Provided by

Kent Community Health NHS
NHS Trust

East Sussex Children's Integrated Therapy Service

Occupational Therapy Team

POSSIBLE SENSORY REASONS FOR SOME BEHAVIOURS and suggestions/strategies for managing or changing them

These are some possible reasons for behaviours seen in children with sensory processing or modulation disorders, full assessment is necessary to decide the precise reasons why a child is behaving like this, and often there is not a simple answer. Some children may have modulation disorders and rapidly swing between high sensitivity and under-sensitivity to stimulation; therefore reactions to these suggestions should be carefully monitored. Generally speaking, proprioceptive input (heavy muscle work, pushing, pulling, carrying etc) will help to calm over-reactive systems and alert under-reactive systems; hence it is often called "the great modulator". These are suggestions which may suit some children and not others. If these suggestions appear to be making the situation worse or your child is not showing any improvement after a little while please discontinue with them.

DRESSING / CLOTHING

Strong preferences re which clothes will wear - this may be due to feel of the clothes (parents often interpret it as fashion conscious, and favourite characters on clothing can lead to preferences), avoid buying clothing the child says is uncomfortable, head, neck and abdomen are the most sensitive areas.

Likes to wear lots of layers of clothes, even in warm weather (e.g. likes to keep coat on) - This may be to give them an extra 'skin' between them and the outside world if they are highly sensitive to touch.

Strips off and/or dislikes loose clothing – every time we move, loose clothing brushes lightly against our skin, we can ignore this touching, but it can be very unpleasant or itchy to children who are highly sensitive to touch. Try closer fitting clothes, or even Lycra clothing under clothes. Some children strip off because they enjoy the feel of air on their skin - try loose fitting clothes which give additional light touch.

Complains about tags in clothes - children with high sensitivity to touch often find these irritating, try cutting them out, leaving no fibres.

Refuses to undress/dress - when undressing or dressing, the clothes brush lightly against the skin and if a child is highly sensitive to touch, this can be very uncomfortable for them.

Complains of discomfort from seams on socks - may be due to high sensitivity to touch. Try turning socks inside out so seam is on outside, or try either seamless socks or different socks where seam is less prominent.

CHEWING ITEMS & MEALTIMES

Messy eater, prefers fingers to eat - may have poor tactile awareness around mouth, may not like the feel of cutlery in their mouth, and/or may have poor fine motor skills. Encourage activities involving the mouth, e.g. blowing bubbles, whistles etc. Try using a vibrating toothbrush, encourage child to massage around their own mouth with different textures and materials, e.g. toothbrush, flannel. Heavier cutlery may help by increasing proprioceptive input, cutlery with thicker handles may assist grasp and make it easier to manipulate cutlery.

Very picky eater, may complain of feeling sick at sight of some foods - may dislike foods of certain textures, or only eat foods of certain textures (due to over or under sensitivity to touch in mouth and/or smell), may be very sensitive to temperature of foods, may be very sensitive to certain tastes. Allow this if it does not result in limited nutrition. Deep pressure to mouth by chewing on something strong, pliable, and suitable to put into mouth (e.g. chewy tubes) can help to calm a highly sensitive mouth before meals. Think about the sensory quality of new foods being introduced, begin with firm food textures and expand repertoire - smooth, soft textures before uneven textures (lumps and bumps); change one characteristic of food at a time (taste, texture or temperature) e.g. mix two preferred fruits, or change texture by making a favourite food thicker or runnier, or add texture to a food flavour which is liked. Only introduce very small portions of new foods or food variations, if possible, avoid doing this at mealtimes.

Difficulties coping at mealtimes (e.g. bad behaviour, screams, tantrums etc) - mealtimes are often accompanied by movement, strong smells, noise and echoes in school dining rooms, and the child may be highly sensitive to any or all of these, resulting in the behaviours seen. Consider allowing the child to eat in a more peaceful, less stimulating environment, e.g. with a small group of others in a different location, or in the school dining room before everyone else. Minimise the time they have to spend in the environment.

Chews on clothing, pencils, etc - may be to seek proprioceptive input to calm over-reacting senses or increase sensory alertness; may enjoy tactile input of item. Allow child to chew latex-free tubing, chewing gum, chewy snacks. If it appears to be to raise alertness, try also crunchy snacks. Allow child to chew clothes if not harmful to them. Try a sports drinks bottle, to provide resistance to sucking (alternative proprioceptive input) consider other alternatives providing a strong oral input.

