



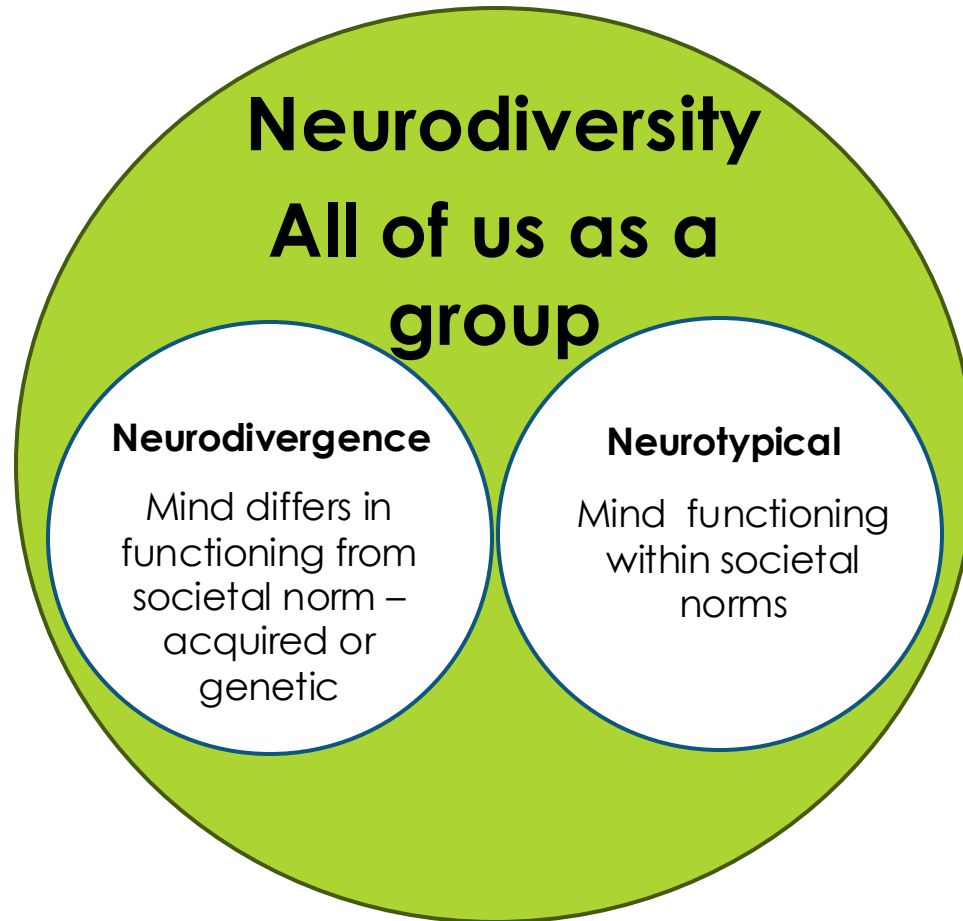
Experiences of Neurodivergence in a Young Adult Dietetic Clinic

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What is Neurodivergence?

Neurodivergence includes; ADHD, Autism, OCD, Dyslexia, Dyspraxia and many more....



Evidence of link with diabetes yes or no?

- ▶ **Autism** - Increased risk 57% compared to controls –higher levels of T2 than T1
- ▶ Multifactorial – socioeconomic, obesity, medication, stress, sleep disturbance, physical activity levels, diet, maternal health – Lots of confounding issues
- ▶ Worth noting also increased rate of other autoimmune disorders including coeliac disease

Probably!

