backed down a lot as I decrease my overall inflammation, there are still many days when I cannot wear a hat or hair ties because the compression is too uncomfortable.

Halitosis: See Bad Breath, Body Odour, Digestive Stink, Foot Odour

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Hat Removal: See Biting, Chewing, Hair-Tie Removal,

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Headaches: See Biting, Chewing, Hair-Tie Removal, Hat Removal

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accumulation of fat in most bodies. These toxins lodge in the brain tissues, and in the membranes surrounding the brain, causing brain inflammation.

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Head-Banging: See Droning, Self-Injury

Autistics bang our heads as a form of white noise, to shut out unpleasant, highly distracting sensory input such as emotional and physical pain. It's a coping mechanism, and it works quite well. Head banging is one way of creating your own white noise, your own signal to drown out other things. Head banging is a much louder signal than its relative, droning.

When you're banging your head, you're using pain that you control to drown out pain that you cannot control. Why would this be an improvement? One of the things that post-Holocaust research discovered is that when someone or something else is in control of how much pain you're feeling, and how long that pain lasts, you have a lot less tolerance for pain than when you have control over how much pain you're experiencing, and how long it lasts. It's quite a startling difference between the levels and lengths of pain which can be endured.

As a result, from the inside, head-banging feels very empowering and protective, drowning pain we have no control over. Rather than trying to forcibly stop an autistic from head-banging, it would be better to investigate dietary, hormonal, detox, and other interventions to decrease pain and inflammation in the body.

Hygiene Avoidance: See Avoids Clean Clothes, Avoids Haircuts

Showers and baths are very sensory-intense experiences. Touch, smell, sight, and hearing are all involved. While most of us autistics love water, some of us find showers too intense and need to take slower, less-stimulating baths. Others find their symptoms aggravated by toxins in the water and steam. In addition, bathing involves work and the use of often-toxic products, which can also worsen our challenges.

Most households and institutions use soaps, shampoos, conditioners, deodorants, shaving creams, and depilatory products which contain toxic components. Some of these enter the body in minutes through the skin, affecting the health in a variety of undesirable but non-obvious ways. Some of these enter the body in seconds, through the rapid transport of VOCs (including fragrances) into the bloodstream via breathing. VOCs can take only moments to register as pain in the form of toxin headaches or nausea, to name only the top two indicators of intoxication.

Choosing products unlikely to cause inflammation or pain can make bathing experiences much less difficult. As a general rule of thumb, if you wouldn't eat it, don't put it on your skin. Your gut does a lot of work to separate out the toxins and waste from the nutrients you need, when you eat. Your skin and airways have none of these mechanisms to sort the necessary or useful from the detrimental.

Hyperactive: See Climbing, Elopement, Runs Away

Because our nervous systems are bringing in lots and lots of information, we autistics often get overstimulated. Also, when we have lots of toxins flowing through our bloodstream, we tend to be much more inflamed, irritable, reactive, and friable than most people are. Anything that happens around us registers louder for us than for non-autistics, and the stimulation affects us more.

Where is this overstimulation coming from? This often relates to the foods we're eating, which will leave us with more or less inflammatory products in our bodies. Inflammatory products will cause us to be more hyperactive; their lack allows us to be more relaxed, happy, and engaged. Inflammatory products can also enter the body through the skin, and through the breathing.

Many people on the autistic spectrum have post-traumatic stress disorder. There is a close relationship between these two diagnoses. The body language of those of us autistics who are very tense is quite close to the body language of people with post-traumatic stress disorder. So many environments are ugly and stressful on all of the senses, especially when your senses are turned up to high volume. Things that are fascinating and beautiful are such a relief!

Hyper-Focused: See Focused

Some autistics have a lot of trouble paying attention to anything, especially in crowded or otherwise chaotic and unfamiliar environments. We autistics can learn to deal with sensory overwhelm by developing the skill of using our focus on a single thing to exclude every other sensory input. That skill is called monotropism. It's a coping mechanism — not a pathology or problem.

Inferences (Spoken or Written) Not Made: See Body Language Not Interpreted, Conversation

Most autistics have one or more senses on high alert, taking in much more sensory detail than non-autistics would. This detail requires brain nutrients to understand and integrate the information. When brain nutrients are in short supply or are being displaced by toxins, or when nerve messages are being slowed or distorted, it can take a lot longer to sort through all the information — a wait of days, weeks, or months is not unusual, with length of wait reflecting depth of health issues.

As a coping mechanism, and in the hopes of not being left out of interactions entirely, most autistics limit the senses they pay attention to and try to sort. All the information is still coming in, but translation is only being demanded for what is considered highest priority — usually sight or sound. When someone is speaking, autistics may turn off translation of any or all other sensory inputs in order to keep up with hearing and understanding the words. In addition, words are taken at face value, at their literal meanings.

The result is that, unless an interaction is repeated over and over the way it would be in theatre, or video recordings, giving enough observation time to focus on and tease out the details for each of the sensory inputs in turn, and then gradually put them together to see if the collection changes the meanings, an autistic is likely to entirely miss body language until their sensory integration has had a chance to catch up with their real-time experiences.

Speaking relies on nerves in the brain being able to communicate at lightning-fast speeds. There are 86 billion of these brain neurons, on average, and they're hungry for energy and nutrients. They eat between 20 and 25% of all the energy the body produces. In addition, these brain cells rely on having a very special soup surrounding them, full of the compounds they use to pass messages to each other, and empty of the toxins and wastes (brain cels need repairs and maintenance, too) that can gum up the works.

Toxins penetrate the blood-brain barrier when gut dysbiosis has weakened the gut-blood barrier, allowing undigested food, gut microbes, and microbial waste products — some of which are inflammatory and toxic — into the bloodstream without filtration. When the gut-blood barrier is disrupted, the blood-brain barrier follows closely behind. Unfortunately, this allows not only gut-associated challenges into the brain, but any other toxins arriving in the bloodstream from skin contact and airways into the brain, as well.

If brain energy and/ or brain food is in short supply, brain processing slows down. If toxins and wastes within the brain envelope are more concentrated, brain processing slows down. If stress is heightened, brain processing slows down. Initiating conversations relies on being able to process information in a timely fashion, spotting opportunities to join others, identifying likely topics to expand on, etc.

When any action in the brain is slowed by lack of supplies and too many heaped-up wastes and toxins, conversation is first slowed to rote (memorized) phrases which require less on-the-fly energy and nutrients, and then slowed to a state of barely verbal and not-necessarily conversation-connected words, and then slowed to non-verbal, regretful, wishing that we had words in the moment, never mind the right words. Many of us autistics who are verbal have moments, hours, or days where we are barely verbal, or non-verbal, because of the presence of either heightened stress, heightened toxins, or both.

Irritability:

Most autistics have one or more senses on high alert or turned up to high volume, taking in much more sensory detail than non-autistics would. This abundant detail requires extra brain nutrients to understand and integrate the information. When brain nutrients are in short supply or are being displaced by toxins, or when nerve messages are being slowed or distorted, it can take a lot longer to sort through all the information — a wait of hours, days, weeks, or months is not unusual, with length of wait reflecting depth of health issues.

Inflammation in the body lowers your "smoke point". Have you ever noticed how grouchy senior citizens (those who don't do yoga regularly) can get? The higher the regular pain levels being experienced, the harder it is to be happy, friendly, or even engaged in what's going on around you.

Jiggling Self or Things: See Fidgeting and Squirming

Why do seniors often choose chairs which allow them to rock or swing, gently? Why do upset babies calm down, sometimes enough to sleep, when rocked or bounced in arms, strollers, or car seats? When we're uncomfortable, jiggling does two things.

First, these motions lull the central nervous system, allowing the sympathetic (stress) response to back down, and the parasympathetic (sleep, digestion, learning, repair) system to get the energy and supplies it needs to do its job. People in the autistic spectrum tend to carry much higher levels of stress in their bodies than non-autistics do. These types of movement allow that stress to dissipate.

Second, these motions get the lymphatic fluid moving. When detoxification is impaired, it's normal for excess toxins to accumulate in places where blood flow and lymphatic flow are most limited: the extremities (the head, the hands, and the feet). Lymphatic fluid doesn't flow unless muscles are moving, pumping it up to the lymph nodes which filter it into the blood for cleaning.

When toxins — both from normal body functions, as well as from gut dysbiosis or absorption from the surroundings — accumulate in the extremities, what begins as vague discomfort in those extremities gradually increases into irritation, and then outright pain. Jiggling movements are effective at dissipating this pain.

Jumping: See Flapping and Pacing

When things happen which we care deeply about, or when we're trying to express things that are very important to us, our nervous systems may accumulate a high degree of charge. We then need a way to let that charge out. Letting the charge out through physical actions allows us to calm ourselves enough to continue doing what we're doing.

Jumping is one way of letting that charge out. Have you ever been to a rock concert, or seen film footage from one? Often, there's a group of people standing up right in front of the stage, eagerly anticipating the band's arrival. And when the band comes on stage, members of this group (and sometimes the whole group) begin jumping up and down, flapping their hands as though they're drying their fingernails, and letting out strange shrieks. While they might look autistic, they're not. They're so wound up, they have to physically release that charge in their nervous systems.

When autistics jump, it's rarely to do with being excited about a band! We autistics can deal with really loud noises or other sensory overwhelm by developing the skill of using our focus on a single thing to exclude every other sensory input. That's called monotropism. It's a coping mechanism — not a pathology or problem.

The only way an autistic could get anywhere near the loud-speakers at a noisy concert is by focussing on something to the exclusion of everything else. For example, John Elder Robison pulls one instrument's melody out of a medley of other instruments. The volume of noise would be too overwhelming, without that kind of crutch.

When you see someone pacing, or jumping, or flapping, you know that they've got so much 'zing' going through their nervous system, they need extra physical ways to let that 'zing' out. That 'zing' can be coming from both internal and external sources of overstimulation. Acting in these ways can make the difference between being able to stay present, learn, and interact, or having to leave or lose self-control (which none of us enjoys). Allowing us to self-monitor and self-sustain in this way lets us participate much, much, better.

Licking/ Touching With Tongue: See Mouthing

One of the earliest reflexes in humans is to explore things with our mouths. The lips and tongue are very rich in sensory nerves, and can provide a great deal of information about texture, temperature, weight, and all kinds of other things about whatever they're in contact with. Those of us with autism are taking in a lot more sensory details, but there are problems with this.

Our autistic perceptions can be distorted by intoxication from environmental toxins, and toxins produced by unhealthy microbes in our gut. Our integration of sensory information can be patchy or much-delayed by insufficient energy and nutrients in the brain. And our attempts to figure out what is signal, and what is noise, can take a long time and a lot of data.

The more senses with which we engage with things, the better an understanding we will have of those things. This is entirely separate from biting and chewing things, which are

engaged in to momentarily detract from tightness and inflammation inside the skull by tugging on the membranes inside the skull.

Limited Conversation Topics: See Conversation Topics Limited

Review "Conversations Hard to Initiate, Join, or Sustain". When any action in the brain is slowed by lack of supplies and too many heaped-up wastes, conversation is slowed or stopped. Many of us autistics who are verbal have moments, hours, or days where we are barely verbal, or non-verbal, because of the presence of either heightened stress, heightened toxins, or both.

When human brains are under heightened stress during key developmental stages, they invest more energy into the parts of the brain designed for pattern recognition and problem-solving, and less energy into the parts of the brain designed for socializing. It's my (gaining traction) theory that this is an adaptive response which has supported survival of the human species by creating more problem-solvers when the going gets tough.

