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Attention-Deficit / Hyperactivity Disorder (ADHD) in Developmental Disorders

Presented by the

Victorian Dual Disability Service

Acknowledgement of Country

The Victorian Dual Disability Service would like to recognise the traditional owners of the country where we live, work and meet. We recognise and celebrate the diversity of Indigenous people and their enduring cultures and connections to the land and waters of Victoria. We pay our respects to elders; past and present, and recognise the Indigenous people that contribute immensely to mental health and disabilities services.

Artwork by Mandy Nicholson

Acknowledgement of Lived Experience

We would also like to acknowledge the immeasurable contributions of people with a lived and living experience of mental illness, psychological distress, alcohol and other drugs, and disability, as well as those who love, have loved and care for them.

We acknowledge that each person's experience is unique and valued. We recognise their adverse experience of stigma, but also their strength and resilience. We respect and value their generous contributions which teach us, and guide us to continually shape, reflect upon and deliver quality care, from a lived experience perspective.

Artwork by Zeva Mirankar

Victorian Dual Disability Service (VDDS)

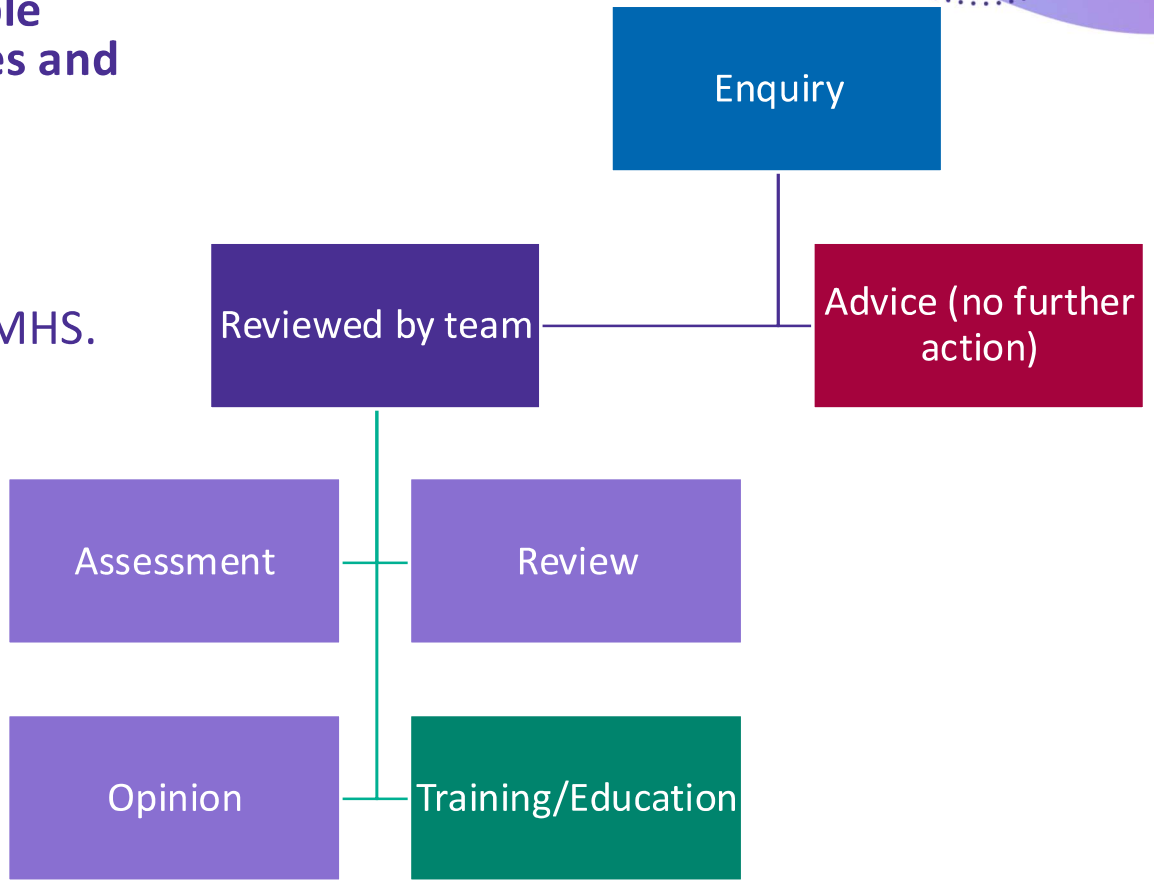
State-wide mental health service for people with co-occurring mental health challenges and a developmental disability.