More evidence needed

Young Persons' clinic

- ▶ Ages 16-24 transition from paediatrics
- ▶ Total patients approx. 500
- ▶ The clinical team – Consultants, DSNs, Psychology, Technical support, Dietitian
- ▶ As a team we started to note increasing numbers of young people coming through with diagnosed and undiagnosed neurodivergence.
- ▶ As part of NHSE improving transition services work, psychology colleagues began screening all young people attending MDT clinic. Includes a simple question about neurodivergence – diagnosed, traits or on the waiting list for diagnosis

Results of screening and accessing diagnosis

- ▶ July 2023-Sept 2024 – 12% self-identified as Neurodivergent – diagnosed or waiting for diagnosis – equates to 60 patients
- ▶ Experience tells me this is an underestimate
- ▶ Access to diagnosis is limited and more so for marginalised groups
- ▶ The wait time for ADHD diagnosis locally is lengthy with new assessments having been paused for adults
- ▶ Private diagnosis is expensive – several thousand pounds, and may not be accepted by all NHS services/clinicians

What are some of the features of neurodivergence that may influence care in clinic?

- ▶ Executive dysfunction
- ▶ Interoceptive differences
- ▶ Sensory differences
- ▶ Communication differences
- ▶ Stimming

What is executive function?

A set of cognitive skills that are responsible for controlling and managing other cognitive processes

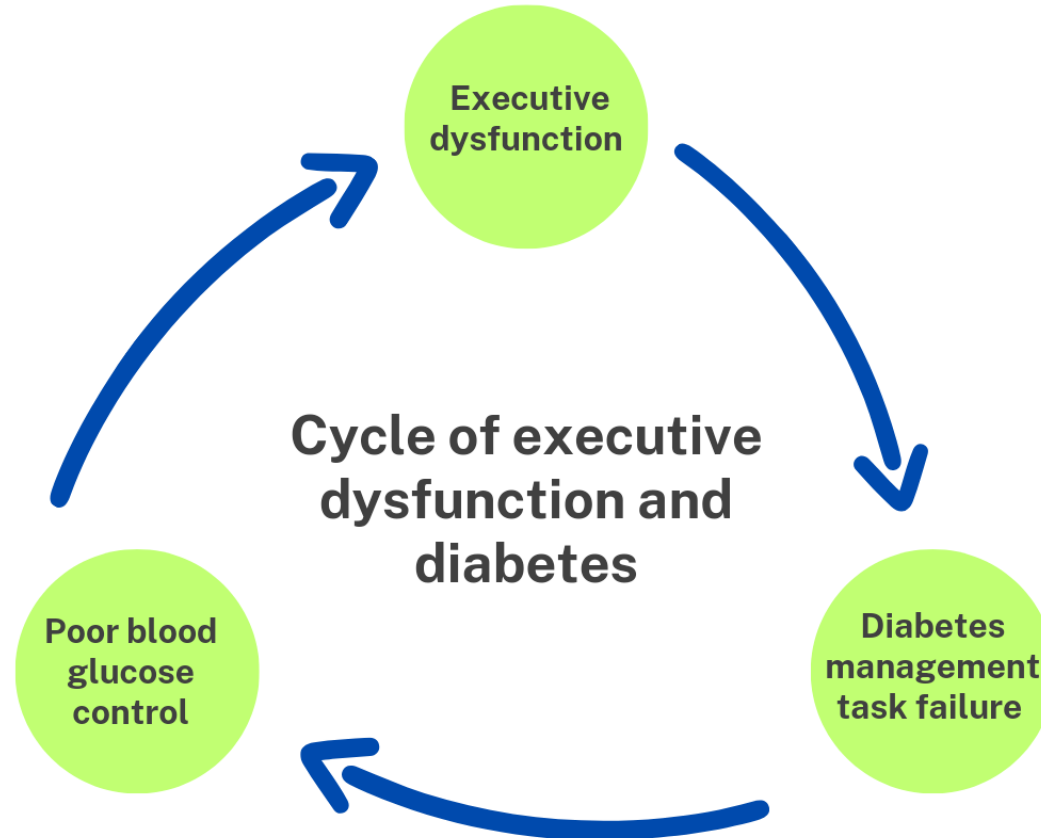
What are the main executive functions?

- ▶ Organisation
- ▶ Impulse control
- ▶ Working memory
- ▶ Self-monitoring
- ▶ Emotional control
- ▶ Flexible thinking
- ▶ Time management
- ▶ Task initiation



Can diabetes cause executive dysfunction?