HYGIENE AND HAIR CARE

Dislikes hair or face washed - may be extra-sensitive to light touch. Let child know they are going to be touched before starting. Firm massage before washing may help to calm the sensitivity. Encourage child to wash their own hair, Try using a shampoo shield if child will wear one. Count as water is poured over head (e.g. “10 pours and it will be finished - 1, 2”) Firm pressure is more tolerable than light. If child is tipped backwards or asked to tip head backwards for washing in bath, it may be the backwards movement that is intolerable for them due to gravitational insecurity, so consider a different position.

Tilting head back to wash hair may be intolerable or uncomfortable for them, due to gravitational insecurity. Fine spray from shower head may be uncomfortable on face. If the showerhead has several options of spray, try the smaller range which has more pressure, the child may prefer this.

Dislikes hair cutting - Close proximity of hairdresser may be an issue if child has over-reactivity to touch and/or visual stimulation. Noise of scissors or clippers, may be worrying to a child with auditory sensitivity. Feel of cape around neck may be uncomfortable if sensitive to tactile input, as is the cut hair on neck and clothes during and after hair cutting. Encourage participation of child, e.g. letting them use the spray bottle to wet hair. Deep pressure, such as a firm massage or rub with a towel, applied before cutting, can reduce sensitivity and increase tolerance to touch and noise. If child dislikes the cape texture, try an alternative, such as a towel. Change child’s clothes straight after haircutting. Play cutting doll’s hair to familiarise child with process, bearing in mind sensory components and vocalising them. Provide extra support around child to give feeling of security in hairdresser’s chair, and provide some heavier pressure to help calm child. Consider playing music they like, through earphones, to cut out noises. Provide child with something to hold or fiddle with during haircut, if they enjoy vibration; give them a vibrating toy to hold. Offer a reward after haircutting, as an incentive to tolerate the procedure.

Dislikes tooth brushing - taste, smell or texture of toothpaste may be unpleasant to child, due to their nervous system’s sensitivity, although not to others. Suggest that family try alternatives and if the child only likes one, acknowledge that. Suggest they use less toothpaste, instead of a lot. Toothbrush may be too large for child to cope with, or bristles of wrong texture. As soon as possible, let child control toothbrush for themselves. Many prefer a vibrating toothbrush but some are unable to tolerate this.

BEHAVIOUR

Insists on holding something in hands - Some children find constantly holding something calming, especially during transitions.

Becomes upset at changes in room arrangement, or toy arrangement. Knowing where furniture and toys are in the room give security if you have difficulty with perception (e.g. judging distances, where things are in space, recognising things from a different angle) so children with these difficulties prefer to keep things still, so that they know where they are, like a blind person.

Dislikes being cuddled, kissed etc except on their terms and when they seek it, prefers touch from one family member over another - Tactile high sensitivity may be the issue, the child may only be able to tolerate touch initiated by them. They may prefer touch of certain family members because they use firmer pressure, or warn child before touch, always approach from front etc. Consider these differences, if child is extra-sensitive to touch, they will prefer firm touch, not light, prefer to be warned of impending touch, and dislike being approached from behind. Family members should acknowledge that child needs to initiate touch, not have it imposed on them. Babies should be swaddled firmly, accompanied by talking to them gently and softly to calm, along with gentle rocking in a linear direction (i.e. side to side, backwards and forwards), avoid mixed direction, sudden or vigorous movements.

Avoids, cannot cope with corridors, school hall, assembly cloakrooms, lining up - responses may vary, depending on sensory stimulation at the time. Tactile sensitive children may either avoid, or over-react to touch, e.g. child brushing past, children too close in line etc and react with a fight reaction, complain the child “hit” them (to them, it feels as though they have been hit). When lining up, they may start at the front of the queue and end up at the back as they move away from others coming too close. The noise of many children or echoing may be too loud for them, and the movement of a crowd of children can be disorientating for children with high sensitivity to movement, as the visual system is closely related to the vestibular system and can stimulate it. Provide heavy muscle work (proprioceptive input) to calm high -reacting senses by asking the child to push or carry something, or lean with their back on the open door to hold it open for the other class members. This input can help to dull sensory stimulation which follows, e.g. in the hall. Allow child to leave before the other children, or be first or last in the line, whichever they prefer, allocate a locker/coat hook at the end of the row, to minimise risk of other children brushing past them. Walks into or sits on other people, treads on feet, walks over other children, misses chair when sitting down - poor body awareness, spatial awareness, difficulty with motor planning.