Most individuals in the autistic spectrum have very defined interests. Something that interests one of us is fascinating; something that doesn't interest us cannot hold our attention at all. Our interests tend to go deep into specialized information, rather than broadly into popular non-autistic topics such as human (or TV/ movie/ sports) doings, and the why of interactions.

While we autistics have as profound a desire for positive and caring interactions as any other human, it can be much more difficult for us to find people not only willing to converse about the things we find fascinating, but delighted to do so. Fortunately, two things have been changing.

First, the internet has allowed interest-based community to build across previously daunting geographic, age, and cultural barriers. And second, as more factual information about autism becomes available, it allows more of us to optimize our autism. As a result of our greater health and function, our interests broaden to allow more varied conversation, and our social skills refine.

Lining Things Up: See Organizing

Most autistics have one or more senses on high alert, taking in much more sensory detail than non-autistics would. This detail requires brain nutrients to understand and integrate the information. When brain nutrients are in short supply or are being displaced by toxins, or when nerve messages are being slowed or distorted, it can take a lot longer to sort through all the information — a wait of days, weeks, or months is not unusual, with length of wait reflecting depth of health issues.

As a coping mechanism, and in the hopes of not being left out of interactions entirely, most autistics limit the senses they pay attention to and try to sort. All the information is still coming in, but translation is only being demanded for what is considered highest priority — usually sight or sound. When someone is speaking, autistics may turn off translation of any or all other sensory inputs in order to keep up with hearing and understanding the words.

The more chaotic an autistic's surroundings are, the more likely that person is to miss some detail that would otherwise be considered important. This is a signal-to-noise ratio problem. That's an engineering term comparing how much of what's around you has meaning (signal), and how much is irrelevant (noise) in all of the possible things you could be paying attention to.

For example, imagine you're trying to get your favourite radio program on a short-wave radio. You're turning the tuning knob, and you're listening intently, trying to find that sweet spot where everything will come through clearly. But mostly, you hear hisses, pops, whistles, and squeals, with an occasional word or dash of music.

In this case, the music or the words is the signal. The noise is everything else in between. Trying to identify what around you has meaning, and what doesn't, seems to be something that non-autistics filter automatically, or that they're unconsciously competent at (like going on auto-pilot to drive home). But autistics have to really work at it, to keep consciously translating what has meaning in any given situation. It's exhausting, and can be very frustrating.

When you see an autistic who is organizing things or lining things up, they're doing something very clever: reducing the signal-to-noise ratio. They're creating more signal and less noise by organizing their environment. Encourage this coping skill, this active engagement with what has meaning. Help them organize things in parallel play. This really helps us begin to be able to identify more and more of the criteria that are considered meaningful.

This kind of exploration can be the first breakthrough in understanding. And supporting this skill will speed the path to increasingly effective communication. Most of us who have made it out of the fog of autism are highly skilled at spotting patterns or errors in chaotic information, because of developing this coping skill.

Looks Away: See Not Paying Attention

Autistics may seem like they're not paying attention, or not looking at you, when you want them to know or remember something. However, you would be surprised at how much information is getting in. Did you know that the 'noisiest' of all the senses is vision? In the face of visual distraction, it is very hard to pay attention to anything else.

Now consider what it's like when all of your senses are giving you too much information. When it's really important to hear something, or emotions are heightened and you're wanting to deal with the feelings, or you want to really focus on a smell or taste, do you ever shut your eyes?

Autistics have so much more information coming in, because of heightened senses. We often can't keep up with the amount of information coming in, never mind process it in time to do something about it. As a result, we find ways of shutting down the amount of information that's coming in, so that we can pay attention to the thing that we think people want us to pay attention to, or to the thing that most interests us.

The central cone of the visual field is where we see the most colours and details, but it is also the part of the eye which provides the highest amount of information. Outside of this central cone is the peripheral vision, which is still very capable, but less information-dense. Most non-autistic people only notice information that's in the central cone of their visual field — straight ahead of where they're looking — which is actually only a very small portion of the full visual field. If you're concerned, this process can be reversed with exercises.

We autistics often find it easier to shut our eyes or look at something that is unmoving and unchanging, taking in any visual information through our peripheral vision. When we don't look directly at the person or object we're relating to, we can actually pay attention better by using our peripheral vision and cutting down the clutter of signals to be processed by our often-impaired sensory integration processes.

When we close our eyes, look away, or look down at something unmoving and unchanging, it's often because we **want** to pay better attention to your words. Decluttering the visual field, or viewing things only through the peripheral vision so there are fewer signals, is a profoundly helpful tool in being able to respond appropriately and in a timely fashion to external expectations.

If you want autistics to pay attention, it can be quite counterproductive to make them look at you, and thereby confuse or distract them from actually hearing what you want them to hear.

You would be surprised at what we remember, from times you would swear we are entirely disengaged or unresponsive.

If you help us get healthier by dealing with the lifestyle factors which are undermining our health, and giving effective support for the underlying chronic health issues at the root of our symptoms, it gets much easier for us to both look at you, AND hear what you say.

Meltdowns:

Many people mix meltdowns with tantrums, and try to scold or shame the meltdown away. This is counterproductive. In a true meltdown, other people's reactions don't even register until later, when we've had a chance to calm down. There's a very clear difference between meltdowns and tantrums which you'll begin to spot, as soon as you understand what to look for.

In a tantrum, the background emotion is anger. Behind the behaviour is a stream of thought that goes something like, "I'm not getting what I want, and I'm going to do whatever I have to do to make this person understand that this is really important to me. I should get to have what I want, or I shouldn't have to do what I don't want." You will often see the person who is having a tantrum looking at you, checking to see what your reaction is like to the display that he or she is making, and to check on whether you're going to give in or not.

Now, meltdowns are different — and they're really hard for me to talk about, because I can't talk about them without feeling them. Meltdowns come from a place of hopelessness, helplessness, and utter overwhelm. There are so many sensory inputs coming in that we autistics haven't a hope of integrating these a timely fashion, never mind understanding them well enough to respond appropriately. And there is so much inner turmoil and stress happening, we haven't a clue what else is going on around us.

When this happens, we have no way to cope with all of it. We're beyond ourselves, unable to translate our surroundings fast enough, usually because they are painfully overwhelming to a sensory system with everything turned to high volume. So what happens is survival, a lashing out with everything we've got because we have no control over the stress and pain we're feeling. If we happen to meet anyone's gaze, it's an accident. In case you're wondering, it's worse to experience than to support; I've had it both ways.

So what can you do to make a positive impact, help reduce tantrums, and help speedier meltdown recovery? You actually do very similar things. First, move the upset person out of the upsetting situation, as soon as possible. Ideally, move him or her into a natural area where there will be a lot less sensory overwhelm, and away from whatever it is that is causing the tantrum or meltdown. The quieter, calmer, or more greenery-covered the space is, the faster the calm returns.

As best you can, get yourself calm and sympathetic. In either case, the more that you're able to be a loving and calm presence, the faster your upset autistic companion will be able to emulate your calm. At that point, you have a lot more opportunity for doing some problem-solving, figuring out what was going on, and hopefully helping that upset individual come out of that upset space.

If someone is using tantrums to try to assert his or her willpower, he or she will quickly learn that this is the fastest path to not getting what is wanted, and will try other things, growing out of the tantrums. On the other hand, many other humans (not just autistics; I've seen non-autistic senior citizens having meltdowns using anger to cover their shame, fear, or sadness) never grow out of meltdowns. The more stressed we are, the more often they crop up. Because autistics are under such high levels of stress and pain, meltdowns are difficult to avoid

altogether. However, meltdowns can be prevented, and this is something that I go into in my online programs and teacher trainings.

Mouthing: See Licking

One of the earliest reflexes in humans is to explore things with our mouths. The lips and tongue are very rich in sensory nerves, and can provide a great deal of information about texture, temperature, weight, and all kinds of other things about whatever they're in contact with. Those of us with autism are taking in a lot more sensory details, but there are problems with this.

Our autistic perceptions can be distorted by intoxication from environmental toxins, and toxins produced by unhealthy microbes in our gut. Our integration of sensory information can be patchy or much-delayed by insufficient energy and nutrients in the brain. And our attempts to figure out what is signal, and what is noise, can take a long time and a lot of data.

The more senses with which we engage with things, the better an understanding we will have of those things. This is entirely separate from biting and chewing things, which are engaged in to momentarily detract from tightness and inflammation inside the skull by tugging on the membranes inside the skull.

Moving On/ Past Issue:

Have you ever noticed how things you've experienced that feel unresolved keep coming up in your memory until you find some peace and greater understanding around them? With sensory distortion, sensory integration challenges, and communication challenges, it's much more difficult for those of us with autism to resolve things that confused us. When you can't find the words to say even simple things, the more challenging or upsetting things can feel insurmountable, and much more upsetting.

Muscle Cramps/ Spasms: See Seizures and Tics

Muscle spasms result from two related issues: nutritional deficiencies, and neurotoxic body burden. How do these relate to each other? The higher the toxic body burden (the concentrations of various classes of chemicals in the body), the greater a demand there is for nutrients which help to detoxify the body. Neurotoxins are toxins which cause nerves to fire when they shouldn't, or prevent them from firing when they should. Where are these toxins coming from?

Endogenous toxins are usually created by gut dysbiosis. Dys means "wrong", and bio means "life". Inside the gut, we're supposed to have thousands of species of mostly healthy bacteria, which form a rainforest inside us. Because we're living so far outside our optimal tolerance ranges for best human health, our internal ecosystems are suffering. The probiotics (the healthy bacteria which help us break down and absorb food) are experiencing waves of genocide, and increasingly, all that's left inside us are undesirable organisms like yeast, funghi, unhealthy bacteria, and sometimes various parasites.

These unhealthy bacteria, yeasts, funghi and/or parasites all produce wastes, and many of those wastes are toxic or inflammatory. Some of these waste products affect the brain and nerves, badly. These unhealthy creatures in our gut also do a poor job at breaking food into the tiny amounts our cells can absorb, and do a thorough job at stealing and using critical nutrients such as Zinc and Vitamin B12 for their own growth, reproduction, and partying. So when our digestion isn't doing what it's supposed to do, we can be producing an awful lot of things which are telling nerves to cause our muscles to fire when they shouldn't be.

There are also exogenous toxins (toxins being absorbed from outside the body). We breathe in man-made fragrances, which are in the same class of chemicals as neurotransmitters (the

things our nerves use to pass information down a chain of nerves), and inhale a host of other toxins which impair the nerves, the hormones, or other parts of the body. We put toxic things on our skin, and drink beverages which harm us. And we eat toxins in our foods.

Natural detoxification of the body is clogged to some degree in all autistics tested to date. All humans are accumulating toxins much faster with every passing year, because we're steeping in more toxins to absorb. But autistics accumulate more, faster. **Please don't worry**, we know how to decrease these toxins, both inside the body, and in the environments around us. We're simply still building enough will-power to turn things around, just yet. I'm confident that will happen soon, especially once you have the right information in your hands.

Between agricultural chemicals, industrial chemicals, personal care and cleaning chemicals, and things like food additives, our hormones and nerves are receiving signals from outside the body that take our health off-balance, in addition to the nasty waste products from gut dysbiosis. So we have rather a large collection, now, of things which tell our nerves to make a muscle clench when it's not needed.

