

Anxiety in ASD and the relation to sleep difficulties

- What is anxiety?
- How is anxiety different in ASD?
- How do sleep difficulties impact on anxiety and vice versa?
- How to help

Anxiety

- Far more prevalent in ASD than the general population (40-50% compared to 2-10%)
- More common than other neurodevelopmental groups, eg language impairment, Down's syndrome, conduct disorder, learning disability
- Something very particular about ASD that leads to excessive levels of anxiety
- Underlying cause of much challenging behaviour

Societal cost of anxiety in ASD

- 142 million a year (van Steensel et al 2013)
 - ASD+AD 4x higher than AD alone
 - 27 higher than controls
- Related to lower quality of life (van Steensel et al 2012)
- Associated with high levels of self-injurious behaviour, parental stress (Kerns et al, 2015)
- Impact of anxiety often greater than the ASD itself- on child, parents, siblings

What is anxiety?

- Fear – a physiological reaction to a perception of threat
- Worry – a future-focused, cognitive process
- Stress – a demand placed on your mind or body

- Fight or flight or freeze response patterns

Why do we get anxious?

Perceived **probability of threat**

X

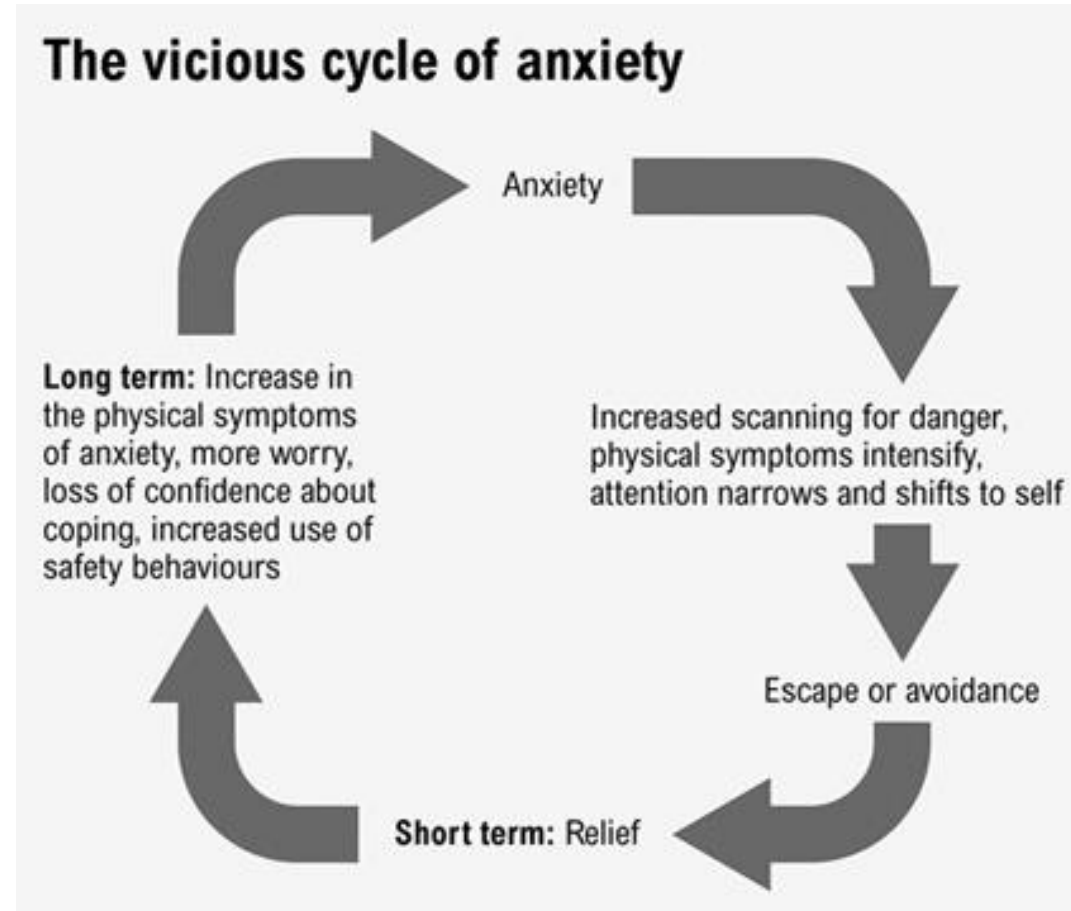
Perceived **cost / awfulness of danger**

Perceived **ability to cope** with danger

X

Perceived **rescue factors**

What keeps anxiety going?