Tends to lean on others, or lie on floor instead of sit during circle time, constantly fidgeting, getting out of seat - may have poor postural control, or be seeking proprioceptive or vestibular input to increase alertness. Allow child to sit against a wall. Provide legitimate opportunities for movement at regular intervals, e.g. handing out papers, running errands, sharpening pencils, helping put out the rubbish. Allow child to stand instead of sit if they wish. consider using a Movin’ sit cushion (wedged inflated cushion which allows movement within their seat), or put tennis ball on two legs of chair at opposite corners to provide a chair which constantly moves as it does not sit firmly on the floor. The fidgety children need to move in order to concentrate. Provide

opportunities for large muscle work before settling to sedentary activities, e.g. pushing, pulling, jumping to give increased proprioceptive input. Rocks body, moves head a lot, spins or twirls body. Although this may look like odd behaviour, it may be to increase the messages from the vestibular system.

Waves or flicks fingers near eyes, spins wheels on toys or spinner. The visual system is strongly linked to the balance system, so this may be a way for their body to try and increase stimulation to the balance system. (Have you ever sat in a car or train which is not moving and when the car or train next to yours starts to move forwards, you feel as though you are moving backwards - this is the visual stimulation of the car or train giving you a sense of movement, even though your head has not moved.

Flaps hands, claps, jumps more than usual. Hand flapping and clapping stimulate the muscles and joints in the arms and shoulders (proprioceptive input) and jumping does the same for the legs and spine, so the child may be doing it to calm themselves or to alert themselves.

Walking on toes with straight knees (and without tight heel cord muscle) - Walking on the toes tends to put extra stretch on leg muscles, increasing proprioceptive input, some children who are extra-sensitive to touch may also do this to decrease the amount of skin in contact with the floor and to use the proprioceptive input to calm the touch sensations.

Grinds or clenches teeth, bites objects or others. Grinding and clenching teeth may be a way of getting strong proprioceptive input, grinding can also cause vibration in the bones of the jaw which will stimulate the balance system. Biting also gives jaw proprioception.

Head banging provides stimulation to the balance system by the vibration as in grinding teeth, the jarring of the neck muscles and joints can provide proprioceptive input.

Difficulty with transitions, changing activity, moving from place to place, interactions with people. Unpredictable emotional outbursts. Because their nervous system is not working in a balanced way, it is under stress. Imagine how you feel when stressed, very tired, ill, or worried, even minor changes can upset you and you can become very emotional - tearful, angry, short tempered. These children need routine and predictability because any new routine demands new learning or coping power from a stressed nervous system. In addition to this, children with autistic spectrum disorders lack the ‘circuits’ of messages to allow them to be adaptable and anticipate what will happen, plus they often have difficulties recognising a memory experience, and tend to get stuck attending to the thing they are doing, lacking flexibility. Use a signal to warn child of change. Use visual supports for change (e.g. visual timetable). Provide deep pressure activities during changes/transitions.

Rigid rituals - prefers to have predictability in environment, feels need to structure activities to avoid unpleasant sensory experiences. Chooses activities they feel competent with if have motor planning difficulties, limiting challenges. Allow ritual if it does not interfere with daily living. Use visual supports/timetable to help organisation. When making changes to routine, offer child strategies to help them cope with it. Identify possible triggers of behaviours and use deep pressure and heavy muscle work

to calm and organise. Provide calm-down space where child can retreat to re-organise or calm down (should not be a space used for time-out punishment). Only change one sensory element of behaviours at a time, to introduce flexibility. If child enjoys movement, allow access to a rocking chair or swing.

Crawls under desk, chair, behind sofa - needs to be away from sensory stimulation (e.g. talking, lights buzzing, lights which are too bright for them, risk of tactile stimulation). Provide a quiet area, with reduced lighting, e.g. with beanbags, large pillows, rocking chair, popup tent, cardboard box to squeeze into, to reduce sensory stimulation and/or provide calming deep pressure.

Has compulsion to touch everything and everyone, although may dislike being touched themselves (can't keep hands/feet to themselves) - seeking tactile input (often to boost discrimination or increase alertness), give child a fidget item, this can be related to subject of task in hand, e.g. toy model of something in a story while listening to the story. Child may not understand personal boundaries, so provide them with a carpet square, beanbag, swim ring to sit on/in etc, to define their area. If child is participating in a floor activity, suggest they lay on prone on the floor, propping head on elbows. Child could sit and hold or squeeze a large pillow/cushion/soft toy in their lap. Enhancing the tactile quality of tools, e.g. cover pen in textures, carpet, or use weighted pens.