Because our autistic detox mechanisms are impaired, toxins which enter our bodies end up circulating and recirculating through the bloodstream, and randomly getting caught somewhere and firing off nerves. This random firing of nerves is what causes tics (the repeated jumping of a muscle) , spasms (the clenching of a muscle), and seizures. There are several types of seizures, but the type doesn't matter; the source is the same.

So, why do non-autistic people tend to have so much less of this kind of muscle and nerve spasming? Most non-autistic people have more intact detoxification mechanisms (e.g. their liver and kidneys are working better). In addition, fat metabolism is usually working better. The fat soluble toxins which cannot get moved out of the body get packed into fat cells. People who feel awful when they try to lose weight by melting away fat cells are probably dumping too many toxins into the bloodstream at once, without helping the body get rid of them.

If you know an autistic who is experiencing tics, spasms, and seizures, please begin a safe and simple supported home detox, now. No, I'm not talking about the drug-store One-Size-(Doesn't)-Fit-All Detox kits. Get good advice and support lined up, preferably with a licensed holistic medical professional such as a Traditional Chinese Medicine Doctor, a Homeopathic Doctor, a Naturopathic Doctor, an Ayurvedic doctor, or an Osteopathic Doctor. Some Orthomolecular and Environmental Physicians may also be able to support you holistically. Choose carefully, ok?

Tics, spasms, and seizures can escalate (get worse and worse, causing complications on the complications), and can cause damage that is much more difficult to heal than other symptoms. So these are the only symptoms for which I recommend you go straight towards intervention, which is detoxification. Even though you're still filling the body with toxins while you're trying to empty them out, and interventions will cost you more because of this, starting to detox as soon as possible will minimize further damage and resulting repairs needed.

Every other symptom that's telling you which lifestyle factors are undermining the results you want, deal with those lifestyle factors first, before you dive into doing interventions. You can spend an awful lot of money on interventions, and if you're undermining the results you want, you're just pouring money down the drain!

Narrow Interests: See Conversation Topics Limited and Limited Conversation Topics

As well as reading this, review the entry on "Conversations Hard to Initiate, Join, or Sustain". When any action in the brain is slowed by lack of supplies and too many heaped-up wastes, conversation is slowed or stopped. Many of us autistics who are verbal have moments, hours, or

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Night Soiling: See Constipation

Digestive issues indicating gut dysbiosis and leaky gut (or Small Intestinal Bacterial Overgrowth, SIBO for short) show up in 93% of autistics with regressive autism, and 100% of autistics have oxidative stress. Oxidative stress is an indicator of malnourishment, whether that be from low-nutrient food, digestive inefficiency, or auto-intoxication (self-poisoning) from putrid wastes kept in the colon too long — otherwise known as constipation.

When the gut ecosystem is inflamed, the gut-blood barrier is compromised. And when the gut-blood barrier is compromised, so is the blood-brain barrier — which means that most if not all toxins and inflammation present in the gut is also showing up everywhere the blood travels, including the brain. This inflammation throughout the body is one of the measurable, physical hallmarks of autism spectrum challenges, though the source of the inflammation can also be injury, toxins from the environment, and stress.

Conditions such as chronic constipation (a large intestine that moves too slowly), toxic mega-colon (accumulation of old wastes throughout the colon that disrupt the processing of new wastes), and occult mega-rectum (massive blockage accumulated within the ballooned last part of the digestive tract) are all associated with chronic and recurring yeast infections, urinary tract infections, incontinence (including bedwetting), soiling, foul body and faecal smells, skin problems, and other chronic health issues.

Chronic but hidden constipation can also be the primary cause of chronic diarrhea and nausea. In chronic diarrhea, the lining of the colon is constantly assaulted by the toxins from the accumulated wastes, so rushes everything else through, unable to evacuate the offending, hardened, and sticky mass causing the disruptions. In chronic nausea and vomiting, colon microbes have gone upstream and colonized the small intestine.

Many of the worst and most distressing mental, emotional, and physical symptoms of autism are the result of severe gut dysbiosis and resulting constipation.

Night Sweats:

In the model of German New Medicine, a fascinating science which can use CT Scans to predict the mental-emotional trauma behind the body's failure to heal in particular ways (for more information about this, start with Dr. Gabor Maté's "When the Body Says No"), night sweats are part of a healing reaction. If the night sweats are ongoing, it would be worth exploring further health support that can address trauma release, as well as support the resolution of symptoms.

Not Accepting Help:

Ok, this one is just about being human… How many people do you know who just want to do it themselves without interference or someone else deciding what the priorities are? I don't see any more of this in autistics than I do in the rest of the population, though I can certainly understand that this attitude can be frustrating wherever you find it!

Not Paying Attention: See Looking Away

Autistics may seem like they're not paying attention, or not looking at you, when you want them to know or remember something. However, you would be surprised at how much information is getting in. Did you know that the 'noisiest' of all the senses is vision? In the face of visual distraction, it is very hard to pay attention to anything else.

Now consider what it's like when all of your senses are giving you too much information. When it's really important to hear something, or emotions are heightened and you're wanting to deal with the feelings, or you want to really focus on a smell or taste, do you ever shut your eyes?

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If you help us get healthier by dealing with the lifestyle factors which are undermining our health, and giving effective support for the underlying chronic health issues at the root of our symptoms, it gets much easier for us to both look at you, AND hear what you say.

Not Trying:

Umm… Important — no, critically important — question: Are you sure you're aware of and recognizing just how hard most autistics DO try? If or when we do seem to stop trying, it might be worth you taking a read through Kristine Barnett's book, "The Spark", especially the part about where her son stopped engaging, something she eventually suspected was because everything he did was work, from waking to falling asleep.

When Kristine decided to go cold turkey on all of the expected learning interventions and instead tried to make sure her autistic son Jacob got time to do things that made his face shine with delight, not only did her son start engaging again, but his true genius emerged. Before he finished his teen years, Jacob was improving upon Einstein's theories at one of the pre-eminent physics institutes in the world.

Sensory issues are no joke. Here's a vignette to try to let you sample what it's like:

Imagine you're listening to a short-wave radio in the mountains with lots of weather systems moving through. You're desperately trying to tune into some program about an issue you deeply care about, but you're only deciphering about one word in every five or ten, between all the pops, squeals, whistles, hisses, and static. Just how long are you going to be able to handle your climbing frustration about not getting the connection you want, before you want to kick that radio out the window? Please, please don't assume we aren't trying.

Sometimes, however, the people around us do manage to convince us that we're bad and wrong, and we will then attempt to fulfill those expectations. While this might be used as an excuse for why so many of us end up in prisons, the truth is more probably that autistic communication challenges and behavioural differences often set off inappropriate alarm bells for justice system employees, especially police and guards.

Nose Plugging:

Certain parasites require nose *picking* for part of their life cycle. Symptoms usually depend on the type of parasite, but generally they include nervousness, grinding teeth at night (especially children), various aches and pains that may move from place to place, mimicked appendicitis, ulcers and various digestive pain, nausea or diarrhea.

Picking the nose, itching, acne, foul breath, appetite sometimes voracious and at other times poor, itching anus, anemia, liver jaundice, wide mood swings, fatigue, menstrual irregularities, fever, colitis and insomnia may also occur.

However, nose or ear *plugging* is likely something only autistics who are very dissociated from their bodies would do. The main reason people dissociate is to try to escape physical and emotional pain and discomfort. Health support and trauma release may both be helpful in resolving this.

Organizing: See Lining Things Up

Most autistics have one or more senses on high alert, taking in much more sensory detail than non-autistics would. This detail requires brain nutrients to understand and integrate the information. When brain nutrients are in short supply or are being displaced by toxins, or when nerve messages are being slowed or distorted, it can take a lot longer to sort through all the information — a wait of days, weeks, or months is not unusual, with length of wait reflecting depth of health issues.

As a coping mechanism, and in the hopes of not being left out of interactions entirely, most autistics limit the senses they pay attention to and try to sort. All the information is still coming in, but translation is only being demanded for what is considered highest priority — usually sight or sound. When someone is speaking, autistics may turn off translation of any or all other sensory inputs in order to keep up with hearing and understanding the words.

The more chaotic an autistic's surroundings are, the more likely that person is to miss some detail that would otherwise be considered important. This is a signal-to-noise ratio problem. That's an engineering term comparing how much of what's around you has meaning (signal), and how much is irrelevant (noise) in all of the possible things you could be paying attention to.

For example, imagine you're trying to get your favourite radio program on a short-wave radio. You're turning the tuning knob, and you're listening intently, trying to find that sweet spot where everything will come through clearly. But mostly, you hear hisses, pops, whistles, and squeals, with an occasional word or dash of music.

In this case, the music or the words is the signal. The noise is everything else in between. Trying to identify what around you has meaning, and what doesn't, seems to be something that non-autistics filter automatically, or that they're unconsciously competent at (like going on auto-pilot to drive home). But autistics have to really work at it, to keep consciously translating what has meaning in any given situation. It's exhausting, and can be very frustrating.

When you see an autistic who is organizing things or lining things up, they're doing something very clever: reducing the signal-to-noise ratio. They're creating more signal and less noise by organizing their environment. Encourage this coping skill, this active engagement with what has meaning. Help them organize things in parallel play. This really helps us begin to be able to identify more and more of the criteria that are considered meaningful.

This kind of exploration can be the first breakthrough in understanding. And supporting this skill will speed the path to increasingly effective communication. Most of us who have made it out of the fog of autism are highly skilled at spotting patterns or errors in chaotic information, because of developing this coping skill.

Overwhelmed:

If you're in the autistic spectrum, your metabolism is off to at least some degree — 100% of us have much higher inflammation than is usual in the rest of the population. When your metabolism is off, your body is like a city torn up for urban renewal. Many tasks that ought to be easy require extra energy, extra supplies, and extra distance traveled in order to dodge the construction zones.

Some days, we're near our peak abilities, sailing through tasks, new understandings flying open within us. Other days, we struggle to get enough brain together to get dressed in the correct sequence. It's not an easy thing to plan your life for such heightened variability in how possible it is to get things done. And on the days when expectations have been set too high, or too many unexpected, out-of-routine things happen, it can be very easy to get overwhelmed.

The higher functioning autistic individuals are, the greater the expectations of the people surrounding them in terms of how they will be able to interact and perform. Despite these expectations usually being unrealistic for the skill sets autistics have, these other people's expectations often get replaced by our own feelings of disappointment in ourselves for so often failing to meet other's expectations.

This is often a recipe for trying too hard, pushing past exhaustion, and then spending a long time recuperating, recovering strength and function for the next big push. For a little while,

there was a push in the other direction, with protective parents saying "my child will never be able to do that", and their child believing them and not trying until many years later, only to discover that it was a false barrier.

Now, I'm seeing increasing numbers of younger people in the autism spectrum who have grown up with parents who helped them to discover and delineate their limitations, so they are better able to balance expectations with just how much more energy it takes an autistic to get things done. It won't do away with the overwhelm, but being accepting of yourself, and accepted by others is a much better buffer against getting overwhelmed.

Pacing: See Flapping and Jumping

When things happen which we care deeply about, or when we're trying to express things that are very important to us, our nervous systems may accumulate a high degree of charge. We then need a way to let that charge out. Letting the charge out through physical actions allows us to calm ourselves enough to continue doing what we're doing.

Pacing is one way of letting that charge out. You've probably seen lecturers, or parents who are upset, or people who are emotionally over-wrought pacing back and forth, or around in circles. They're so wound up, they have to physically release that charge in their nervous systems. You may even have experienced occasions when you found yourself pacing. All humans pace when we have a high level of stress and tension, when we're feeling very nervous, afraid, or intense about things.