ADHD associated with higher HbA1c and acute diabetes complications



So how does executive dysfunction show up for our patients?

- Agree in clinic but then don't put advice into action at home
- Forget insulin doses or timings. Forget to take insulin pre meal
- Request and are interested in advice and support, but behaviours and actions never seem to change
- Repeatedly turn up late or miss appointments that they really appear to want
- Forget to scan sensor or test blood glucose
- Forget to bring devices to clinic to download
- Hyperfocus on one aspect of their diabetes to the detriment of others
- Executive function paralysis – too many steps so don't do it at all (overwhelm)

Executive Dysfunction - Food Specific

- ▶ Struggle with changes in food types or routines
- ▶ May forget to complete diaries despite best intentions
- ▶ Struggle to organise shopping or cooking
- ▶ Struggle to concentrate for the full appointment
- ▶ Struggle to follow instructions for cooking or recipes
- ▶ Snacking to boost dopamine or aid concentration



Interoceptive Differences

'6th sense' – internal cues – thirst, hunger, temperature etc

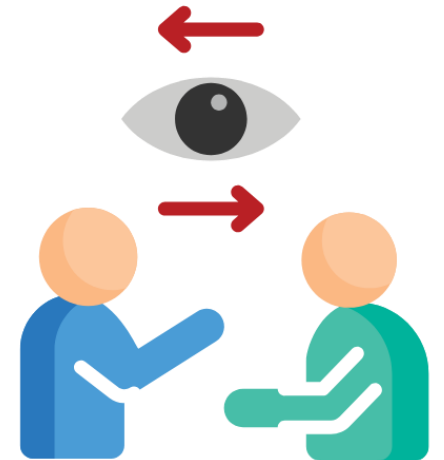
- ▶ May go long periods without food or fluids - this may also lead to binges or hypos
- ▶ May not recognise signals of fullness leading to overeating
- ▶ May have reduced awareness of hypo symptoms

Sensory Differences

- ▶ Sensory avoiding – may avoid entire food groups or foods with specific sensory characteristics – can affect balance of eating as fruit and veg are particularly challenging
- ▶ Sensory seeking – may seek out strong tastes and stimulation – can increase snacking or lead to snacking on certain foods with a specific texture feedback – crispy snacks are popular
- ▶ Difficult to implement dietary advice if it doesn't meet the right sensory profile
- ▶ May find physical activity difficult due to how it feels – different clothes, sweat, hot
- ▶ May struggle to accept diabetes tech due to how they feel on the body

Communication Differences

- ▶ Time blindness can affect the communicating of symptom or medication timelines
- ▶ Eye contact can be uncomfortable or even painful
- ▶ May struggle to maintain focus in an appointment
- ▶ May change the subject, lose track of what the appointment is about
- ▶ Speech differences, non speaking
- ▶ May prefer clear written instructions



Stimming

Stimming = self-stimulation

- ▶ A way to self sooth, manage emotion
- ▶ Should never be discouraged unless harmful
- ▶ Can help focus if supported
- ▶ Can include picking - including at devices or the tape/adhesive securing devices
- ▶ Can impact eating behaviour – stimming with food, especially if also sensory seeking



A note on eating disorders

- ▶ Increased risk of eating disorders in diabetes – 1 in 50 pts with T1 and 2 in 10 pts with T2 with an eating disorder and 2 in 5 pts with T1 and 1 in 4 pts with T2 experience disordered eating (Figures from Diabetes UK) - 32% of our patients reported some difficulty with eating, although not all disordered eating.
- ▶ Increased risk of eating disorders in neurodivergence particularly ASD with anorexia and ADHD with binge eating
- ▶ We do also see patients with (Avoidant Restrictive Food Intake Disorder) ARFID

