

Sensory Diet for Teenagers and Adults

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Introduction: Patricia and Julia Wilbarger coined the term *sensory diet*. Persons with sensory over-responsivity (SOR) – a subtype of sensory processing disorders (SPD) – use sensory diets to stay calm, energized, and organized. Sensory diets are used for SOR in many sensory channels, including the auditory (sounds), the visual (sights), the tactile (touch), and the olfactory (smells). **Note:** The term SPD often is used interchangeably with SOR, including *auditory over-responsivity*. To be in sync with others, I used the term SPD in this document, unless the more narrow term of SOR or auditory-responsivity is needed for clarity.

Disclaimer: Whether a sensory diet also is helpful for persons with misophonia is unclear. Sensory diets were developed to treat SOR. If the causes of misophonia are different, then a sensory diet may not be effective. Scholars have speculated that both conditions are neurologically based, and perhaps the same structures in the brain are involved. Scholars from both camps proposed that the limbic system plays a role. The limbic system controls our emotions and the fight-flight-freeze response. The amygdala filters out the unimportant and irrelevant sensory information so it does not reach the limbic system. Deep pressure and slow movement are theorized to help the amygdala act as a filter. If the amygdala plays a role in misophonia, then a sensory diet could lessen the impact of the triggers so persons can respond with less adversity to noxious sounds (triggers). Research is needed to investigate the similarities and the differences between auditory over-responsivity and misophonia.

Purpose of a Sensory Diet: Use a strategic mix of sensory activities to reduce *meltdowns* (e.g., yelling or snapping at someone) and *shutdowns* (withdrawing).

Definition of Sensory Dieting: Similar to eating food every few hours, the body needs to be replenished with sensory input. You may need to do a sensory diet every one-two hours. Sensory diets can be used at specific daily time periods or as needed. Choose one or more activities. Doing a sensory diet for 5-15 minutes can be helpful; however, doing a sensory diet for 30 minutes has a longer-lasting effect.

Essential Ingredients in a Sensory Diet: Proprioceptive (pressure) and vestibular (movement) inputs can be calming and organizing. Swinging is the ideal source of *vestibular* input. The effect in the brain from 15 minutes of swinging is reported to last up to eight hours. Other types of sensory input affect the brain for one-to-two hours. Some experts recommend swinging for at least 15 minutes, 2 times per day (e.g., early morning and late afternoon). Because a swing hung from one hook can be moved at varying speeds (e.g., fast) and in more directions, using a swing hung from a single hook gives more intense and longer-lasting input than a swing hung from two hooks. **Important points:** *Slow, linear, and rhythmical movements are calming and fast, rotary, and erratic movements are excitatory.*

Proprioceptive input is speculated to help integrate vestibular input. Climb and jump after swinging. Proprioceptive input can be used alone without vestibular input. Proprioceptive input is gotten through “heavy work” such as carrying books, moving furniture and vacuuming, and lifting free weights.

Proprioceptive input can be calming, energizing, and organizing. So when in doubt, use heavy work (proprioception).

Notes on Other Types of Sensory Input:

Auditory (sounds) – Many persons with auditory over-responsivity or misophonia can avoid becoming overwhelmed by controlling and predicting the noxious sounds (triggers). So take some control over the environmental noises, whenever possible.

Visual (sights) – Visual input can be over-arousing for persons with auditory sensitivities. Simplify your visual field for a calming and organizing effect. Avoid clothes, towels, rugs, wall colors, etc., in colors that you find distressing. In contrast, if you feel “tuned out,” add brightly colored objects to encourage visual attention.

Tactile (touch) – Tactile input can be over-arousing. Light touch can be noxious; firm touch can be calming. Avoid clothes with labels, etc., that you find distressing.

Olfactory (smells) – Odors calm, stimulate, or send a person into sensory overload. Persons with olfactory over-responsivity can become upset by something “stinky.”

Precautions: Avoid using lavender products with boys who have not yet reached puberty. In several recent studies, researchers found a link with breast growth. Experts also suggest not using these products with girls because the effects are not yet known. Lavender also has precautions for adults. When applied to the skin, for example, it sometimes causes irritation.

