


AUTISM OUTREACH SERVICE
Dudley

Our Senses

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Saltwells February 10th 2016



FOTOSERARCH

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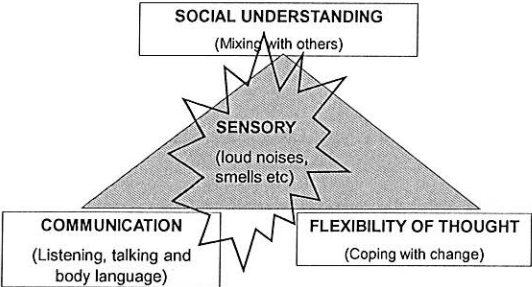
Aims

- To give an overview of the sensory system and the possible impact on children with AS
- To provide strategies to support sensory issues in the environment

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Autistic Spectrum

The Triad of Impairment – ‘The common thread’



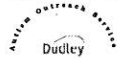
SOCIAL UNDERSTANDING
(Mixing with others)

SENSORY
(loud noises, smells etc)

COMMUNICATION
(Listening, talking and body language)

FLEXIBILITY OF THOUGHT
(Coping with change)

Information



- 5 -15% of the population have some issues with their senses
- 90% of people on the AS have a sensory dysfunction to one or more senses
(Miller, 2006)

The Sensory System



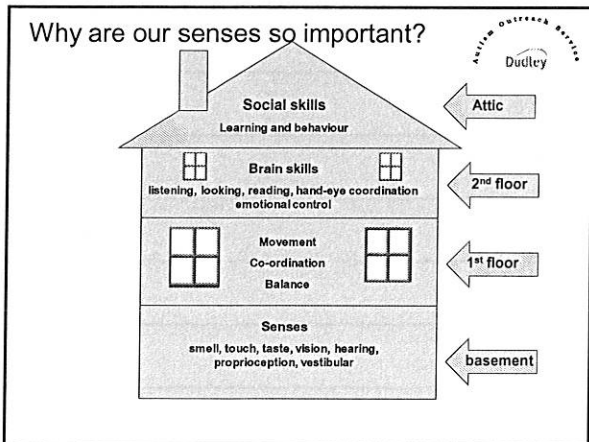
- Vision
- Hearing
- Taste
- Smell
- Touch
- Proprioception – knowing where your body ends and the rest of the world begins
- Vestibular – the sense organ of balance and gravity



Purpose of our sensory system



- Drives our development
- Protects us
- Regulates us – arousal levels, need to be in a calm /alert state – we self regulate
- Enables us to adapt to environmental demands; Adapts to environmental change
- Blocks out irrelevant sensory input
- Attends to relevant sensory input
- Responds appropriately/proportionately to sensory input



Sensory Integration is:

- The ability to take in information through the senses, add it to prior knowledge, information and memories stored in the brain and then make a meaningful response - in order to use the body effectively within the environment
- Sensory integration usually mature by 8-10 years

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What we see


- Hyper-sensitive system – over responsive, works too well
Very little sensory input is required to activate a neural response
- Hypo-sensitive – under responsive, doesn't work well enough
Lots of strong input needed to activate response, nervous system dormant for much of the time
- May occur with any of the senses, lead to extreme or no reactions
- May be hypo in one sense, hyper in another
- Worse if hungry/tired/stressed

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<div style="display: flex; justify-content: space-between;"> Hypo Hyper <small>ADDITIONAL DIFFERENTIAL SERVICES</small> Dudley </div>	
Passive/quiet - Need the feedback to wake their sensory system up	Hyperactive/excitable/ Distractible -Winding them up as over-stimulating sensory system, constantly in a state of heightened arousal
Hyperactive/excitable/ Distractible - They know they need it and will seek out the stimulation to increase their arousal level	Passive/quiet - Shut down to avoid


Sensory Issues <div style="float: right; text-align: right;"> <small>ADDITIONAL DIFFERENTIAL SERVICES</small> Dudley </div>
<ul style="list-style-type: none"> • Sensory overload • Sensory shutdown

Quote <div style="float: right; text-align: right;"> <small>ADDITIONAL DIFFERENTIAL SERVICES</small> Dudley </div>
<p>“I looked out into the world through my distorted senses, unable to make coherent meaning of all the mesmerising fragments of noise, light, words and sensations.” Alison Hale (1998)</p>