When you see someone pacing, jumping, or flapping, you know that they've got so much 'zing' going through their nervous system, they need extra physical ways to let that 'zing' out. That 'zing' can be coming from both internal and external sources of overstimulation. Acting in these ways can make the difference between being able to stay present, learn, and interact, or having to leave or lose self-control (which none of us enjoys). Allowing us to self-monitor and self-sustain in this way lets us participate much, much, better.

Perfectionism:

We autistics are systems thinkers. We cannot see the forest without the trees, the birds, the insects, the funghi, the mammals, the invertebrates, the soil microbes… This can mean that when we create something, we have a bigger vision for how well things might work if everything was designed to fit together, all the parts complementing each other so that whatever was accomplished would feel synergistic, greater as a whole than the collection of parts could be on their own.

At the same time, many of us have trouble staying present in our bodies, staying connected to the moment. There is often a profound gap between the synergies we can envision or imagine, and the realities we can create with our imperfect bodies, coming-and-going cognitive abilities, and communication challenges.

On the plus side, most of us are doggedly determined, if not outright stubborn, and will keep working at things through frustration, meltdowns, embarrassments, miscommunications, and other hurdles. A remarkable number of us end up making some kind of contribution in our fields of interest, despite our struggles. Yes, many if not most of us have perfectionist tendencies. However, it's not all bad, especially if you work with it as a carrot rather than a stick.

Pica: See Coprophagia and Eating Non-Foods

The only reason any of us mammals ever eat non-foods is because of internal dysbiosis. If the wrong microbes get into the wrong parts of our digestive tracts, this puts us in pain, debility, mental difficulties, and emotional turmoil (dysbiosis is one of the main reasons dementia in

seniors is rising). The degree of pain and functional disruption directly reflects the degree of dysbiosis.

This disruption inevitably means that we're losing a lot of nutrients in our wastes, nutrients that our bodies desperately need. Non-foods often smell of the substances from which they're made. In my grandmother's era, many schoolteachers found themselves eating the classroom chalk when they became pregnant because they smelled the calcium and their bodies told them they needed it, just like dogs, cats, and livestock will eat plants with the nutrients their diets don't provide enough of, or the medicinals their bodies need in that moment.

Eating non-foods can be a prime indicator of malnourishment, usually a result of insufficient diet and/or gut dysbiosis. However, pica can also reflect a need to chew. Inflammation inside the skull can cause the brain to feel uncomfortably or painfully compressed. As a pre-schooler, I ate the vinyl piping off all of the seats in my parents car because the chewy texture helped to give temporary relief from my discomfort caused by brain inflammation.

Pinching Self: See Droning, Head-Banging, Self-Injury

Autistics may use self-injury as a form of white noise, to shut out unpleasant, highly distracting sensory input such as emotional and physical pain. It's a coping mechanism, and it works quite well until the true source of the emotional or physical pain can be effectively addressed. Like droning, pinching yourself is a way of creating your own white noise, your own signal to drown out other things.

When you're pinching yourself, you're using pain that you control to drown out pain that you cannot control. Why would this be an improvement? One of the things that post-Holocaust research discovered is that when someone or something else is in control of how much pain you're feeling, and how long that pain lasts, you have a lot less tolerance for pain than when you have control over how much pain you're experiencing, and how long it lasts. It's quite a startling difference between the levels and lengths of pain which can be endured.

As a result, from the inside, pinching yourself can feel very empowering and protective, drowning out the experience of pain you have no control over. Rather than trying to forcibly stop an autistic from self-pinching, it would be better to investigate dietary, hormonal, detox, and other interventions to decrease pain and inflammation in the body.

Some of the pain that self-pinching can be protective against is emotional pain from feelings of worthlessness, never being good enough, being unacceptable as we are, and so on. This negativity can stem partly from gut dysbiosis and resulting malnourishment, but can also stem from unresolved trauma.

PMS Severe:

This is very common in the female half of the autistic spectrum, a group which is rapidly approaching numeric parity with autistic males as assessment tools catch up with autistic gender differences in expression. This is a direct result of very high toxic body burden. A sensible, paced, and safe detoxification regimen can make a profound difference in PMS challenges within months.

Pressure (Desire/ Need for):

On this symptom, there is a smattering of possibly relevant research, but mostly the voiced and written experiences of autistics. Most of us, when feeling insecure, vulnerable, pained, or overwhelmed, will partially dissociate from our bodies. This doesn't feel very good on any longer-term basis, but it can be difficult to get back inside once you're out.

Whether from something like Temple Grandin's hugging machine, from the tiny coat closets I've lined with futon cushions and squeezed myself into over my lifetime, or from the weighted clothes and blankets being manufactured for autistic children now, pressure helps us autistics to come back into our bodies and calm down faster.

There is some fascinating horse research regarding Neonatal Maladjustment. The mother horse produces sedatives — neurosteroids — as the birth process begins in order to prevent getting ripped up by the baby horse struggling against the confinement of the birth canal. Apparently there's something about the pressure of the birth canal which helps to signal the baby horse's chemistry to throw off this sedative so it can get up, recognize its mum, nurse, and generally thrive in the first few minutes after birth.

Horses which are born by Caesarian (much more common for autistic children) or unusually rapidly (my situation) don't get the signal to throw off the sedative, and have much higher — and often rising — quantities of this sedative crossing the blood-brain barrier after birth, and suppressing the central nervous system.

Previously, newborn horses with this problem required up to 10 days of intensive care before fully recovering. Recently, veterinary researchers have used a simple rope technique to mimic the pressures and duration of a normal birth canal progression, which either significantly reduced the maladjustment problem, or results in a foal with no sign of prior trouble.

Assuming certain similarities between mammals, I have to wonder what would happen to autism statistics if, instead of being taken from their mums, hospital babies were immediately cuddled into the pressure of loving arms.

Reflux (GERD): See Constipation

Digestive issues indicating gut dysbiosis and leaky gut (or Small Intestinal Bacterial Overgrowth, SIBO for short) show up in 93% of autistics with regressive autism, and 100% of autistics have oxidative stress. Oxidative stress is an indicator of malnourishment, whether that be from low-nutrient food, digestive inefficiency, or auto-intoxication (self-poisoning) from putrid wastes kept in the colon too long — otherwise known as constipation.

When the gut ecosystem is inflamed, the gut-blood barrier is compromised. And when the gut-blood barrier is compromised, so is the blood-brain barrier — which means that most if not all toxins and inflammation present in the gut is also showing up everywhere the blood travels, including the brain. This inflammation throughout the body is one of the measurable, physical hallmarks of autism spectrum challenges, though the source of the inflammation can also be injury, toxins from the environment, and stress.

Chronic constipation (a large intestine that moves too slowly), toxic mega-colon (accumulation of old wastes throughout the colon that disrupt the processing of new wastes), and occult mega-rectum (massive blockage accumulated within the ballooned last section of the digestive tract) are all associated with chronic and recurring yeast infections, urinary tract infections, incontinence (including bedwetting), soiling, foul body and faecal smells, skin problems, reflux, and other chronic health issues.

Chronic but hidden constipation can also be the primary cause of chronic diarrhea and nausea. In chronic diarrhea, the lining of the colon is constantly assaulted by the toxins from the accumulated wastes, so rushes everything else through, unable to evacuate the offending, hardened, and sticky mass causing the disruptions. In chronic nausea and vomiting, colon microbes have gone upstream and colonized the small intestine.

Many of the worst and most distressing mental, emotional, and physical symptoms of autism are the result of severe gut dysbiosis and resulting constipation.

Repetitive Actions & Noises: See Stimming

Why do seniors often choose chairs which allow them to rock or swing, gently? Why do upset babies calm down, sometimes enough to sleep, when rocked or bounced in arms, strollers, or car seats? When we're uncomfortable, jiggling, swinging, toning, tuning rocking and bouncing do two things.

First, these motions and sounds lull the central nervous system, allowing the sympathetic (stress) response to back down, and the parasympathetic (sleep, digestion, learning, repair) system to receive the energy and supplies it needs to do its job. People in the autistic spectrum tend to carry much higher levels of stress in their bodies than non-autistics do. These types of movement and activities allow that stress to dissipate.

Second, these motions and sounds get the lymphatic fluid moving. When detoxification is impaired, it's normal for excess toxins to accumulate in places where blood flow and lymphatic flow are most limited: the extremities (the head, the hands, and the feet). Lymphatic fluid doesn't flow unless muscles are moving, pumping it up to the lymph nodes which filter it into the blood for cleaning.

When toxins — both from normal body functions, as well as from gut dysbiosis or absorption from the surroundings — accumulate in the extremities, what begins as vague discomfort in those extremities gradually increases into irritation, and then outright pain. Rocking, bouncing, and swinging movements are most effective at dissipating this pain.

Rigid Routines: See Counting Things Repeatedly

Most people find that they are more tired when they travel. Sometimes this relates to how much harder it is to communicate in a language that's not as familiar. Sometimes this relates to the increased physical stress of an unusual climate, or unusual foods. Sometimes this relates to having to get things done when where and how things are done can be so very different, and require so much investigation.

As a result of this increased exhaustion from learning and doing new things, most people limit the amount of change they are exposed to in their day-to-day lives. The more routine they sustain, the less energy they have to invest in the unfamiliar. This leaves more energy available for the inevitable disruptions to routine.

Daily tasks cost us autistics more thought, more effort, and more energy. It's a real struggle to keep ourselves paying attention, staying on track, getting through a sequence of necessary events, and actually getting things done. While in some avenues we're constantly seeking for how to improve our efficiency and effectiveness, to lower this high cost, in most parts of our lives, we put our routines into long-term memory storage, or "automatic".

You've probably had the experience of driving, cycling, or walking somewhere and "going on automatic". You arrive at your destination, and you cannot remember your trip. You were so involved in other thoughts that your body and its memories took over and got you to where you wanted to go (or to somewhere you go more often, to your aggravation)!

Autistics are taking in a lot more sensory information, whether from heightened alertness from stress, or heightened irritation from toxins. A lot more energy and constant effort goes into conscious filtering of this extra information in order to identify patterns, and sort the signals from the noise. As a result, routines become much more valuable. Patterns are soothing, calming, restful.

For us autistics, it's just way more exhausting every time we have to do something differently, consciously thinking our way through each part rather than running a program. So the more we can structure our lives to do the same things, in the same order, at the same time,

the easier it is for us to encompass a few things that have to have some amount of change in them. In a body ecosystem of heightened stress, metabolic turmoil, and too little routine, repeating patterns that calm the body, emotions, and mind are invaluable.

Rocking: See Bouncing, Swinging

Why do seniors often choose chairs which allow them to rock or swing, gently? Why do upset babies calm down, sometimes enough to sleep, when rocked or bounced in arms, strollers, or car seats? When we're uncomfortable, swinging and rocking and bouncing do two things.

First, these motions lull the central nervous system, allowing the sympathetic (stress) response to back down, and the parasympathetic (sleep, digestion, learning, repair) system to get the energy and supplies it needs to do its job. People in the autistic spectrum tend to carry much higher levels of stress in their bodies than non-autistics do. These types of movement allow that stress to dissipate.

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Running: See Climbing, Elopement, Hyperactivity

Because our nervous systems are bringing in lots and lots of information, we autistics often get overstimulated. Also, when we have lots of toxins flowing through our bloodstream, we tend to be much more inflamed, irritable, reactive, and friable than most people are. Anything that happens around us registers louder for us than for non-autistics, and the stimulation affects us more.

