Barnet Children's Integrated Therapies

Understanding Pica

Mardian Vries
Paediatric Occupational therapist



Aims of the session



- What is Pica?
- Impact on function
- Red flags/ key observations
- Sensory strategies
- Environmental considerations
- Further signposting and resources

What is Pica?

- Pica is a feeding and eating disorder in The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition - DSM-5'
- 'It is defined as recurrent intake of non-nutritive, non-food substances (e.g., paper, soap) for **at least 1 month**, is **inappropriate to the developmental stage** of the individual, occurs **outside of cultural norms**, and occurs in the absence of another mental or physical condition' **(American Psychiatric Association, 2013).**
- Items may include soil, paper, hair, chalk, stones or fabric.
- Research shows that Pica is more common in young children and those with developmental differences
- Diagnosed by Paediatricians, psychiatrists and GPs.






Age trends

- **Not diagnosed before age 2:** Diagnostic threshold: For diagnosis behaviour must be "developmentally inappropriate" e.g., children under age 2 who mouth objects are *not* typically diagnosed with Pica.
- **Typical developmental stage**; babies and toddlers explore objects orally and mouthing usually decreases after 18 months and is largely resolved by age 2.
- Onset of Pica: Most commonly diagnosed in **young children**, especially in children with developmental delays or autism.
- For children with additional learning needs/SEN they may continue eating non-food items beyond the typical age.



Prevalence

- **General population children**: ~0.3–2%
- **Neurodevelopmental/ disability groups**: up to 25–30%. The National Autistic Society (NAS) highlights pica as a serious concern in autism.
- **Age trend**: Higher in younger children and tends to decreases with age but can still persist for those with additional needs.
- **Special populations**: Elevated risk in Autism, learning disabilities, developmental delays
- Cardiff University research (2024) highlighted associations between pica and feeding difficulties such as ARFID.

Causes

We cannot know for certain. Possible causes include:

Nutritional deficiencies such as iron and zinc.

Developmental disorders: Pica is often associated with developmental disorders where there are abnormal eating habits due to sensory or other cognitive differences.

Anxiety or distress. Several scientists have linked it to the nervous system and have understood it as a learned behaviour or coping mechanism.

Research examines links between pica and sensory processing difficulties (Galiana et al., 2017; Smith et al., 2016).

Mental health conditions: Certain mental health conditions, such as schizophrenia or obsessive-compulsive disorder (OCD), can also contribute to the development of Pica.

Why Seek Medical Advice?

- Though some ingested non-food items may pass through the body harmlessly, others pose serious health risks which may cause:
- Vomiting, choking, constipation, intestinal obstruction or perforation, poisoning (lead, other toxins).
- Infections: Caused by bacteria or parasites found in non-food items.
- Tooth damage: Chewing on hard or abrasive materials can injure gums and teeth.
- Pica may be linked to iron or zinc deficiency

(anaemia) or other vitamin/mineral

Deficiencies (identified through blood tests).

- GP can rule out medical causes

and monitor gastrointestinal health.



Impact on function

- Reduced participation in mealtimes and daily routines such as dressing and teeth brushing
- Dressing: Common challenge where children are distracted by sensory properties of the clothing and will bite the clothes.
- Disengaged from learning as focus only on the item being chewed/ ingested
- Pica behaviours may calm the child temporarily but limit engagement with tasks.
- Dysregulation and irritability from unmet sensory needs
- Unable to engage in certain craft based tasks that involve glue/ glitter/ play dough as would eat the items used putting them at risk.





What strategies have been recommended?

Behavioural interventions: Reinforce safe behaviours, teach edible vs. non-edible items, positive rewards, reduce opportunities for Pica.

Functional analysis: Identify purpose (sensory seeking, attention, access) to tailor support

Sensory strategies: When pica is sensory-driven, safe oral alternatives (chew toys, crunchy foods, oral motor based activities) can reduce risk.

Humber NHS sensory guidance emphasises creating safe sensory environments to redirect behaviours

Environmental risk management: Limit hazards and adapt the spaces.

ALL STRATEGIES must be consistent across education setting and home

Pica and sensory

- Some children engaging in pica appear to be seeking oral sensory input (chewing, mouthing) or particular textures, tastes or sensations.
- Sensory seeking: Sensory factors may include oral motor needs (biting/chewing/ mouthing), tactile seeking (texture in mouth, hand-to-mouth).
- Indicators: often preference for certain items/ textures (e.g. rubber, fabric, paper).
- Common triggers: boredom, transitions, lack of routine or predictability, overstimulation, lack of sensory alternatives available
- Pica may serve a calming function, similar to thumb-sucking or fidgeting. Children may appear more focused or calm during the behaviour, indicating its regulatory role.

Signs pica may be used for regulation

- ☑ Child feels anxious or overwhelmed
- ☑ Comforted/calm behaviour occurs during pica
- ☑ Sometimes accompanied by self-soothing behaviours (e.g. rocking, humming)

Sensory Strategies That May Help

- Focus on redirecting behaviour and offering alternatives that provide the sensory input the child is seeking.
- Provide a sensory box with safe alternatives (e.g. chewy toys, fabric swatches, fidget items).
- Use consistent language when redirecting e.g. 'Soil is not for eating.'
- Offer edible 'lookalikes' (e.g. crunchy breadsticks instead of stones).



Further Strategies





Substitute textured play items: Safe alternatives to inedible items (for example edible “sand” like crushed biscuits, edible clay, risk-managed tactile play) for children who put many items in their mouth.

Scheduled meal/snack times: Ensure regular meals/snacks so that hunger or lack of oral input is less of a trigger for pica behaviour.

Strong flavours/ crunchy textures to be offered throughout the day

Fidget tools and tactile play: These help fulfil children’s sensory-seeking needs and reduce anxiety or boredom that may be a potential trigger for pica.