Other oils can cause irritation when applied directly to the skin. Experiment on small patches of skin before applying oils in large quantities. Putting a few drops into a warm bath can lower the risk of skin irritation. You can use a diffuser to dispense the oils; however, this method has a less intense impact.

Women who are pregnant or breast-feeding should avoid some of the oils listed below. Some of them should be discontinued 2 weeks prior to surgery, as they can negatively interact with the anesthesia.

Explore the scents to find the ones that best meet your needs – calming (soothing) versus alerting (waking up), and to find the aromas that you prefer.

Scents that generally are calming and relaxing: Lavender, rose, rosemary, chamomile, ylang ylang, vanilla (the smell of vanilla in hot tea can make some persons nauseous), and frankincense.

Scents that generally are alerting without causing over-stimulation: Citrus – the best oils for feeling awake (e.g., bergamot, grapefruit, orange, lemon, and lime), mint (e.g., peppermint and spearmint), pine (e.g., juniper and white fur), eucalyptus, and some condiments and spices (e.g., basil, rosemary, and cinnamon).

<http://www.alertprogram.com>

This website has a one-page PDF handout explaining the Alert Program. You can buy a book called “How Does Your Engine Run? – A Leaders Guide to The Alert Program for Self-Regulation,” written by Mary Sue Williams and Sherry Shellenberger. The program has step-by-step instructions to help you identify your level of alertness (arousal) and activities that can enable your engine to run at an optimal speed. Many therapists, teachers, and parents have taught themselves how to use the program by reading this book. The program can be used to help others or yourself.

Guidelines

1. For persons with SPD, the activities listed in this sensory diet are suggestions. The ideas are not intended to be cookbook recipes. Consider buying the book for the Alert Program to identify your level of arousal and the activities that are calming, energizing, and organizing for you. Alternatively, consult with an occupational therapist for a thorough evaluation and an individualized sensory diet.
2. Use activities based on your interests. Start with something simple and gradually move on to something more challenging.
3. Routines can be important. However, occasionally changing the routine might help you expand your interests if you desire to do so.
4. Pay attention to your mind/body. Notice when you need to cool off or calm down. Watch for signs that you are starting to relax after switching to calming activities.
5. Activities that work for you one day may not work for you on a different day. Although a sensory diet has consistencies, variations occur from day to day and moment to moment, based on the noxious stimuli that have accumulated on that day at that moment.
6. Although I listed a particular activity once, putting it into only one category – calming, energizing, or organizing – some of the activities can be used in more than one category. Heavy work (defined as pushing and pulling against resistance and carrying heavy items) can be calming, energizing, and/or organizing. Use a strategic mix of sensory activities by paying attention to your mind/body. **Note:** When in doubt, use heavy work (proprioception).
7. Borrowing the wisdom from the quote, “If you know one person with autism, then you know one person with autism,” one can say, “If you know one person with SPD, then you know one person with SPD.” In other words, all persons with SPD are unique individuals. So the sensory diet that works for one person, might not work for another person.
8. Talk with an occupational therapist regularly, when possible, to be certain the sensory diet continues to fit your sensory needs.

To Create a Strategic Mix: Sensory diets should include calming, energizing (alerting), and organizing activities to be used based on your performance. Develop an individualized sensory diet using the lists below as a guide. Use calming activities during periods of high arousal or stress and energizing activities during low periods.

Calming Activities

If you are over-stimulated, the following activities may help to calm you.