What does VDDS do?

- Telephone consultation to anyone.
- Assessment & consultation for public AMHS.
- Assessment & consultation for NDIS participants
- Education & Training
- Service Development

How to make a referral or request training:

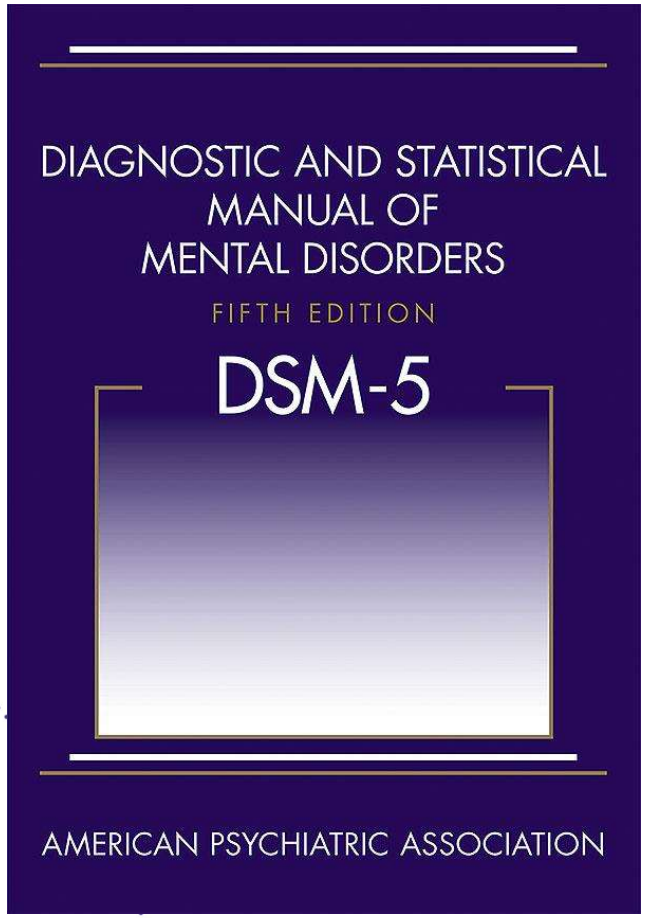
- *Telephone Referral: (03) 9231 1988*
- *Email: vdds@svha.org.au*



AIMS

1. Understand the core features of ADHD
2. Prevalence, nature & impact of ADHD
3. ADHD assessment
4. ADHD management

DSM-5 Criteria for ADHD



A. A persistent pattern of *inattention* and/or *hyperactivity-impulsivity* that is inconsistent with developmental level and interferes with functioning or development.

B. Several symptoms were present prior to age 12 years.

C. Several symptoms are present in two or more settings.

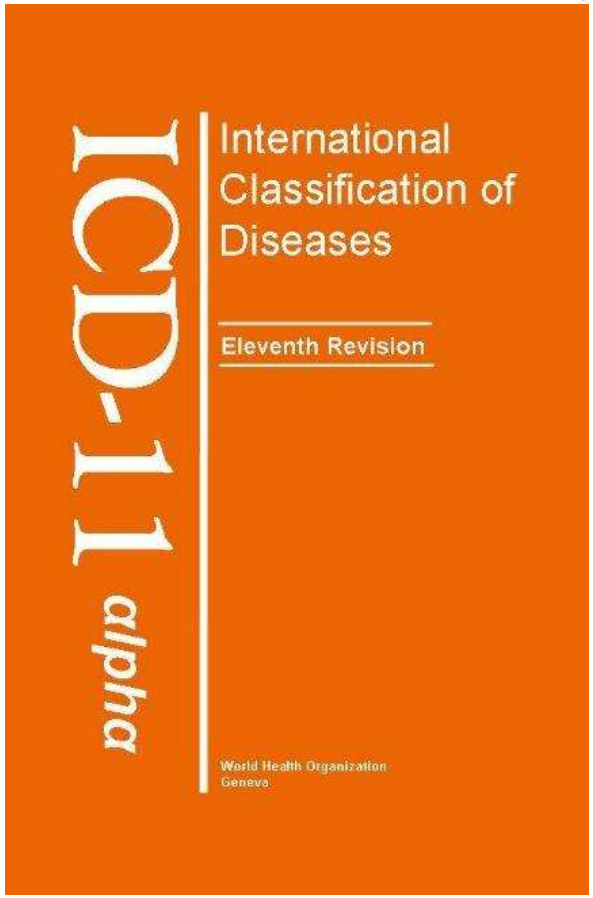
D. Symptoms affect social, academic or occupational functioning.