How do we spot it?

- Arousal
- Reassurance seeking
- Avoidance
- Somatic symptoms eg changes in sleep patterns, stomach complaints, constipation, skin complaints

- Subtle changes in demeanour eg 'freezing', twitching
- Controlling behaviour
- Fight or flight behaviour, eg bolting, physical aggression
- Increase in obsessional/repetitive behaviours
- Verbal expression of anxiety – but may be limited even in verbally able children

When anxiety is not overtly observable

- Quiet, well-behaved child – not wishing to stand out
- Masking of symptoms – eg smiling (all the time)
- Effortful suppression of symptoms – released later in safe environment (challenging behaviour, teariness, exhaustion)
- Look out for
 - Hypervigilance/close observation of others for clues as to how to behave
 - Excessive stillness (freezing)
 - Restlessness (not attributable to ADHD)

Difference between ASD and TD population in presentation of anxiety (Kerns and Kendall, 2014; Ozsivadjian et al 2012)

- Behavioural expression of anxiety
- Prolonged, more intense, more difficult to soothe
- Specificity of worries around change, routine (in the absence of generalised worry)
- Unusual specific fears eg babies crying, happy birthday song
- Social fearfulness (in youth who lack an awareness of social judgement)

Pathways to anxiety in ASD

- Cognitive – intolerance of uncertainty, cognitive rigidity, attentional bias, executive function impairments, theory of mind?
- Neuroanatomy/neurophysiology/neurobiology

Intolerance of ...more than uncertainty?

- Of discomfort?
 - Of internal state
 - Of external stimuli

Emotional regulation

- Emotional response/reactivity requires emotional regulation
- ER defined as efforts to modify or control the intensity of an emotional reaction, usually in the service of an individual goal (Thompson, 1994).
 - Reappraisal, problem-solving
- Emotional dysregulation may present as:
 - 'Meltdowns'
 - Irritability
 - Aggression
 - Self-injury
 - Impulsivity
 - Suppression, rumination
 - And anxiety

Chicken and egg

- Anxiety and worry can impair sleep
- Poor sleep can cause irritability and reduced cognitive function, apathy and impaired emotion regulation
- Which can cause anxiety.....

- Not to mention disruption of the sleep of everyone else...
- Which can result in fewer resources to manage challenging bedtime behaviour...

Research evidence of the relationship between sleep and anxiety in the general population

eg Chorney et al (2008)

- Significant relationships have been found between sleep problems, anxiety and depression in the typically developing population
- The interplay between these can create a perpetuating cycle
- Targeting one problem may indirectly affect another – eg targeting separation anxiety may reduce bedtime struggles, night time waking

Research evidence of the relationship between sleep and anxiety in ASD

- Sleep problems and anxiety are significantly correlated in ASD/ID, and contribute hugely to challenging behaviour – sleep problems stronger predictor than anxiety (Rzepecka et al, 2011)
- Improvements in sleep over time were associated with improvements in anxiety (Fletcher et al, 2017)
- More maladaptive activity at bed time related to sleep onset time....(“)

Research evidence of the relationship between sleep and anxiety in ASD ctd....

- Internalising problems (withdrawal, somatic complaints, fearfulness) predicted sleep related problems more than social deficits, externalising symptoms and anxiety symptoms (Madeau et al, 2015)
- Disordered sleep is associated with cognitive performance and behavioural problems in ASD (Astill et al, 2012)
- Sensory Oversensitivity and anxiety strongly related to sleep problems (Mazurek and Petroski, 2014) – hyperarousal at a brain level?

So what can we do?

- First crucial step – understand why your child is anxious. If they cant tell you....