- Hugging/bear hugging with a partner
- Tightly wrapping your arms around your torso and/or crossing your legs and/or squeezing your hands together
- Cuddling with a partner or pets
- Getting a firm massage or backrub with deep/firm pressure – light touch or stroking could be alerting
- Pushing against a wall with back, buttocks, hands, head, or shoulders
- Pushing against a wall as if to move it
- Leaning forward with hands on edge of desk or table – gently pushing as if to move it; doing pushups if table is stable
- Pushing into a chair with hands on the sides; holding self above chair with both arms; doing chair pushups
- Rolling up tightly in a blanket
- Slow rocking in a sleeping bag
- Slow rocking, e.g., in a rocking chair
- Swinging with slow, linear, and rhythmical movements (e.g., on a hammock)
- Carrying books or other heavy objects across a room or up and down the stairs
- Wearing a heavy backpack (Precautions: the conservative estimate to prevent injuries is to carry no more than 10% of your body weight, with 15-20% being less conservative estimates; use a backpack with wide and padded shoulder straps, a padded back, and a waist strap; distribute the load so it does not become bottom-heavy or top-heavy, and wear the backpack across both shoulders)
- Wearing a heavy backpack while carrying a few books
- Wearing weighted collars, pillows, or blankets (heed precautions, especially with weighted vests)
- Taking a slow walk at sunset
- Walking/strolling in a park
- Swimming laps
- Lifting free weights
- Carrying the laundry basket
- Washing windows, mirrors, or tables
- Pushing and pulling heavy items (e.g., yard work): Mowing the lawn (with a push lawn mower), raking, shoveling dirt or snow (heed safety precautions to avoid straining), and pushing firewood in a wheelbarrow
- Enjoying leisure activities (e.g., reading or listening to books on tape) in a quiet space filled with pillows for cuddling (Avoid over-stimulating visual

distractions: Use dim lighting, close the drapes/shades or sit with your back to the windows, use solid-colored furniture and rugs versus patterned ones and solid-colored walls in soft or neutral colors versus patterned wallpaper in bold colors, hide clutter in bins or boxes or behind doors or curtains – e.g., hang a solid-color curtain over a bookshelf, and avoid wearing clothing in colors that you find distressing – and consider asking your loved ones, friends, and colleagues to avoid wearing clothes in colors that you find distressing)

- Watching the fish swimming in an aquarium
- Watching and listening to the flames in a bonfire or fireplace, especially a fireplace with real wood
- Listening to rain, a waterfall, and ocean waves
- Listening to a tabletop fountain or an aquarium
- Listening to quiet/soothing/relaxing music such as Mozart and Baroque music, e.g., Bach, Handel, Pachelbel, and Vivaldi
- Listening to colored noise (e.g., white, pink, and grey); however, some persons find colored noise to be irritating
- Taking a warm bath or shower, then rolling up in a large towel (avoid using towels in colors that you find distressing)
- Using calming scents such as lavender and/or rose in oils, soaps, lotions, or candles (strong scents can be alerting rather than calming, so experiment)
- Wearing compression clothing, e.g., short-sleeved and long-sleeved t-shirts, shorts, and pants

Energizing Activities

If you need to be aroused, wake up your senses by trying some of these activities:

- Tug-of-War (pull on TheraBand tied around the doorknob of a closed door; use the strongest resistance possible)
- Pulling heavy items, e.g., suitcase or backpack on wheels
- Jumping jacks/star jumps on the floor
- Jumping on a mini-trampoline (use a backyard trampoline if one is available)
- Jumping rope
- Bouncing on a hopper ball, exercise ball, or therapy ball (these balls come in adult sizes)
- Brisk/vigorous walking and race walking
- Hiking uphill
- Stair climbing: Race up the stairs, then go up the stairs two at a time (to cool off, walk at a normal pace down the stairs)
- Aerobics, including chair aerobics
- Calisthenics, e.g., lunges, squat jumps, sit-ups, pushups, and pull-ups
- Tumbling, e.g., cartwheels
- Swimming: Doing flips and somersaults in the water
- Swing dancing
- Spinning in rotating chair or on swing suspended from one hook
- Using playground swings or a merry-go-round (you're never too old)
- Taking a cool shower

- Using alerting scents such as citrus, mint, and/or pine in oils, soaps, lotions, or candles

Organizing Activities

These activities may calm or energize, depending on your needs. Pay attention to your body for signs that indicate your level of arousal.