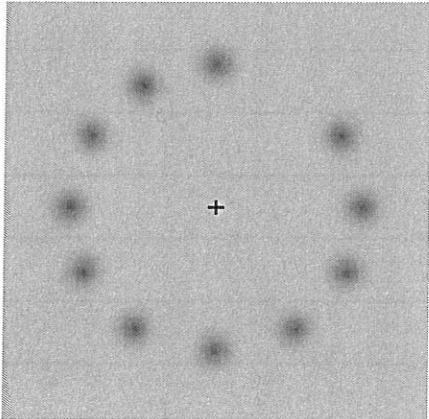
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Dudley

Sensory Systems

- Vision
- Hearing
- Taste
- Smell
- Touch
- Proprioception
- Vestibular



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Dudley

A significant number have some abnormality of sensory and perceptual processing functions

IFNOSPACESARELEFTBETWEENWORDSITSDIFFICULT TOSEE

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Vision



- Detects colour, shape, size, edges, contrast and movement
- Over-rides other sensory systems, often first sense to be stimulated
- Visual system 'tags' emotional events
- Written language processed in different part of brain to pictures

Visual Hypersensitivity



- Sensitive to bright/fluorescent/flashing lights
- Fascinated by details and patterns
- Very sensitive to colours
- Drawn to water or rainbow colours
- Eye contact may be painful – better peripheral vision
- Red and yellow may be over arousing

Things to Try

- Use dimmers/sunglasses/cap
- Avoid fluorescent/bright lights
- Avoid stripes and patterns
- Vary visual tasks
- Provide visually less stimulating area. (bedroom!)
- Reduce contact with mirrors – bouncing light
- Clothing



Visual Hyposensitivity



- Fascinated by lights
- Drawn to bright lights or reflective surfaces
- Difficulty with clear/pale objects
- Doesn't notice small detail

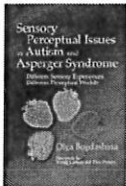
Things to Try

- Different coloured lighting
- Use of bright colours to draw attention
- Increase contrast
- Provide direct targeted lighting
- Visual reward box



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“Some autistic people may stare at the sun for a long time, or walk around something, running their hand around the edges so they can understand what it is.” Brad Rand (p.56)



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Touch/ tactile

- Detects pain, temperature, crude and light touch/pressure and vibration
- Touch next most important sense to vision
- Anecdotal reports talk about hypersensitivity being common, some feel trapped in own skin
- 25% of sleep issues linked to tactile issues (Jasmine,2009)


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Tactile Hypersensitivity

- Dislikes wearing clothes with seams or labels
- Extreme reaction to slight touch or brushing past
- Dislikes feel or some surfaces/materials
- Feel of hand/touch may remain


Things to Try

- Warn of any necessary touch and keep it brief
- Allow greater person space to avoid unintentional touch
- Allow choice of clothing and fabrics
- Accept claims of pain as genuine





SLIGHTEST TOUCH IS /MAY BE
VERY PAINFUL

← COULD USE SOCIAL STORY



“From as far back as I can remember, I always hated being hugged. I wanted to experience the good feeling of being hugged but it was just too overwhelming. It was like a great, all engulfing tidal wave of stimulation, and I reacted like a wild animal.” Temple Grandin (1995)





Tactile Hyposensitivity


- Likes fur, soft fabrics
- Head bangs, bites self, pulls own hair
- Enjoys rough and tumble
- Prefers deep pressure/tight hold
- May not register touch unless intense
- Delayed reaction – 15 secs to process hot

Things to Try

- Provide objects to touch that are socially appropriate
- Find alternatives to self-harming behaviour
- Weighted blankets/vests- with caution!!
- Fitted or lycra clothing



Auditory


- Detects frequency (pitch), loudness and duration
- If NT (neuro typical) processed in milliseconds
- Being on your own is it the noise?
- Speech is only one ‘sound’ that we hear
- We react to sudden noises


AVIUM OSTFERRA BATES
Dudley

Auditory Hypersensitivity

- Hands over ears
- Sleep problems
- Grimacing
- Echolalia – trying to block
- Hearing sounds others don't hear
- Dislikes vacuum cleaners, hand dryers, bells, wind, rain, breathing of others, cutlery

Things to Try

- Ear plugs /headphones
- Prewarn
- Sound absorbent materials
- Give control to the person
- Whisper – don't shout
- Noise meter




— TV

DIFF. VOICES – PLAYGROUND VOICE
CLASSROOM VOICE

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Auditory Hyposensitivity


- May ignore loud sounds
- May enjoy own noises
- Enjoys tapping surfaces
- Fascinated by traffic sounds
- Ear to vibrating machines
- Slams doors, likes hovering
- Things to Try
- Agree times to make noises
- Agree an alternative
- Provide headphones to listen to noise
- White noise for sleep




COULD USE NOISE/MUSIC /
BACKGROUND NOISE TO GET TO
SLEEP.