Poor eye contact - may be due to lack of confidence. If visually defensive, it may be uncomfortable for them to maintain eye contact. Consider decreasing expectations of eye contact in some situations and contexts. Avoid positioning yourself too close when trying to engage eye contact. Consider using little auditory or tactile clues (if child is not tactile defensive) to encourage eye contact. Children with autistic spectrum disorders may be visually distracted by one specific moving facial feature (e.g. the mouth) and then become unable to attend to what is being said to them. Allowing them to avoid eye contact may increase their potential for listening.

Bothered by bright lights, sunshine, fluorescent lighting - child may be highly sensitive to light, and may become over-stimulated by it; consider lighting levels, provide areas with dimmer light, shaded area for child to access to "calm down". ? use vertical blinds at windows to control natural lighting. Consider position in class in relation to lighting levels.

Travel sickness - possibly due to over sensitive vestibular system, if also avoids fast amusement rides, balance activities and fairly sedentary. Sitting on paper will enhance movement sensation and reduce "mismatch" between visual and vestibular input (the old wives tale of sitting on brown paper does have a grain of truth, although the colour of the paper is not significant!) Seat child near a window. Chewing can help to calm and organise the child.

Child dislikes walking on uneven surfaces (stones, grass, sand, mud etc) - try providing extra proprioceptive input, e.g. child wears a weighted backpack, or bum-bag. Give the child emotional and physical support because they may have vestibular difficulties. Children may also dislike walking on grass, sand etc. because of the feel of it, if they are tactile defensive.

Repeatedly makes noises or likes the radio or TV on all the time. Children who are over-aroused or extra-sensitive to sound may make noises themselves to "drown out" the noises from their environment. For example, in a noisy room, they may start to hum or make noises as their way of cutting out other people's noise. Those who like to have music on all the time, or constant background noise, may also be highly sensitive to sound and are using the radio or television to cut down on new noises being heard, making them feel more secure. Some people find "white noise" (for example the constant sound of an electric fan) helpful for this, others find it irritating. As fans can be dangerous if left unattended in a child's room, if the noise helps, try recording it and playing a tape of it at bedtime.) If child needs to hum in class, teach them to hum quietly to avoid distracting others. If it is thought that they are making noises for auditory or tactile input, consider vibration, e.g. tooth brush, playing a kazoo.

Holds hands over ears, or shows increased anxiety if noise levels rise, e.g. singing time, assembly - child may have auditory sensitivity. Limit noise levels where possible, rugs and carpets reduce noise levels in rooms.

Easily distracted or excited by loud noise - may be sensitive to noise, especially unexpected (e.g. door bell, fire alarm, dog barking), may have difficulty "screening out" unimportant noises to attend to important ones. Soft background noise may be calming. Headphones or earplugs may help to muffle noises. Warn child of noise whenever possible. Avoid noise at times when child needs to attend to something.

Bothered by normal household noises, e.g. fridge - (see also notes under "makes noise for noise sake") Pitch and frequency of noises can upset children. Warn when the household appliance is being switched on, expose child to the noises they dislike in small amounts, gradually increase length of exposure as child's tolerance improves. If child is old enough, encourage them to help with operation of the appliance which they dislike, giving them some control over it. Lessen the unpleasant effect by coupling it with pleasant noises or activities, e.g. preferred music or a favourite game, if they enjoy music with a strong beat, vacuum in time to the beat and make it into a 'dance'.

Doesn't notice sounds in their environment - may have difficulty knowing what sounds to attend to, or may be over-focussed on what they are doing. Use tactile and visual clues to gain attention. Sound lotto may help.

Difficulty processing sounds - Difficulty with screening auditory input. Gain attention, ask child to repeat back instructions to check for accuracy. Use body gestures and visual supports to reinforce what is being said. Give instructions at quiet times. Set up a cue for child to listen (visual or gesture).

Notices every little noise or visual change in their environment – resulting in being very distracted and having difficulty concentrating. Keep visual and auditory stimulation to a minimum, i.e. limit posters etc on wall, and sit away from windows or doors. Prepare child whenever possible for visitors, with visual reminder. May use a cubicle or workstation within class to minimise distraction, should not be used for more than 15 - 20 minutes at a time, because it can cause myopia if used for longer periods.

Poor attention – Under-arousal (alertness) is commonly associated with a need for novelty and new stimulation, resulting in a poor attention span. The child flits from one

toy to another, but doesn't play with anything properly. Parents then tend to offer more and more new toys and the child never learns to go back and play with older ones and learn different ways of playing with them. Try having only a few toys available at a time; recycle toys every few weeks. A smaller enclosed space, e.g. a play tent with beanbag or soft cushions will often help to contain the child in a 'special play area' and help them focus. At school, use check-ins, break task down, child completes one part, then checks in with teacher or TA/INA, and then completes next stage, checks in, etc. They can then move on to check lists. Have a distinct beginning and end to activities, e.g. "do five more (eg sums)", rather than telling them to do five more minutes. Encourage practice of only starting things they are going to finish.