- Squeezing stress balls
- Sucking, e.g., water from a squeeze bottle, a popsicle, a lifesaver
- Sucking drinkable (liquid) yogurt through a straw
- Eating healthy, crunchy foods like carrots or chewy food like jellybeans
- Chewing bubble gum
- Blowing soap bubbles
- Climbing stairs (up and down) or a ladder
- Doing pushups (on the floor from knees or toes; standing and leaning forward against a wall)
- Doing sit-ups
- Doing jumping jacks
- Tumbling and gymnastics
- Doing headstands or handstands against a wall
- Hiking, walking, or running
- Roller skating, roller blading, or ice skating
- Jumping rope
- Biking/cycling
- Horseback riding
- Stretching, including tai chi and yoga
- Lying on your stomach to read a book
- Painting the walls with plain and/or textured paints, e.g., add sand to the paint
- Pushing heavy items, e.g., shopping cart, laundry basket, or box filled with books
- Pulling heavy items, e.g., wagon filled with children, books or laundry detergent
- Vacuuming – especially when pushing the furniture out of the way!
- Taking out the rubbish/garbage/trash or hauling bags of leaves to the curb
- Creating a scrapbook: Ripping/tearing paper, using different textures, gluing (squeeze bottle) or pasting, and painting
- Coloring mandalas – begin at the center and work your way to the outside border; use colored pencils or crayons, because markers leak and destroy the experience
- Sewing, knitting, crocheting, and weaving
- Sculpting: Making things out of clay through coil or slab methods; try using a potter's wheel
- Woodworking: Sawing, gluing in dowels, pounding nails, screwing in nuts and bolts, using sandpaper to smooth the project
- Baking: Mixing the ingredients in a bowl (not using an electric mixer), and squeezing/kneading, flattening, and rolling the dough for bread or cookies

- Cooking: Pounding chicken cutlets with a food hammer and chopping vegetables
- Gardening: Digging, patting soil, pulling weeds, carrying and pouring water from a large watering can, and pouring/dumping dirt or mulch

Organizing Games and Partnership or Group Activities

- Tug-of-War
- Tennis or badminton
- Softball or baseball
- Volleyball
- Basketball
- Kickball or soccer
- Martial arts, including tae kwon do and karate
- Races, e.g., adult relay races, 5K and 10K runs, ½ and full marathons, and track
- Dancing and singing

Example of a Sensory Diet

Personalize this example. To meet your changing sensory needs, modify the activities as your needs change. Use a strategic mix of activities.

General suggestions: Take frequent movement breaks, sit on an inflatable wobble cushion, and chew crunchy foods (e.g., carrots) during daily activities that require attention and concentration. Rocking gently before bedtime can help with a sleeping problem. Try a firm self-hug after rocking.

In the morning:

- Upon awakening, massage your neck and shoulders: Gently but firmly move your fingers in small circles – start at the base of your skull and move down your neck and then out toward one shoulder and repeat toward the other shoulder - work out the knots – then stretch by hugging yourself
- Take a bath or a cool shower with alerting scents such as citrus, mint, or pine
- Use a vibrating toothbrush and/or a vibrating hairbrush
- Listen to music that you find alerting but not over-stimulating
- Eat crunchy cereal with fruit and some protein
- Take a brisk or vigorous walk or jump on a mini-trampoline

Midafternoon:

- Do aerobic exercises or jump on a mini-trampoline
- Go for a bicycle ride or do yoga
- Push a grocery cart or a stroller, depending on family needs
- Massage your feet to “reorganize”
- Listen to music that you find alerting but not over-stimulating
- Oral work – Suck liquid yogurt through a straw, eat crunchy and chewy snacks, or chew gum before and/or during activities at a desk or table

At dinnertime:

- Make a meal with mixing, chopping, pounding, and so on
- Set the table, using two hands to carry and balance a heavy but stable tray
- Eat crunchy and chewy foods

At night:

- Take a walk/stroll in a park
- Sew, sculpt clay, or make woodworking projects or scrapbooks
- Color mandalas – begin at the center and work your way to the outside border; use colored pencils or crayons
- Take a warm bath with bubbles and calming essential oils such as lavender or rose
- Listen to quiet/soothing/relaxing music such as Mozart and Baroque music, e.g., Bach, Handel, Pachelbel, and Vivaldi
- Massage