Where is this overstimulation coming from? This often relates to the foods we're eating, because the foods we're eating will make us have more or less inflammatory products in our bodies. These inflammatory products will cause us to be more hyperactive, or their lack allow us to be more relaxed, happy, and engaged. Inflammatory products can also enter the body through the skin, and through the breathing.

Many people on the autistic spectrum have post-traumatic stress disorder. There is a close relationship between these two diagnoses. The body language of those of us autistics who are very tense is quite close to the body language of people with post-traumatic stress disorder. There are two reasons for running away. Any child who runs away, autistic or not, will be either running away from something, or running towards something.

Regular autistic runaways are either running away from something that they are overstimulated, afraid, or angry about, or they're running towards something attractive. Many of us autistics will run to green spaces, or run to water. There's a good reason for that. Natural areas — the wilder, the better — are extremely calming. They allow and enable much more comprehension and integration of what's going on around us. In contrast, indoor environments can be toxic and overstimulating.

When we're running from something, you can usually tell if we're afraid, or if we're angry, or if we're upset. Sometimes we run from abusers, or from the places where people have abused us in the past. You can also usually tell if we're running towards something, with an intent or

focused look on our faces. If you see that intent kind of look, chances are there's something out there that's calling to us, that we really want to go and engage with. So many environments are ugly and stressful on all of the senses, especially when your senses are turned up to high volume. Things that are fascinating and beautiful are such a relief!

Scratching Constantly:

Our bodies are ecosystems, and our skin has its own complex community of supportive and interdependent microbes, just as our gut does. One of these microbes is a microscopic mite called Demodex. In a healthy body, these little creatures are hoovers that clean up our skin for us. In an unhealthy body with dysbiosis and yeast breaking down the tissues from within, Demodex assumes our bodies are ready for recycling, and steps into massive reproduction and consumption activities.

What was formerly the occasional skin tickle becomes a constant biting, itching, and tickling from the heightened presence of and irritation from Demodex. External treatments bring only temporary relief. To get rid of itching so terrible you'll scratch your skin off (been there), go directly to addressing gut dysbiosis. I promise, you're at most a handful of days away from complete relief.

Scripting: See Repetitive Actions and Noises, Stimming, Tuning,

Scripting is when we autistics repeat a dialogue or passage from a book, an audio, a video, a skit, or even a commercial, many, many times in a row. There are a couple of reasons we autistics do this.

First, imagine the human brain as a computer for a moment. When you have a reduced amount of RAM (which allows us to have several programs and windows open at once) or an excessive amount of information coming in to sort, integrate, and remember, your mind can 'hang' (or in Mac terms, spin the rainbow ball of death).

Autistic brains have developed differently. We've got a lot of hard drive to store information long-term, but we don't have a lot of the RAM that allows non-autistics to flip between tasks and windows of different programs, the way non-autistic brains do when they have conversations involving multi-sensory observations.

Every time we autistics try to pull up words to respond to or engage with something that's going on, we don't necessarily have the ability to take in all of what's happening, integrate it, and respond to it in a timely way. Especially in chaotic environments, this is exhausting. There's just too much information processing to do, in too little time. Sometimes it's easier to engage by just using "canned" words or "canned" music, that has a particular meaning, and that feels appropriate to that situation. Scripts from topically-related dialogues can help us engage without having to find our own words to fit the situation.

The second reason we might tune or script is that a lot of our experiences don't tend to be positive, when we're autistic. As a result, when we have an experience that is positive, and either we find it funny or uplifting, or somebody else finds it funny or uplifting, it is often a very memorable occasion for us. It can become something that we use in the future as kind of as a touchstone in situations that really aren't as nice, that we're not as happy in. In this case, we'll tune or script to help lift our spirits.

People have used stories and music to bring joy to rough circumstances throughout human cultures and histories. Think of Welsh miners, or Roman oarsmen, or soldiers marching; something somewhat monotonous can help keep your mind off the things you don't want to dwell on.

Seeks Deep Pressure: See Pressure (desire or need for)

On this symptom, there is a smattering of possibly relevant research, but mostly the voiced and written experiences of autistics. Most of us, when feeling insecure, vulnerable, pained, or overwhelmed, will partially dissociate from our bodies. It's just the "Freeze" part of the fight-flight-freeze stress response. This dissociation doesn't feel very good on any longer-term basis, but it can be difficult to get back inside once you're out.

Whether from something like Temple Grandin's hugging machine, from the tiny coat closets I've lined with futon cushions and squeezed myself into over my lifetime, or from the weighted clothes and blankets being manufactured for autistic children now, pressure helps us autistics to come back into our bodies and calm down faster.

There is some fascinating horse research regarding Neonatal Maladjustment. The mother horse produces sedatives — neurosteroids — as the birth process begins in order to prevent getting ripped up by the baby horse struggling against the confinement of the birth canal. Apparently there's something about the pressure of the birth canal which helps to signal the baby horse's chemistry to throw off this sedative so it can get up, recognize its mum, nurse, and generally thrive in the first few minutes after birth.

Horses which are born by Caesarian (much more common for autistic children) or unusually rapidly (my situation) don't get the signal to throw off the sedative, and have much higher — and often rising — quantities of this sedative crossing the blood-brain barrier after birth, and suppressing the central nervous system.

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Assuming certain similarities between mammals, I have to wonder what would happen to autism statistics if, instead of being taken from their mums, hospital babies were immediately cuddled into the pressure of loving arms.

Seeks Head Squeezes: See Headaches

When we're autistic, we tend to have neither a good gut-blood barrier (so the gut leaks all kinds of nasties into the bloodstream), nor a good blood-brain barrier (so the nasties from the gut and blood are getting into the brain). As a result, toxins — which make their way into our bloodstream from the airways, the gut, or the skin — get into autistic brains much more easily. Many of the worst toxins are fat soluble, attracted to fat, and the brain is the largest accumulation of fat in most bodies. These toxins lodge in the brain tissues, and in the membranes surrounding the brain, causing brain inflammation.

All through my life, I have had what I call a perma-headache. The pain moves up and down on the discomfort scale, but never entirely goes away; my head feels sore, aggravated, and hot. At its worst, there are cicadas constantly going in the background in my ears. This kind of perma-headache is a constant in my life, and in the lives of many other autistics. When anything aggravates that headache, it gets worse fast.

If your skull feels like it's too small for your head, you can't take your skull off the way you would a pair of tight shoes. When you're experiencing that kind of compression on the inside of the skull, the sutures of the skull (where the skull plates meet) can ache a lot, too. Anything which puts any pressure, even very light, on the outside of the head can aggravate the pressure inside the head, and on the sutures.

I'll often notice babies and toddlers taking clips, elastics, headbands, and hats off just as soon as their parents put them on, and wonder how much brain inflammation they're experiencing. If you see this kind of behaviour in someone, take action to bring down inflammation in the body overall. While my headaches have backed down a lot as I decrease my overall inflammation, there are still many days when I cannot wear a hat or hair ties because the compression is too uncomfortable.

When the head hurts from brain inflammation, the sutures where the plates of the skull come together are often sore and irritated, as well. Squeezing the head, especially in ways that slightly shift how these skull plates interlace, was something I used regularly as a child in order to back my headaches off enough to be able to sleep at night (cold cloths on the forehead helped, too).

Squeezing the head gives some relief from the pressure and inflamed feelings, some of which may stem from membrane adhesions from excess wastes and toxins within the fluids surrounding the brain. Certainly the freeing of these adhesions has dramatically reduced my head pain, as has doing regular and careful detoxing.

Seizures: See Muscle Cramps and Tics

Spasms, tics, and seizures are caused by mis-firing nerves. They result from two related issues: nutritional deficiencies, and neurotoxic body burden. How do these relate to each other? The higher the toxic body burden (the concentrations of various classes of chemicals in the body), the greater a demand there is for nutrients which help to detoxify the body. Neurotoxins are toxins which cause nerves to fire when they shouldn't, or prevent them from firing when they should. Where are these toxins coming from?

Endogenous toxins are usually created by gut dysbiosis. Dys means "wrong", and bio means "life". Inside the gut, we're supposed to have thousands of species of mostly healthy bacteria, which form a rainforest inside us. Because we're living so far outside our optimal tolerance ranges for best human health, our internal ecosystems are suffering. The probiotics (the healthy bacteria which help us break down and absorb food) are experiencing waves of genocide, and increasingly, all that's left inside us are undesirable organisms like yeast, funghi, unhealthy bacteria, and sometimes various parasites.

These unhealthy bacteria, yeasts, funghi and/or parasites all produce wastes, and many of those wastes are toxic or inflammatory. Some of these waste products affect the brain and nerves, badly. These unhealthy creatures in our gut also do a poor job at breaking food into the tiny amounts our cells can absorb, and do a thorough job at stealing and using critical nutrients such as Zinc and Vitamin B12 for their own growth, reproduction, and partying. So when our digestion isn't doing what it's supposed to do, we can be producing an awful lot of things which are telling nerves to cause our muscles to fire when they shouldn't be.

There are also exogenous toxins (toxins being absorbed from outside the body). We breathe in man-made fragrances, which are in the same class of chemicals as neurotransmitters (the things our nerves use to pass information down a chain of nerves), and inhale a host of other toxins which impair the nerves, the hormones, or other parts of the body. We put toxic things on our skin, and drink beverages which harm us. And we eat toxins in our foods.

Natural detoxification of the body is clogged to some degree in all autistics tested to date. All humans are accumulating toxins much faster with every passing year, because we're steeping in more toxins to absorb. But autistics accumulate more, faster. **Please don't worry**, we know how to decrease these toxins, both inside the body, and in the environments around us. We're

simply still building enough will-power to turn things around, just yet. I'm confident that will happen soon, especially once you have the right information in your hands.

Between agricultural chemicals, industrial chemicals, personal care and cleaning chemicals, and things like food additives, our hormones and nerves are receiving signals from outside the body that take our health off-balance, in addition to the nasty waste products from gut dysbiosis. So we have rather a large collection, now, of things which tell our nerves to make a muscle clench when it's not needed.

Because our autistic detox mechanisms are impaired, toxins which enter our bodies end up circulating and recirculating through the bloodstream, and randomly getting caught somewhere and firing off nerves. This random firing of nerves is what causes tics (the repeated jumping of a muscle) , spasms (the clenching of a muscle), and seizures. There are several types of seizures, but the type doesn't matter; the source is the same.

So, why do non-autistic people tend to have so much less of this kind of muscle and nerve spasming? Most non-autistic people have more intact detoxification mechanisms (e.g. their liver and kidneys are working better). In addition, fat metabolism is usually working better. The fat soluble toxins which cannot get moved out of the body get packed into fat cells. People who feel awful when they try to lose weight by melting away fat cells are probably dumping too many toxins into the bloodstream at once, without helping the body get rid of them.

If you know an autistic who is experiencing tics, spasms, and seizures, please begin a safe and simple supported home detox, now. No, I'm not talking about the drug-store One-Size-(Doesn't)-Fit-All Detox kits. Get good advice and support lined up, preferably with a licensed holistic medical professional such as a Traditional Chinese Medicine Doctor, a Homeopathic Doctor, a Naturopathic Doctor, an Ayurvedic doctor, or an Osteopathic Doctor. Some Orthomolecular and Environmental Physicians may also be able to support you holistically. Choose carefully, ok?