Proprioception

- Chewing gives strong jaw input → proprioception
- Proprioception = our hidden “body awareness” sense
- Proprioception calms nervous system & aids regulation
- Supports body awareness (teeth, tongue, gums)
- Heavy work activities may help to reduce Pica behaviors
- Strategy: Offering regular daily proprioceptive activities
- Examples of heavy work: pushing. Pulling, pulling and lifting activities.
- Carrying weighted objects, edible playdoh, chewing crunchy foods, climbing







Sensory Circuit

To support regulation and occupy a child/young person, which can alleviate pica behaviours.



Benefits of a Sensory Circuit

- Helps children self-regulate emotions and behaviour
- Improves focus and readiness for learning
- Enhances motor skills and coordination
- Reduces anxiety and restlessness

School/Nursery Input

Ensure close supervision to maintain safety.

School/nursery should complete a risk assessment.

Emergency protocols: First aider and medical escalation plan in place.







- Liaise with school/nursery staff for consistency.

- Keep a pica diary to spot triggers. When do they do this? Are there signs?

- Collaboration and communication: Ensure all staff know the child's plan in regards to how Pica is being managed, the safe alternatives, the redirection strategies and consistent responses

- Use a chart for tracking purposes that goes between home and education setting

What happened before	Behaviour observed	What was ingested	What followed	Strategies that worked	Risk level

Environmental safety tips

Creating a safe and supportive environment is essential.

- **Remove or secure hazardous items**: Lock away batteries, cleaning products, sharp objects and small parts. Checking the floor daily to reduce items on the floor.
- Keep non-food items, that your child frequently attempts to eat out of their sight.
- **Use visual cues and structured routines**: Predictability reduces anxiety and impulsivity.
- **Supervise during transitions**: Pica behaviours often occur during unstructured times.
- **Conduct regular safety audits**: Especially in classrooms, therapy rooms, and play areas.
- **Train ALL staff and caregivers**: Ensure everyone understands pica risks and response strategies.

ICARE EQUITY

NHS Whittington Health NHS Trust

Environmental checklist for Pica

PRIORITY ACTIONS

- ☐ **TRAIN ALL STAFF** ON SIGNS OF PICA AND WHAT TO LOOK OUT FOR
- ☐ **CREATE A PICA PLAN** FOR ANY CHILD EXHIBITING PICA BEHAVIOUR
- ☐ **SHARE THE PICA PLAN** WITH PARENTS TO ENSURE CONSISTENT STRATEGIES ACROSS SETTINGS
- ☐ KEEP A RECORD OF WHAT THE CHILD TYPICALLY INGESTS AND SHARE WITH THE TEAM
- ☐ TRACK FREQUENCY OF PICA BEHAVIOURS
- ☐ LIST PLACES/SITUATIONS WHERE MOUTHING OR INGESTION OCCURS

- **ENVIRONMENTAL SAFETY MEASURES**
  - ☐ REMOVE NON-FOOD ITEMS FROM SIGHT
  - ☐ LOCK CABINETS WITH HAZARDOUS ITEMS
  - ☐ CLEAN FLOORS DAILY TO REDUCE ACCESS TO SMALL OBJECTS
  - ☐ PROVIDE SAFE, ENGAGING ACTIVITIES DURING DOWNTIME
  - ☐ TEACH DANGER AWARENESS (EDIBLE VS. NON-EDIBLE)
  - ☐ PROVIDE ADULT SUPERVISION
  - ☐ CONDUCT REGULAR SAFETY AUDITS
  - ☐ SECURE HAZARDOUS ITEMS

Top tips for education staff

- Conduct regular environmental audits.
- Train staff to recognize and respond to pica behaviours quickly.
- Create calm, low-stimulation zones to reduce sensory overload.
- Use communication strategies to help children express needs or discomfort
- Have access to appropriate sensory tools in your setting.

Speech and Language Advice

- Keep language clear and consistent
- Use visuals to discriminate between food and non-food items.
- Examples:



When to seek immediate medical attention?

If a child swallows sharp or toxic items, or shows symptoms like:

- Stomach pain or distress
- Constipation or diarrhoea
- Blood in stools
- Visible items in faeces

Take away messages

- Early identification and monitoring are essential to reduce risk
- The importance of individualized, proactive strategies over reactive punishment.
- Sensory strategies can help — but not to be used in isolation
- In some instances triggers may be seen and understanding this helps to tailor the support offered
- Environmental risk management is critical for safety
- Importance of the family and the setting working together in reducing risk.

Signposting and Further Support

- Book a telephone drop-in to discuss strategies tailored to your child.
- Get signposted to additional services.
- Visit the National Autistic Society and National Pica Advisory Service - https://autism.org.uk/pica
- Challenging Behaviour Foundation: https://www.challengingbehaviour.org.uk
- Understanding-and-Managing-Pica.pdf
- Explore the NHS Cambridgeshire & Peterborough Children's Health website for more ideas.

Contact and Resources

To book a drop-in appointment:

020 3316 8900

Barnet Children's Integrated Therapies (CIT)

Access universal training:
https://www.whittington.nhs.uk/document.ashx?id=15232

Universal training menu

Live virtual trainings can be accessed by Barnet Children's Integrated Therapies:

https://www.whittington.nhs.uk/document.ashx?id=15232

Supporting Sensory regulation

Supporting Schools with the sensory environment

Sensory Based Functional Needs

Food refusal, food avoidance and fussy eating

Pre- recorded trainings also available on the menu.

Thank you

Contact Details -

whh-tr.barnetcit@nhs.net

020 3316 8900

Mardian Vries and Abigail Jackson
Paediatric Occupational therapist