E. The symptoms not better explained by another mental disorder.

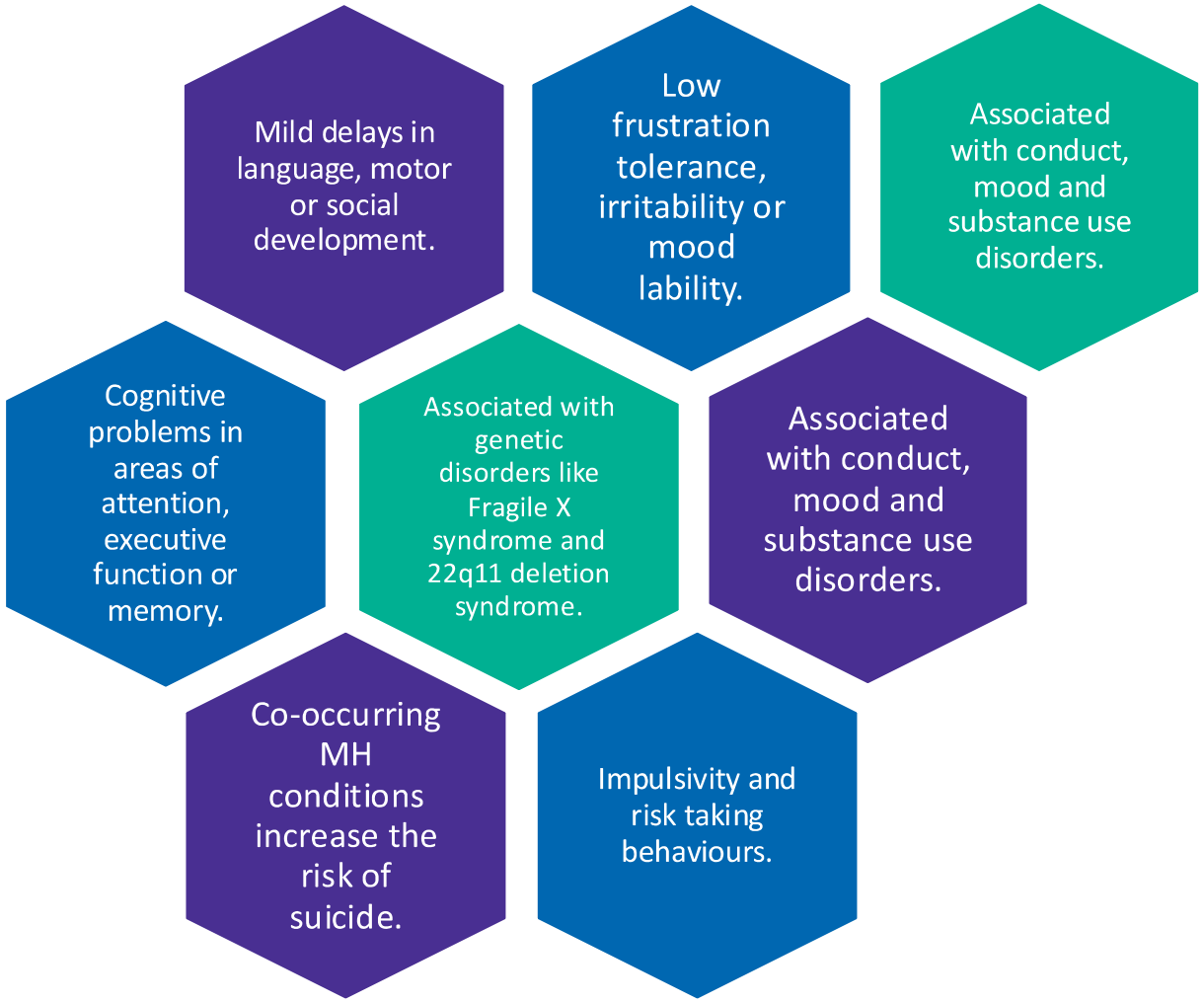
The presentation can be Combined, Predominantly inattentive or Predominantly hyperactive/impulsive.