Tics, spasms, and seizures can escalate (get worse and worse, causing complications on the complications), and can cause damage that is much more difficult to heal than other symptoms. So these are the only symptoms for which I recommend you go straight towards intervention, which is detoxification. Even though you're still filling the body with toxins while you're trying to empty them out, and interventions will cost you more because of this, starting to detox as soon as possible will minimize further damage and resulting repairs needed.

Every other symptom that's telling you which lifestyle factors are undermining the results you want, deal with those lifestyle factors first, before you dive into doing interventions. You can spend an awful lot of money on interventions, and if you're undermining the results you want, you're just pouring money down the drain!

Self-Injury: See Droning, Head-Banging

Autistics may use self-injury as a form of white noise, to shut out unpleasant, highly distracting sensory input such as emotional and physical pain. It's a coping mechanism, and it works quite well until the true source of the emotional or physical pain can be effectively addressed. Like droning, pinching yourself is a way of creating your own white noise, your own signal to drown out other things.

When you're pinching yourself, you're using pain that you control to drown out pain that you cannot control. Why would this be an improvement? One of the things that post-Holocaust research discovered is that when someone or something else is in control of how much pain you're feeling, and how long that pain lasts, you have a lot less tolerance for pain than when you

have control over how much pain you're experiencing, and how long it lasts. It's quite a startling difference between the levels and lengths of pain which can be endured.

As a result, from the inside, pinching yourself can feel very empowering and protective, drowning out the experience of pain you have no control over. Rather than trying to forcibly stop an autistic from self-pinching, it would be better to investigate dietary, hormonal, detox, and other interventions to decrease pain and inflammation in the body.

Some of the pain that self-pinching can be protective against is emotional pain from feelings of worthlessness, never being good enough, being unacceptable as we are, and so on. This negativity can stem partly from gut dysbiosis and resulting malnourishment, but can also stem from unresolved trauma.

Sensory Sensitivity:

In North America, the impacts of things like alcohol tend to be common knowledge, even if we haven't experienced them ourselves. We're aware that getting intoxicated will entail sensory distortions, more emotional expressivity (and sometimes volatility), and the impairment of coordination. We're also aware that, once the intoxication is over, there is often a detoxification period which is much less sought-after. We call this a "hangover".

Hangovers are a result of profound irritation of just about every body system. Leftover toxins from the intoxication, and waste products created by our bodies' efforts to metabolize, or clean up those toxins, are aggravating every nerve in the body. Our sensory nerves gather a lot of information, and when they are aggravated, they gather more information. It's a survival strategy, for our nerves to be more alert when we're under stress of some kind, but like any strategy, it can become dysfunctional. One way it becomes dysfunctional is called PTSD, or Post-Traumatic Stress Disorder.

For anyone who is not aware of what a hangover is like, here's a list of common symptoms (many of which look an awful lot like autism):

- nausea, indigestion, stomach upset, bowel evacuation, vomiting
- lights too bright, noises too loud, scent and flavour overwhelming or disgusting
- balance, motor control, and coordination challenges
- skin hyper-sensitive to texture, contact, rubbing, and things like clothing seams and labels
- emotionally reactive, barometer to surrounding emotional climate

How could intoxication and hangovers possibly be relevant to children and adults with autism? Where on earth would they be getting intoxicants from? Well, all autistics tested by the Autism Research Institute have had impaired detoxification systems. We stockpile toxins faster than everyone else. And the lifestyles we choose can surround us with more, or less toxins, depending on where and how we choose to live.

If you don't have autism, you will be able to take any toxins acquired from outside the body, or created inside the body, and either move those toxins out of the body, or pack them away in belly fat, or other places of higher fat content on your body. You can even end up manufacturing fat cells, to protect the rest of your body from having these toxins floating around in your bloodstream.

This is one of the biggest reasons for the current obesity epidemic. If you aren't autistic, your brain (made of fats) is relatively safe because your blood-brain barrier works well enough, although people with Parkinson's, Alzheimer's, and a few other diseases are also affected.

However, if you're somewhere in the autistic spectrum, you're stockpiling more toxins from outside the body, and chances are, you're creating more toxins inside the body, too. Autistic bodies can't move these toxins out of the body very well. Most of these toxins are fat soluble;

they're attracted to high concentrations of fat. Unfortunately, the highest concentration of fat in the body is in the brain. And autistics' blood-brain barrier is compromised; toxins cross right through, and affect learning, thinking, reaction times, and so many other abilities.

When I was in my mid-30s, I learned what a hangover was. I was finally healthy enough that I didn't have one all the time. Before then, lights were always too bright, noises were always too loud, and scents, flavours, textures, etc. were so easily over-stimulating. Being an adult, and responsible for my own livelihood, I can't take the weeks, months, or even years off work it would take to detox quickly. So I do it the slow, safe way. I'm looking forward to being a senior, because every year, my quality of life gets better!

Sleep Troubles:

If you've ever shared sleeping quarters with an autistic, you may have some idea of what I'm talking about when I say sleep problems: trouble falling asleep, waking at the slightest disturbance, recurrent and awful nightmares, waking and staying awake for long periods during the "wee hours" for weeks or months on end, when it's very difficult for others to stay awake and keep us safe.

While not all autistics have every symptom (after all, which symptoms we do or do not have is how we figure out which root causes to deal with, to optimize the gifts and minimize the challenges of autism), sleep problems are very common in the autistic spectrum.

So let's start with why autistics have trouble falling asleep. In order to fall asleep, you have to be able to relax. For many autistics with high body tension and nervous systems on high alert, relaxing is very difficult and requires great effort. Why do we have trouble relaxing, and falling asleep?

There are two main parts of your nervous system: the sympathetic system, and the parasympathetic system. When your sympathetic nervous system — which is the part that gets you revved up and engaged and able to pay attention to things — is on high alert, it can be really, really hard to turn off your internal alarms, and back down the stress and tension you're feeling, so that the parasympathetic nervous system can take over and let you heal, digest food, learn things, and sleep.

When I was about three years old, my father began to teach me some Yoga breathing exercises he'd discovered, trying to deal with some of his own severe back pain. He hoped to help me to learn to consciously bring to the fore the parasympathetic nervous system, to allow me to be able to relax, and then to be able to fall asleep. It is one of the least expensive and easiest ways to help an autistic get better rest.

Now, autistics tend to wake regularly during the night, too. Why is this? This is pretty interesting! If you look up the Chinese organ clock on Google, you'll find images that have a 24 hour clock divided into two-hour segments. Each of these two-hour segments is the time period during which an organ or system of the body is either at its most active, getting its work done, or at its least active, getting its repairs done.

When we wake at night at the same time, say 2 until 4 am regularly, and have trouble falling back asleep, it's a really good clue as to which organs or which systems of the body are either over-performing, or under-performing. This tells us specifically which organs or systems need support in order to do what they're supposed to do, effectively, and in order for us to begin to sleep through the night.

Nightmares are also extremely common for people in the autistic spectrum. When we have really bad nightmares repeatedly, often the same ones over and over again, this is one of the best clues that there is unresolved trauma that person has experienced. However, novel nightmares

can reflect high levels of toxic body burden from gut dysbiosis or lifestyle, and detoxification challenges.

Smelly Breath, Feet, Sweat, Gas, and Poops: See Digestive Stink

Western medicine is currently in the midst of switching from a body-as-machine model of human health to a body-as-ecosystem model, so not everything you read or hear will reflect the new model arising from the human microbiome project. Our bodies are healthiest when the quantity of microbial cells within us out-numbers our own body's cells by ten times. The more diverse and balanced these microbes are, the better our bodies run.

Our gut ecosystem is one of the most critically important microbial communities within us. Without it, we cannot break foods down to materials our bodies can use for maintenance and repair, we cannot absorb those materials, and we cannot manufacture nutrients our bodies need, such as turning beta carotene into the form of vitamin A our bodies need. Unfortunately, poor air quality, poor beverage quality, poor food quality, poor medical choices, and unhealthy skin contacts with toxins all kill off the probiotics, or microbes that keep us healthy.

Digestive stink is a sign that the gut ecosystem isn't healthy, and that toxic wastes are highly enough concentrated in the body that mechanisms to keep us functioning are working poorly. The gut needs some support to return to better function. Stress is the most likely cause of changes in the gut microbial balance, but obvious or occult constipation are also too common.

Spinning: See Repetitive Actions and Sounds, Stimming

The Sufi whirling dervishes use spinning to reach ecstatic states. And most people who dance will tell you that even brief spins are exhilarating. Those of us with autism are often seeking ways to feel pleasure sufficient to hide our usual pain or discomfort. Certain actions and sounds do two things.

First, they lull the central nervous system, allowing the sympathetic (stress) response to back down, and the parasympathetic (sleep, digestion, learning, repair) system to receive the energy and supplies it needs to do its job. People in the autistic spectrum tend to carry much higher levels of stress in their bodies than non-autistics do. These types of movement and activities allow that stress to dissipate.

Second, these motions and sounds get the lymphatic fluid moving. When detoxification is impaired, it's normal for excess toxins to accumulate in places where blood flow and lymphatic flow are most limited: the extremities (the head, the hands, and the feet). Lymphatic fluid doesn't flow unless muscles are moving, pumping it up to the lymph nodes which filter it into the blood for cleaning.

When toxins — both from normal body functions, as well as from gut dysbiosis or absorption from the surroundings — accumulate in the extremities, what begins as vague discomfort in those extremities gradually increases into irritation, and then outright pain. Spinning movements help to dissipate this pain, but are also a delightful way to cover pain with pleasure for as long as possible.

Squirming: See Fidgeting and Jiggling

Why do seniors often choose chairs which allow them to rock or swing, gently? Why do upset babies calm down, sometimes enough to sleep, when rocked or bounced in arms, strollers, or car seats? When we're uncomfortable, squirming does two things.

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When toxins — both from normal body functions, as well as from gut dysbiosis or absorption from the surroundings — accumulate in the extremities, what begins as vague discomfort in those extremities gradually increases into irritation, and then outright pain. Squirming movements are effective at dissipating this pain.

Squinting: See Sensory Sensitivity

Squinting in bright light is usually a result of malnourishment from sub-optimal foods, sub-optimal absorption of foods from dysbiosis, and/or of toxin accumulation. Think of the process of drinking and then breaking down something addictive like alcohol, with the intoxicated, hangover, and cravings phases.

Sensory distortions happen the most during the intoxication phase. During the hangover phase, noises are too loud, lights are too bright… Different toxins can mean the body is in both states at once. This sensory sensitivity has been linked to conditions such as hypokaelemia, caused by toxin-clogged cell walls unable to transport potassium into cells.

Brain and nerve compression or damage can also distort sensory messages one way or the other, or cause extra inflammation which entails pain from bright lights.

Standing (Not Sitting):

Sitting still for any length of time gets increasingly aggravating, then uncomfortable, then outright painful, when your body has a high level of inflammation. This is because lymphatic fluid has no pump to keep it flowing unless our muscles are moving. When we sit still, waste products tend to accumulate in the lymph, and with the reduced circulation of blood carrying less waste products away, these wastes tend to accumulate in the extremities — the hands, the feet, the head.

If an autistic has trouble sitting still, please find ways that person can move, bounce, swing, cycle, run, or otherwise keep the lymphatic fluids moving toxins out, and the circulation high enough to carry most of them away. We can learn and work while we're moving, often much better than we could if trying to sit still.