Talks self through tasks - may be to keep self on task, to block out other noises, to assist motor planning abilities.

Poor organisational skills, loses things - difficulty discriminating items which they may need from other things on desk. Difficulty focusing on relevant stimuli. Give visual structure by colour coding books etc. Use individual folders for papers for each subject, e.g. plastic zip top folders, and include other items child will need, e.g. protractor for maths, etc. Encourage use of lists, planner to organise work, when homework needs to be completed by, messages etc.

Dislikes feet off the ground, playground equipment etc. - afraid of falling, may be gravitationally insecure. Allow child to direct movement, grade activity to level with less challenge or threat to child e.g. suggest child walks along a tape on the floor in lieu of a bench in PE. Provide supervised one to one practise before group activities. Incorporate additional proprioceptive input, e.g. with weight by wearing a backpack, large muscle movements, prior or during activity. Never force the child.

Only uses fingertips to grasp things (often develop pincer grasp very early), avoids messy (glue, paint, playdoh etc) play - this is often due to tactile defensiveness, the child uses fingertips to minimise tactile contact with items and avoid contact with palms. Do NOT force child to participate in messy play, but encourage it, e.g. using tools to minimise contact (brush or sponge instead of finger paint) and provide deep pressure to palms before engaging in this play, to desensitise them, e.g. clapping, banging a drum/table. Later this could be replaced with activities involving weight-bearing on hands, e.g. crawling, pushing, pulling games. Allow child to wash hands frequently if they need to, or try to replace this by providing a wet wipe during the activity.

SLEEP

Difficulty settling to sleep, staying asleep, very fussy re nightclothes, prefers to wear socks in bed - May be highly sensitive to light touch, brushing of bedclothes and nightwear may be uncomfortable to them, hence desire to wear socks to limit contact of sheets/duvet on feet. May be easily distracted by noise/light. May have difficulty with self regulation (switching off). Many children have sleep difficulties for various reasons, and there may be several contributing factors. However, trying these strategies may help:-

Try heavier bedclothes (use blankets etc instead of duvet), or try laying a sheet or blanket over the duvet and tucking it well in to increase pressure of bedclothes on body or try a sleeping bag instead of covers.

Warm bedclothes in a tumble drier before putting child to sleep, so that the cold is not alerting them.

Cotton sheets often form little 'tags' with wear with can be very irritating to the child with high sensitivity to touch, try flannelette or towelling sheets instead. Acknowledge the child's preferences for nightwear, some prefer tight fitting, others prefer very little.

Predictable routines are always helpful.

Some children can be calmed and prepared for bed by engaging in some rough and tumble play (but NO tickling, or pulling clothes, check child is not getting overloaded with sensory stimulation, and do not impose it on them, only engage in this if they seek or enjoy it), or heavy muscle work (push-ups etc) before bed, providing proprioceptive input; however, this may alert others, so parents should carefully monitor reactions to this and decide if it is helpful or has an adverse effect. A warm bath or shower helps some children (some are very fussy re the exact temperature of the water, and some dislike bubble bath). As mentioned in section regarding noise, try using "white noise" to cut out other noises (e.g. fan, if child can be left safely with one, or radio on low with calming music). A sports bottle with a drink can provide proprioceptive input to the mouth to help calm the whole body. Another possible reason for not settling in bed is a dislike of sleeping off the ground, if the child has vestibular sensitivity, or the firmness and texture of the mattress can be an issue (the "princess and the pea" situation) if the child is highly sensitive to touch. Try allowing the child to sleep on the floor in a sleeping bag, or on their mattress on the floor. Try giving them a stuffed toy to hug (deep pressure to calm over sensitive senses).

If it is thought that difficulties may be arising from separation issues, encourage separation during the day, e.g. hide and seek games, see if the child can move away from parent on their own. Very active children may be able to settle better in a room which is empty apart from a bed.

Compiled from various sources, including:-

"Advanced Course in Assessing and Treating Infants and Young Children with Multisensory, Interactional, and Attention Problems" Georgia DeGangi.
"S.I. Network Foundation Course"
"Asperger Syndrome and Sensory Issues" Myles, Cook, Miller, Rinner, Robbins
"Sensory Integration & Autism/UK 2000" Gretchen Dahl Reeves
Clinical experience.