Functional assessment

- A process to establish patterns of behaviour
 - Identify why a behaviour is happening and what might be maintaining it
 - Evidence gathering and hypothesis testing
 - Permits individualised treatments
-
- Particularly useful when people can't tell us what they are feeling, but they can show us

What you can try at home

- Practical strategies to help your child relax – prevention is better than cure
- Increasing emotion awareness and regulation
- Be aware of reinforcing anxiety– balance protection with promoting resilience
- Model non-anxious behaviour

The basics

- Diet, sleep, **exercise**
- Special time 1:1
- ALL CHILDREN NEED **DOWN TIME**
- Have routines when you can
- Play to child's strengths
- Push for new things, but slowly and gently
- Be alert for teasing and bullying...

Think about our reactions to child's anxiety

Adaptive protection



Excessive protection



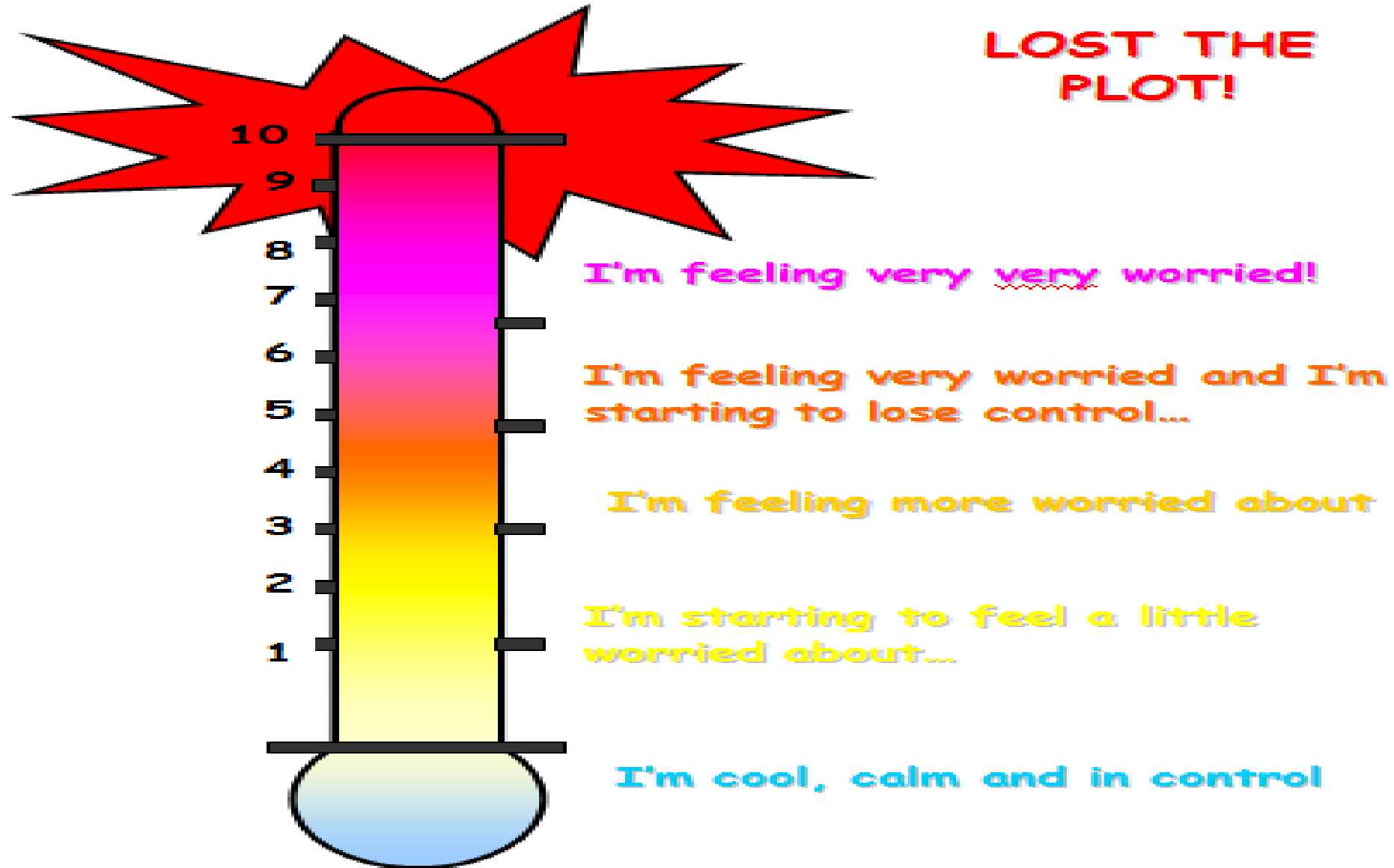
Learn facts about anxiety....