Sticky Thinking:

Thoughts are "sticky" when you just can't seem to turn your attention away from them, or reframe them. Instead, they just keep coming back, like a broken record. When this happens, it's highly likely that you're "triggered", or that you're reacting to a long-ago wounding experience (an unresolved trauma) instead of experiencing life in the moment.

Sticky thinking is one of the hallmarks of anxiety and depression. It stems from the nerve and gut disruptive wastes from gut dysbiosis, from a toxic lifestyle, and from stress that has accumulated past the point of what is sustainable in the longer term.

Stimming: See Repetitive Actions and Noises

Why do seniors often choose chairs which allow them to rock or swing, gently? Why do upset babies calm down, sometimes enough to sleep, when rocked or bounced in arms, strollers, or car seats? When we're uncomfortable, jiggling, swinging, toning, tuning rocking and bouncing do two things.

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When toxins — both from normal body functions, as well as from gut dysbiosis or absorption from the surroundings — accumulate in the extremities, what begins as vague discomfort in those extremities gradually increases into irritation, and then outright pain. Rocking, bouncing, and swinging movements are most effective at dissipating this pain.

Sucking on Things: See Avoids Hair-brushing, Biting, Chewing

When the gut ecosystem is inflamed (93% of autistic children who regress have signs of leaky gut; every single one of over 115 studies found a relationship between autism and oxidative stress), the gut-blood barrier is compromised. And when the gut-blood barrier is compromised, so is the blood-brain barrier — which means that most if not all toxins and inflammation present in the gut is also showing up everywhere the blood travels, including the brain.

Inflammation in the brain feels a bit like wearing tight shoes for too long when your feet are swelling, or like wearing a finger-ring that seems to shrink sometimes. As the level of discomfort from that pressure increases, the likelihood that the shoes or ring will get removed also goes up, in order to stop the discomfort.

When the brain is inflamed, it feels several sizes too large to fit in the skull — but the skull just doesn't come off easily. Fortunately, muscles in the tongue and jaw attach to the membranes inside the skull. And just like the movement of walking in tight shoes can help to dissipate the swelling in feet, and momentarily distract from foot discomfort, so the movement of those brain membranes brings very short term relief to brain discomfort.

Biting, chewing, and sucking momentarily reduce discomfort from brain inflammation by gently tugging on the membranes inside the skull. The muscles of the jaw and tongue engage these membranes, so every time the muscles move, the membrane is gently massaged.

Sweat Smells: See Digestive Stink

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Swinging: See Bouncing, Rocking

Why do seniors often choose chairs which allow them to rock or swing, gently? Why do upset babies calm down, sometimes enough to sleep, when rocked or bounced in arms, strollers, or car seats? When we're uncomfortable, swinging and rocking and bouncing do two things.

First, these motions lull the central nervous system, allowing the sympathetic (stress) response to back down, and the parasympathetic (sleep, digestion, learning, repair) system to get the energy and supplies it needs to do its job. People in the autistic spectrum tend to carry much higher levels of stress in their bodies than non-autistics do. These types of movement allow that stress to dissipate.

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Tactile Defensiveness: See Sensory Sensitivity

Most autistics have one or more senses on high alert or turned up to high volume, taking in much more sensory detail than non-autistics would. This abundant detail requires extra brain nutrients to understand and integrate the information. When brain nutrients are in short supply or are being displaced by toxins, or when nerve messages are being slowed or distorted, it can take a lot longer to sort through all the information — a wait of hours, days, weeks, or months is not unusual, with length of wait reflecting depth of health issues.

The excess of textural sensation some of us experience can be distracting, overwhelming, and unpleasant. When you are sensitive to the sensations of touch, unaccustomed skin contact can feel peculiar, noxious, and even painful.

Heightened sensations are a direct result of high toxic body burden and the resulting intoxicated and hung-over symptoms. These toxins are either accumulated from the lifestyle faster than they can be removed from a detoxification-impaired autistic's body, or regularly created by undesirable microbes from a dysbiotic gut.

Tantrums: See Meltdowns

Many people mix meltdowns with tantrums, and try to scold or shame the meltdown away. This is counterproductive. In a true meltdown, other people's reactions don't even register until later, when we've had a chance to calm down. There's a very clear difference between meltdowns and tantrums which you'll begin to spot, as soon as you understand what to look for.

In a tantrum, the background emotion is anger. Behind the behaviour is a stream of thought that goes something like, "I'm not getting what I want, and I'm going to do whatever I have to do to make this person understand that this is really important to me. I should get to have what I want, or I shouldn't have to do what I don't want." You will often see the person who is having a

tantrum looking at you, checking to see what your reaction is like to the display that he or she is making, and to check on whether you're going to give in or not.

Now, meltdowns are different — and they're really hard for me to talk about, because I can't talk about them without feeling them. Meltdowns come from a place of hopelessness, helplessness, and utter overwhelm. There are so many sensory inputs coming in that we autistics haven't a hope of integrating these a timely fashion, never mind understanding them well enough to respond appropriately. And there is so much inner turmoil and stress happening, we haven't a clue what else is going on around us.

When this happens, we have no way to cope with all of it. We're beyond ourselves, unable to translate our surroundings fast enough, usually because they are painfully overwhelming to a sensory system with everything turned to high volume. So what happens is survival, a lashing out with everything we've got because we have no control over the stress and pain we're feeling. If we happen to meet anyone's gaze, it's an accident. In case you're wondering, it's worse to experience than to support; I've had it both ways.

So what can you do to make a positive impact, help reduce tantrums, and help speedier meltdown recovery? You actually do very similar things. First, move the upset person out of the upsetting situation, as soon as possible. Ideally, move him or her into a natural area where there will be a lot less sensory overwhelm, and away from whatever it is that is causing the tantrum or meltdown. The quieter, calmer, or more greenery-covered the space is, the faster the calm returns.

As best you can, get yourself calm and sympathetic. In either case, the more that you're able to be a loving and calm presence, the faster your upset autistic companion will be able to emulate your calm. At that point, you have a lot more opportunity for doing some problem-solving, figuring out what was going on, and hopefully helping that upset individual come out of that upset space.

If someone is using tantrums to try to assert his or her willpower, he or she will quickly learn that this is the fastest path to not getting what is wanted, and will try other things, growing out of the tantrums. On the other hand, many other humans (not just autistics; I've seen non-autistic senior citizens having meltdowns using anger to cover their shame, fear, or sadness) never grow out of meltdowns. The more stressed we are, the more often they crop up. Because autistics are under such high levels of stress and pain, meltdowns are difficult to avoid altogether. However, meltdowns can be prevented, and this is something that I go into in my online programs and teacher trainings.

Teeth Grinding:

This symptom can be caused by heightened stress, gut inflammation, brain inflammation, or any combination of the three. Since inflammation is significantly heightened by stress, any additional stressors will tend to heighten both the frequency and force of teeth grinding.

Tics: See Muscle Cramps, Seizures

Spasms, tics, and seizures are caused by mis-firing nerves. They result from two related issues: nutritional deficiencies, and neurotoxic body burden. How do these relate to each other? The higher the toxic body burden (the concentrations of various classes of chemicals in the body), the greater a demand there is for nutrients which help to detoxify the body. Neurotoxins are toxins which cause nerves to fire when they shouldn't, or prevent them from firing when they should. Where are these toxins coming from?

Endogenous toxins are usually created by gut dysbiosis. Dys means "wrong", and bio means "life". Inside the gut, we're supposed to have thousands of species of mostly healthy bacteria, which form a rainforest inside us. Because we're living so far outside our optimal tolerance ranges for best human health, our internal ecosystems are suffering. The probiotics (the healthy bacteria which help us break down and absorb food) are experiencing waves of genocide, and increasingly, all that's left inside us are undesirable organisms like yeast, funghi, unhealthy bacteria, and sometimes various parasites.

These unhealthy bacteria, yeasts, funghi and/or parasites all produce wastes, and many of those wastes are toxic or inflammatory. Some of these waste products affect the brain and nerves, badly. These unhealthy creatures in our gut also do a poor job at breaking food into the tiny amounts our cells can absorb, and do a thorough job at stealing and using critical nutrients such as Zinc and Vitamin B12 for their own growth, reproduction, and partying. So when our digestion isn't doing what it's supposed to do, we can be producing an awful lot of things which are telling nerves to cause our muscles to fire when they shouldn't be.

There are also exogenous toxins (toxins being absorbed from outside the body). We breathe in man-made fragrances, which are in the same class of chemicals as neurotransmitters (the things our nerves use to pass information down a chain of nerves), and inhale a host of other toxins which impair the nerves, the hormones, or other parts of the body. We put toxic things on our skin, and drink beverages which harm us. And we eat toxins in our foods.

Natural detoxification of the body is clogged to some degree in all autistics tested to date. All humans are accumulating toxins much faster with every passing year, because we're steeping in more toxins to absorb. But autistics accumulate more, faster. **Please don't worry**, we know how to decrease these toxins, both inside the body, and in the environments around us. We're simply still building enough will-power to turn things around, just yet. I'm confident that will happen soon, especially once you have the right information in your hands.

Between agricultural chemicals, industrial chemicals, personal care and cleaning chemicals, and things like food additives, our hormones and nerves are receiving signals from outside the body that take our health off-balance, in addition to the nasty waste products from gut dysbiosis. So we have rather a large collection, now, of things which tell our nerves to make a muscle clench when it's not needed.

Because our autistic detox mechanisms are impaired, toxins which enter our bodies end up circulating and recirculating through the bloodstream, and randomly getting caught somewhere and firing off nerves. This random firing of nerves is what causes tics (the repeated jumping of a muscle) , spasms (the clenching of a muscle), and seizures. There are several types of seizures, but the type doesn't matter; the source is the same.

So, why do non-autistic people tend to have so much less of this kind of muscle and nerve spasming? Most non-autistic people have more intact detoxification mechanisms (e.g. their liver and kidneys are working better). In addition, fat metabolism is usually working better. The fat soluble toxins which cannot get moved out of the body get packed into fat cells. People who feel awful when they try to lose weight by melting away fat cells are probably dumping too many toxins into the bloodstream at once, without helping the body get rid of them.

If you know an autistic who is experiencing tics, spasms, and seizures, please begin a safe and simple supported home detox, now. No, I'm not talking about the drug-store One-Size-(Doesn't)-Fit-All Detox kits. Get good advice and support lined up, preferably with a licensed holistic medical professional such as a Traditional Chinese Medicine Doctor, a Homeopathic Doctor, a Naturopathic Doctor, an Ayurvedic doctor, or an Osteopathic Doctor. Some

Orthomolecular and Environmental Physicians may also be able to support you holistically. Choose carefully, ok?

Tics, spasms, and seizures can escalate (get worse and worse, causing complications on the complications), and can cause damage that is much more difficult to heal than other symptoms. So these are the only symptoms for which I recommend you go straight towards intervention, which is detoxification. Even though you're still filling the body with toxins while you're trying to empty them out, and interventions will cost you more because of this, starting to detox as soon as possible will minimize further damage and resulting repairs needed.

Every other symptom that's telling you which lifestyle factors are undermining the results you want, deal with those lifestyle factors first, before you dive into doing interventions. You can spend an awful lot of money on interventions, and if you're undermining the results you want, you're just pouring money down the drain!

Time Sense Lacking:

Dr. Daniel Amen has done a significant amount of work identifying which parts of the brain are involved in particular autistic brain challenges as they show up in milder form in those of us with ADHD. The lack of time sense can result from direct physical or from immunological brain injury, from brain toxins sourced either from the gut or from the lifestyle, and from trauma. All of these things can be repaired to some degree, that degree depending on the extent of injury, the age of the individual, and the willingness to take action.