ICD-11 - 6A05 Attention Deficit Hyperactivity Disorder

- Persistent pattern (at least 6 months) of inattention and/or hyperactivity-impulsivity.
- Varies across individuals and may change over the course of development.
- Must be evident across multiple situations or settings.
- Inattention may not be evident when engaged in activities that provide intense stimulation and frequent rewards.
- Some individuals may first come to clinical attention later in adolescence or as adults, often when demands exceed the individual's capacity to compensate for limitations.



Associated Features



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PREVALENCE AND IMPACT

Demographics in General Population

Prevalence:
5% of children and
2.5% of adults
across most cultures.

Some cultural variation in reporting symptoms.

ADHD is more common in males,
2:1 in children and
1.6:1 in adults.

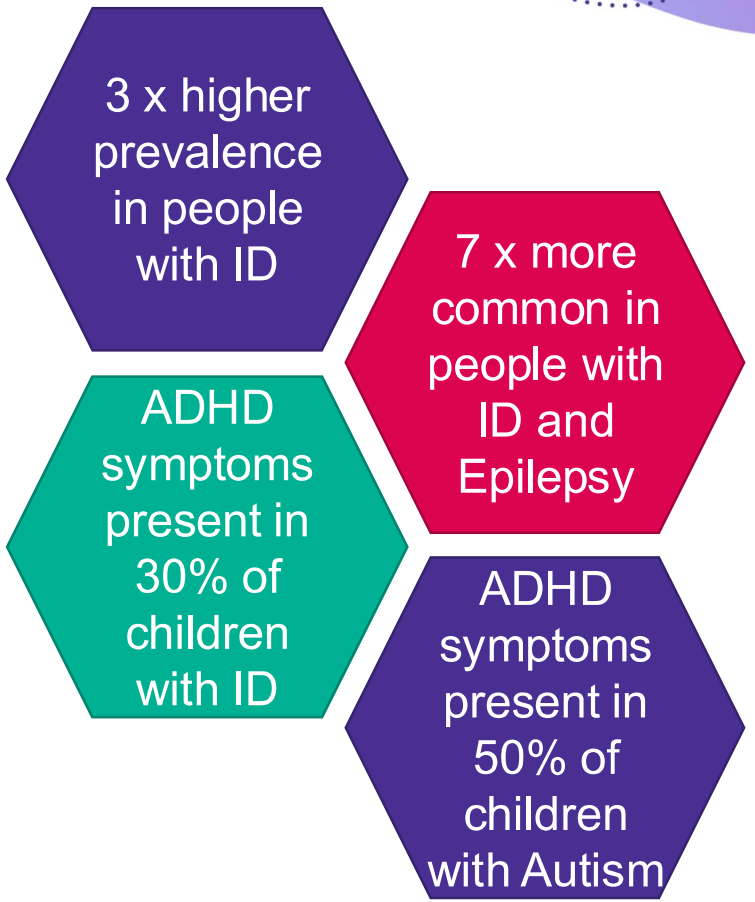
Inattentive type is more common although hyperactive is more referred for treatment.

Combined type of ADHD has poorer prognosis compared to other types.

Females more likely to present with inattentive features.

Demographics in Developmental Disorders

- ADHD is more prevalent with more severe ID.
- ADHD symptoms are more severe and more persistent in people with ID.
- ADHD prevalence is equal between males and females youth with ID.
- Male to female ration of ADHD is 3.8:1 in youth with high functioning ASD (Pearson et al, 2013).



Risk Factors

Artwork by Rico Marcelli

- **Genetic factors:** first degree relatives with ADHD.
- **Environmental:** very low birth weight, Alcohol exposure in utero, neurotoxins, infections and adverse life events.
- **Temperament:** reduced inhibition, increased novelty seeking.
- **Antiepileptics:** can cause reversible ADHD like phenobarbital, or worsen ADHD symptoms like phenytoin, topiramate and carbamazepine.

Course

- Hyperactivity is the main manifestation in preschool.
- Inattentive features becomes apparent during primary school years.
- Hyperactivity symptoms become less apparent in adolescent and adulthood.
- Adolescents and adults usually present with inattention, restlessness and impulsivity.
- Remission in adulthood???