- Anxiety is normal
- Makes your heart race/tummy hurt/head ache etc
- Affects the way you think
- Can't be turned off quickly- eventually subsides by itself
- Can be fun for some (eg rollercoasters, scary films)
- Is rarely harmful

Emotion awareness

- Identify emotions
- Rate emotion intensity
- Model your own emotions
- Express emotions
- Learn to measure anxiety – catch it in the early stages

What can we try?



Emotion regulation skills

- Prevention – healthy eating, sleeping, physical activity
- Focus on strengths
- Use your words
- Write it down
- Who to share with? when? Why is this important? (emotional support, help with problem-solving)
- Does it matter? How important is the feeling? Getting things in perspective

Thinking skills

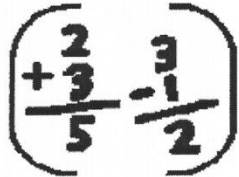


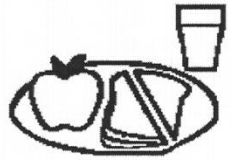

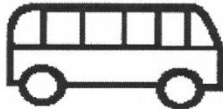
- A thought is just a thought
- Try and stop 'what if?' thinking (give it a name, like 'rollercoaster thinking', or 'messages', or whatever language is meaningful to your child)
- Think 'is this a problem or a worry?' If it's a problem, solve it!
- Schedule in worry time – for some people their worries dry up when they actually have to worry!
- Have a worry box

Environmental modifications



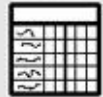


- Structure environment to support thinking
- Increase predictability to aid comprehension
- Give clear explanations – not just ‘because I say so’
- Visual principles
 - Visual timetables (what, where, when)
 - Social stories (why and how)






Predictability/ routine

Joe's Schedule (an example of a visual schedule)

math class 	recess 	art class 
lunch 	reading class 	bus 

Today our schedule will probably be:



- 1 get dressed

- 2 drive to work

- 3 work

- 4 go home

- 5 read


Predictability/ routine

Going to the Dentist

When we get to the dentist's office, I will wait in the waiting room until my name is called.

While I wait, I can listen to my headphones.

When my name is called, I will follow the nurse to a room and sit in the big dentist chair.

I will open my mouth wide so the dentist can look at my teeth.

I will keep my mouth open while the dentist cleans my teeth. When my teeth are clean, I will get a treat!

eye patch

eye test

doctor

first aid kit

hearing aid

hearing test

hospital gown

hurt

do2learn

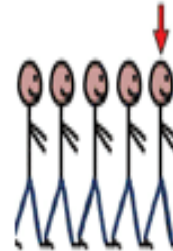
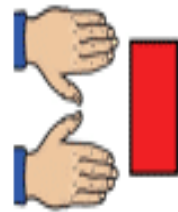


Surprise

Warnings/ explanations



The noise you hear is a fire alarm.



It is OK. Get in line behind me.

Tips to help the child relax

- Physical exercise
- Belly Breathing
- Counting
- Thinking of pleasant situations (i.e. their favourite train)
- Gentle physical touch (hugs, squashing ball)
- Repetitive behaviours

Rezone App

The role of school

- Can small changes make a difference? Worry about the next day at school can have a huge impact on school.
 - Meet and greet
 - Modified homework expectations
 - Later/earlier entry to school to avoid crowds
 - Having a go-to person

Psychological treatments

- Adapted CBT – including imagery restructuring, targeting intolerance of uncertainty and cognitive remediation therapy
- Mindfulness - may be more helpful in reducing maladaptive strategies such as rumination and suppression, improve baseline arousal levels
- Dialectical Behaviour Therapy
- Interventions delivered within school settings eg STEP-ASD, Facing your Fears