Toe Walking:

Toe walking is the result of the worst degrees of heightened toxic body burden, either from lifestyle factors combined with autistic impaired detoxification, or from gut dysbiosis. If you have a child or adult dependent who toe-walks, please read Judith Chinitz' book "We Band of Mothers", about how she and a supporting group of other parents (including a few dads) managed to restore a great deal of their autistic children's happiness and health.

Judith herself writes about her son's previous projectile vomiting, projectile diarrhea, constant screaming, and toe walking. I toe walked occasionally as a child. In my recollections of that time, it seemed to go with the times of heightened dissociation and discomfort in my body.

Tuning: See Conversation, Echolalia

Most people find that they are more tired when they travel. Sometimes this relates to how much harder it is to communicate in a language that's not as familiar. Sometimes this relates to the increased physical stress of an unusual climate, or unusual foods. Sometimes this relates to having to get things done when where and how things are done can be so very different, and require so much investigation.

As a result of this increased exhaustion from learning and doing new things, most people limit the amount of change they are exposed to in their day-to-day lives. The more routine they sustain, the less energy they have to invest in the unfamiliar. This leaves more energy available for the inevitable disruptions to routine.

Autistics are taking in a lot more sensory information, whether from heightened alertness from stress, or heightened irritation from toxins. A lot more energy and constant effort goes into conscious filtering of this extra information in order to identify patterns. As a result, routines become much more valuable.

Speaking relies on nerves in the brain being able to communicate at lightning-fast speeds. There are 86 billion of these brain neurons, on average, and they're hungry for energy and nutrients. They eat between 20 and 25% of all the energy the body produces. In addition, these

brain cells rely on having a very special soup surrounding them, full of the compounds they use to pass messages to each other, and empty of the toxins and wastes (brain cels need repairs and maintenance, too) that can gum up the works.

Toxins penetrate the blood-brain barrier when gut dysbiosis has weakened the gut-blood barrier, allowing undigested food, gut microbes, and microbial waste products — some of which are inflammatory and toxic — into the bloodstream without filtration. When the gut-blood barrier is disrupted, the blood-brain barrier follows closely behind. Unfortunately, this allows not only gut-associated challenges into the brain, but any other toxins arriving in the bloodstream from skin contact and airways into the brain, as well.

If brain energy and/ or brain food is in short supply, brain processing slows down. If toxins and wastes within the brain envelope are more concentrated, brain processing slows down. If stress is heightened, brain processing slows down. Initiating conversations relies on being able to process information in a timely fashion, spotting opportunities to join others, identifying likely topics to expand on, etc.

When any action in the brain is slowed by lack of supplies and too many heaped-up wastes and toxins, conversation is first slowed to rote (memorized) phrases which require less on-the-fly energy and nutrients, and then slowed to a state of barely verbal and not-necessarily conversation-connected words, and then slowed to non-verbal, regretful, wishing that we had words in the moment, never mind the right words.

Many of us autistics who are verbal have moments, hours, or days where we are barely verbal, or non-verbal, because of the presence of either heightened stress, heightened toxins, or both. Tuning is a way of conserving energy, of connecting with and relating to the people around you when you don't have the brain resources to find your own words. Autistics who repeat the same tunes over and over have the capacity to be much more verbal if health issues are effectively addressed.

Twiddling: See Fidgeting, Jiggling, and Squirming

Why do seniors often choose chairs which allow them to rock or swing, gently? Why do upset babies calm down, sometimes enough to sleep, when rocked or bounced in arms, strollers, or car seats? When we're uncomfortable, fidgeting does two things.

First, these motions lull the central nervous system, allowing the sympathetic (stress) response to back down, and the parasympathetic (sleep, digestion, learning, repair) system to get the energy and supplies it needs to do its job. People in the autistic spectrum tend to carry much higher levels of stress in their bodies than non-autistics do. These types of movement allow that stress to dissipate.

Second, these motions get the lymphatic fluid moving. When detoxification is impaired, it's normal for excess toxins to accumulate in places where blood flow and lymphatic flow are most limited: the extremities (the head, the hands, and the feet). Lymphatic fluid doesn't flow unless muscles are moving, pumping it up to the lymph nodes which filter it into the blood for cleaning.

When toxins — both from normal body functions, as well as from gut dysbiosis or absorption from the surroundings — accumulate in the extremities, what begins as vague discomfort in those extremities gradually increases into irritation, and then outright pain. Fidgeting movements are effective at dissipating this pain.

Twisting Hair: See Scripting, Tuning

Most of the sensations an autistic child experiences are unpleasant, resulting from pain, inflammation, and for many of us, unkind social interactions with our childhood peers. Small, repeated actions which actually feel nice can help to comfort us.

Unaware of Body Needs:

Lacking awareness of body needs is a result of two things. First, heightened pain throughout the body or anywhere in the body can make it difficult to differentiate any new pain or discomfort. In other words, it can be hard to tell you're hungry or need to go to the bathroom when your head hurts so badly you feel nauseous.

Second, when pain and discomfort are heightened, most autistics learn to dissociate, which is a mild to severe separation between different aspects of our experience. Mild dissociation is likely familiar to you from going on automatic while driving or walking, and having no memory of having got from A to B. Daydreaming is another way of getting lost in time and space. Some dissociative experiences can feel like watching yourself live your life as though it's a movie.

Dissociation is a common coping mechanism, and a capacity all humans have. More severe dissociation, where parts of the personality split off and are unaware of each other, tend to be linked to unresolved trauma. Spectrum author Donna Williams tells of her experiences in resolving severe dissociation over the course of several books.

Urinary Tract Infections:

Digestive issues indicating gut dysbiosis and leaky gut (or Small Intestinal Bacterial Overgrowth, SIBO for short) show up in 93% of autistics with regressive autism, and 100% of autistics have oxidative stress. Oxidative stress is an indicator of malnourishment, whether that be from low-nutrient food, digestive inefficiency, or auto-intoxication (self-poisoning) from putrid wastes kept in the colon too long — otherwise known as constipation.

When the gut ecosystem is inflamed, the gut-blood barrier is compromised. And when the gut-blood barrier is compromised, so is the blood-brain barrier — which means that most if not all toxins and inflammation present in the gut is also showing up everywhere the blood travels, including the brain. This inflammation throughout the body is one of the measurable, physical hallmarks of autism spectrum challenges, though the source of the inflammation can also be injury, toxins from the environment, and stress.

Chronic constipation (a large intestine that moves too slowly), toxic mega-colon (accumulation of old wastes throughout the colon that disrupt the processing of new wastes), and occult mega-rectum (massive blockage accumulated within the ballooned last part of the digestive tract) are all associated with chronic and recurring yeast infections, urinary tract infections, incontinence (including bedwetting), soiling, foul body and faecal smells, skin problems, and other chronic health issues.

Chronic but hidden constipation can also be the primary cause of chronic diarrhea and nausea. In chronic diarrhea, the lining of the colon is constantly assaulted by the toxins from the accumulated wastes, so rushes everything else through, unable to evacuate the offending, hardened, and sticky mass causing the disruptions. In chronic nausea and vomiting, colon microbes have gone upstream and colonized the small intestine.

Many of the worst and most distressing mental, emotional, and physical symptoms of autism are the result of severe gut dysbiosis and resulting constipation.

Walking (Not Sitting):

Sitting still for any length of time gets increasingly aggravating, then uncomfortable, then outright painful, when your body has a high level of inflammation. This is because lymphatic

fluid has no pump to keep it flowing unless our muscles are moving. When we sit still, waste products tend to accumulate in the lymph, and with the reduced circulation of blood carrying less waste products away, these wastes tend to accumulate in the extremities — the hands, the feet, the head.

If an autistic has trouble sitting still, please find ways that person can move, bounce, swing, cycle, run, or otherwise keep the lymphatic fluids moving toxins out, and the circulation high enough to carry most of them away. We can learn and work while we're moving, often much better than we could if trying to sit still.

Watching Same Video:

Most autistics have one or more senses on high alert, taking in much more sensory detail than non-autistics would. This detail requires extra brain nutrients to understand and integrate the information. When brain nutrients are in short supply or are being displaced by toxins, or when nerve messages are being slowed or distorted, it can take a lot longer to sort through all the information — a wait of days, weeks, or months is not unusual, with length of wait reflecting depth of health issues.

As a coping mechanism, and in the hopes of not being left out of interactions entirely, most autistics limit the senses they pay attention to and try to sort. All the information is still coming in, but translation is only being demanded for what is considered highest priority — usually sight or sound. When someone is speaking, autistics may turn off translation of any or all other sensory inputs in order to keep up with hearing and understanding the words.

The result is that, unless an interaction is repeated over and over the way it would be in theatre, or video recordings, giving enough observation time to focus on each of the sensory inputs in turn, and then gradually put them together to see if the collection changes the meanings, an autistic is likely to entirely miss body language until their sensory integration has had a chance to catch up with their real-time experiences.

Whining:

Seriously? Why does any person of any age or any ability whine? They do it because no one ever explained to them how off-putting whining is, and coached them on how not to whine.

Won't Hurry: See Rigid Routines

Most people find that they are more tired when they travel. Sometimes this relates to how much harder it is to communicate in a language that's not as familiar. Sometimes this relates to the increased physical stress of an unusual climate, or unusual foods. Sometimes this relates to having to get things done when where and how things are done can be so very different, and require so much investigation.

As a result of this increased exhaustion from learning and doing new things, most people limit the amount of change they are exposed to in their day-to-day lives. The more routine they sustain, the less energy they have to invest in the unfamiliar. This leaves more energy available for the inevitable disruptions to routine.

Daily tasks cost us autistics more thought, more effort, and more energy. It's a real struggle to keep ourselves paying attention, staying on track, getting through a sequence of necessary events, and actually getting things done. While in some avenues we're constantly seeking for how to improve our efficiency and effectiveness, to lower this high cost, in most parts of our lives, we put our routines into long-term memory storage, or "automatic".

You've probably had the experience of driving, cycling, or walking somewhere and "going on automatic". You arrive at your destination, and you cannot remember your trip. You were so

involved in other thoughts that your body and its memories took over and got you to where you wanted to go (or to somewhere you go more often, to your aggravation)!

Autistics are taking in a lot more sensory information, whether from heightened alertness from stress, or heightened irritation from toxins. A lot more energy and constant effort goes into conscious filtering of this extra information in order to identify patterns, and sort the signals from the noise. As a result, routines become much more valuable. Patterns are soothing, calming, restful.

Hurrying takes us out of the pattern and flow of getting things done at a pace and in a way that we are familiar with. It adds stress, and with every bit of stress added, the two halves of the brain communicate less well, and the brain is less able to function effectively.

For us autistics, it's just way more exhausting every time we have to do something differently, consciously thinking our way through each part rather than running a program. So the more we can structure our lives to do the same things, in the same order, at the same time, and at the same pace, the easier it is for us to encompass a few things that have to have some amount of change in them. In a body ecosystem of heightened stress, metabolic turmoil, and too little routine, repeating patterns that calm the body, emotions, and mind are invaluable.

Glossary:

+/ - And or Or
GD - Gut Dysbiosis
IDS - Impaired Detoxification System
OIF - Overwhelmed Immune Function
PNI - Physical Nerve Impingement
STC - Stress-Trauma Continuum
VOC - Volatile Organic Compounds