AVIUM OSTFERRA BATES
Dudley


“Another trick my ears played was to change the volume of sounds around me. Sometimes when other kids spoke to me I could scarcely hear them and sometimes they sounded like bullets.”
Darren White (1987)





Smell and Taste

- 75-90% of taste is smell – hold nose and eat something, cant taste it
- Strong link between smell and memory, so bad experience in dining hall may mean wont go in hall as associates it with what happened
- Smell most reliable sense – e.g. smell of smoke





Hypersensitivity to smell

- Sensitive to perfume, petrol, cigarettes, pet odours, detergents
- Avoids strong smelling foods
- Aware of breath smells

Things to Try

- Avoid using strong smelling detergents and perfume
- Offer bland or uncooked food
- Pre-warn of smells and introduce mild smells gradually
- Consider environmental smells when analysing unexpected behaviour






Hyposensitivity to Smell

- May sniff or smell things or people
- Prefers strong smells

Things to Try

- Give strong smells and name them
- Provide alternative items to smell
- Find substitutes for dangerous materials




ADDITIONAL QUALITY SERVICES
Dudley

Taste Hypersensitivity

- Avoids spicy/strong foods
- Dislikes lumpy or rough textured food
- Difficulty using cutlery
- Dislikes brushing teeth (toothpaste)


Things to Try

- Offer bland foods
- Puree foods or provide similar consistency
- Use different cutlery – plastic, chopsticks, ceramic spoon
- Use unflavoured toothpaste or mouthwash



ADDITIONAL QUALITY SERVICES
Dudley

"I really hated it when food had things mixed with it, like noodles with vegetables, or bread with fillings to make sandwiches. I could never put any of it into my mouth. I knew if I did I would be violently sick." Sean Baron (1992)




ADDITIONAL QUALITY SERVICES
Dudley

Taste Hyposensitivity


- Prefers spicy/strong food
- Licks or mouths objects
- Eats non-edible materials/objects - Pica

Things to Try

- Offer alternative objects to mouth
- Chewing gum/ice chips
- Add spices or flavouring to more bland foods



MAY NOT BE ABLE TO COPE
WITH MULTIPLE FLAVOURS
I.E. TOO MANY TO TAKE IN
AT ONCE




Vestibular

Sense of movement
Tells us about gravity, balance and movement

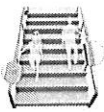
Tells us:


- whether or not we are moving
- which direction we are moving in
- how fast we are moving



Might see:

- Difficulty walking up /down stairs
- Often falls over
- Unable to ride a bike
- Looks for support from other objects
- Keeps at edge of activity
- Avoids /refuses activities
- Appears to be lazy
- Gets upset/frightened






Proprioception

- Difficulty in unstructured/open spaces
- Poor spatial awareness
- Tires easily
- Inattentive as they have to concentrate so hard on their body position
- Bumps into people/things
- Maybe unaware of need to go to toilet
- Feels edges of surfaces/perimeters of rooms



Things to try

- Deep pressure
- Heavy work with movement – wheel barrow, riding, bike, sweeping
- Pushing, pulling, carrying, jumping- compression exercises elastic band on edge of desk
- Add weights to objects that are used i.e. pencil, knife and fork
- Joint compression – mouthing, sucking, biting, blowing and chewing
- Chewing gum, biting apple – instead of people
- Swimming is very resistive
- Weighted rucksacks, waistcoats - be aware of habituating to
- Fidget toys
- Therapy putty
- Move and sit cushion




MAY SIT ON EDGE OF SEAT TO
GET SENSORY FEED-BACK

BITING APPLES





"People sometimes tried to persuade me to join in, and I felt stupid when I didn't want to and couldn't explain why. But it was also often the wisest course not to allow myself to be persuaded. It could have been fatal not to know where the parts of my body were, not to be able to judge speed and distance, or to lose all sense of up and down on a ski slope." Gunilla Gerland (1997)

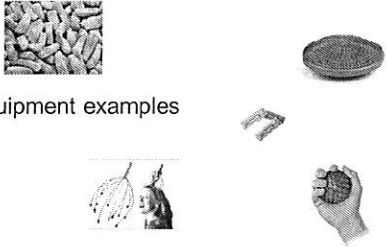
Strategies



- Check environment
- Think of yourself
- Calm area
- Willbarger(1984), nourish body with food, need to nourish our body with sensations, sensations are the information our brain receives through the senses



Equipment examples



AUTISM WEST MIDS.

DO SENSORY

- COULD USE "CHEWIGEM"

WWW.CHEWIGEM.COM

OR GUMIGEM