Artwork by Mitchell Bauer

Common ADHD Experiences

In Children	In Adults
Reduced school performance and academic attainment.	Poorer occupational performance, attainment, attendance and employment.
Social rejection	Increased traffic accidents
Increased injury	Increased interpersonal conflict
Conduct disorder	Antisocial personality
	Substance use
	Incarceration
	Shame and low self-esteem

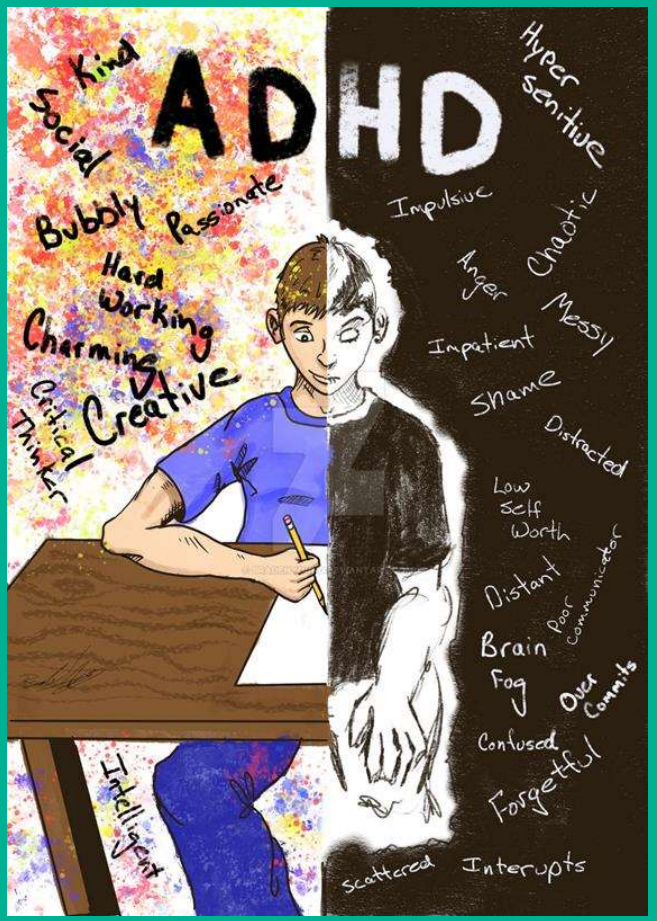
Reported Impact of ADHD

"It's really hard for me to explain to people that I'm disabled in this area" (referring to cooking and shopping)

"I only want to do what I'm passionate about"

"I can't start things"

"I just want to be normal"



Artwork by Braden Young

"I feel like I disappoint the people around me"

"ADHD means I have trouble seeing plans through"

"I lose interest"

"I can't take medication for my ADHD because it triggered my Schizophrenia"

Differential Diagnosis

Intellectual Disability and specific learning disorders

- Hyperactivity / inattention symptoms are not present during non-academic tasks
- Symptoms should be assessed against mental age / cognitive ability.

Autism

- A primary social deficits with limited social skills and understanding.
- Restricted and repetitive behaviours.
- Sensory issues.

Stereotypic Movement Disorders

- The motoric movements are fixed and repetitive.

Oppositional Defiant Disorder

- Resisting demands vs aversion to difficult tasks.

Differential Diagnosis

Artwork by Lucy Person

Intermittent explosive disorder

- More aggression and less inattention.

Anxiety disorders

- Restlessness and inattention is associated with worry.

Depressive disorders and Bipolar disorder

- Symptoms are episodic and associated with mood symptoms.

Personality disorders

- Core features like fear of abandonment, self-harm and others.