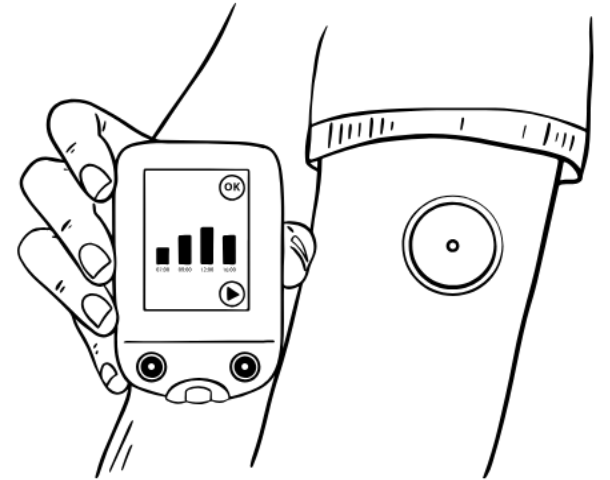
How do we support patients in clinic?

- ▶ Compassion – this isn't a choice
- ▶ Focus on building a good therapeutic relationship
- ▶ Asking patients what methods and skills they have used to help in similar situations – what helps them? What do they need from us?
- ▶ Build in flexibility where possible
- ▶ Buying/accommodating fidget and comfort items
- ▶ Supporting individuals to attend with reminders
- ▶ A trusted staff member accompanying in with new staff
- ▶ Attendance on a quieter day or at a quieter time

REMINDER

How do we support patients in clinic?

- ▶ Avoid discussing too many changes/steps at a time
- ▶ Using alarms – visual or auditory – not helpful to all
- ▶ Break down steps
- ▶ Rewards – positive feedback - dopamine
- ▶ Habit stacking - connecting new habits to established habits. For example put your background insulin with your toothbrush so you give it when you brush your teeth. Put your quick acting on your plates so you see it when you go to eat



How do we support patients in clinic?

- ▶ Establish a routine of meals, snacks and medications – same day, same time
- ▶ Include quick, low prep, low thought food ideas - food delivery boxes are helpful for some, or ready meals as a cheaper option
- ▶ Use visual resources like the hand size pictures of food portions, dummy devices
- ▶ Use tick lists, boxes where possible rather than empty boxes to fill in on diaries
- ▶ Use less words and less steps when educating
- ▶ Being clear when moving onto a new step or subject
- ▶ Summarise with bullet points/tick list

Make the effort smaller than the benefit

Helpful resources for patients

Apps for planning and organising;

- ▶ Remember the milk – to do list
- ▶ Habit Tracker – track your habits, food drinks etc
- ▶ Goblin Tools – AI breaks down tasks into individual steps

Apps for decision making;

- ▶ Tiny decisions app – helps make decision making fun/dopamine boost

Techniques;

- ▶ Pomodoro technique helpful for hyperfocus – encourage to use the breaks to test/scan, eat etc.
- ▶ Body doubling app -Dubbi



A final thought

Even when we feel nothing has changed, our acknowledgment, understanding and compassionate support can reduce shame and distress for our patients, and help us to manage our own feelings and relationships with those patients who are often labelled as 'difficult' or 'non-compliant'.

Contact

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Helpful resources for dietitians

Dietitians with great blogs and resources to learn from

- ▶ Nicole DeMasi (Nicole Malcher) – @eatingwithadhd on instagram
- ▶ Aleta Storch – @the_adhd_rd on Instagram
- ▶ margos_wholebodynutrition on instagram

References

- ▶ Barakat, S., McLean, S.A., Bryant, E. et al. Risk factors for eating disorders: findings from a rapid review. *J Eat Disord* 11, 8 (2023).
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- ▶ Zare Dehnavi A, Elmitwalli I, Alsharif HOH, Shervin Razavi A, Gumpel TA, Smith A, Weinstock RS, Faraone SV, Zhang-James Y. Effects of ADHD and ADHD treatment on glycemic management in type 1 diabetes: A systematic review and meta-analysis of observational studies. *Diabetes Res Clin Pract.* 2024 Mar;209:111566.