Substance use disorders

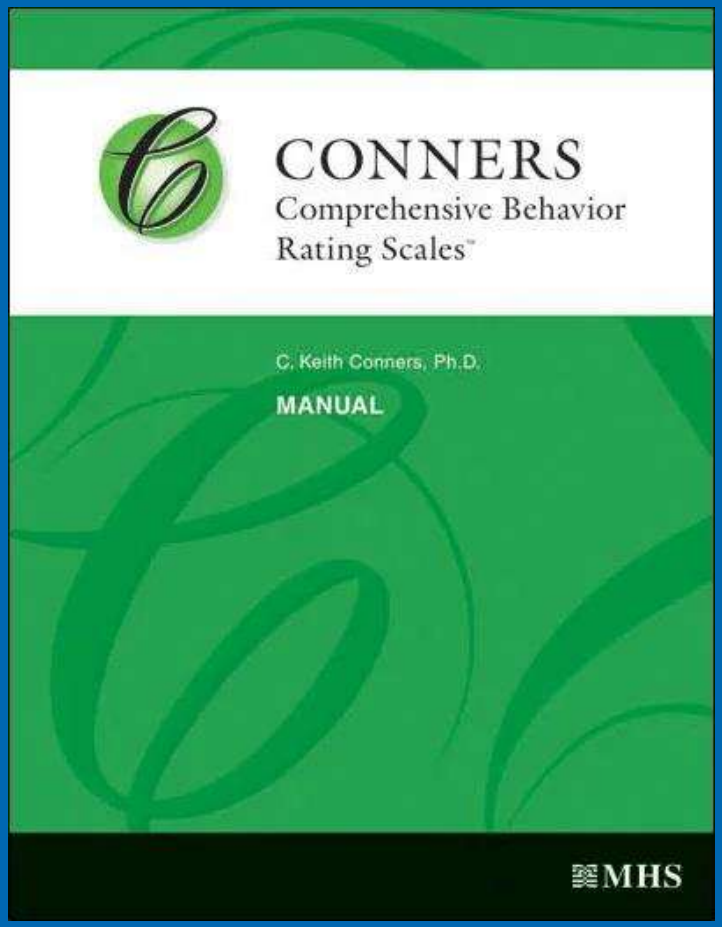
- ADHD symptoms predates substance use.

ASSESSMENT

Presentation with Developmental Disorders

- Consumer may present as moody, aggressive or anxious.
- Usually inappropriately prescribed antipsychotics or mood stabilisers.
- The hyperactive/combined types usually receive more specialist referrals due to the associated aggression and disruptive behaviour (Willcut, 2012).
- The core features of ADHD are the same in individuals with other developmental disorders.
- Consideration of the developmental age of the person is important.
- Clinicians usually adjust for the mental ability of the individual when using standardised ratings of ADHD symptoms.

ADHD Rating Scales



- **The Conners' Rating Scales.** 3-17.
- **The Conners' Adult ADHD Rating Scales (CAARS).** >=18.
- **The Hyperactivity Subscale of the Aberrant Behavior Checklist.** >=5
- **The ADHD-Rating Scale (ADHD-RS-5).** Age 5-17
- **The Swanson, Nolan and Pelham Scale (SNAP-IV).** Age 6-18.
- **Diagnostic Interview for ADHD in adults (DIVA-5)**

Assessment Considerations

- Comprehensive history from different sources with particular attention to developmental aspects, environmental circumstance and functional capacity.
- Ideally the individual should be observed in at least two settings but if not possible, then substitute with comprehensive collateral information.
- Assess for epilepsy, ID, other developmental disorders and genetic disorders as indicated.
- Consider the level of structure, support and cognitive demands while assessing the individual at their educational or vocational facility while taking into account the individual's developmental capacity.
- Aggression in adolescence and adults with ID should prompt a probe of ADHD symptoms prior to age 12 years.

Symptoms of ADHD: Inattention

Present in childhood and adulthood, in multiple settings (e.g. work, home, school)

Difficulty in organising activities	Difficulty sustaining attention	Not listening to others	Failure to complete tasks
• Works slowly to avoid making mistakes and gets bogged down **OR** • Doesn't read instructions and does things quickly.	• Easily distracted unable to concentrate. • Benefits from structure • Can't finish tasks or activities • Quickly bored	• Dreamy • Preoccupied • Unable to remember discussion • Changing topic of conversation • People have to repeat themselves	• Muddles things up or leaves half done. • Needs time limit and structure.

Symptoms of ADHD: Inattention

Present in childhood and adulthood, in multiple settings (e.g. work, home, school)

Failure to notice details and making simple mistakes	Avoids tasks that require sustained attention	Loses things	Easily distracted	Forgetful
• Disorganised at work/home. • Inefficient planning • Often late (or really early) or double booking. • Poor sense of time. • Manages with strict inflexible schedules. • Needing other people to manage time.	• Easy things first. • Postpone tasks. • Does not like reading details.	• Mislays wallet, keys, pens, equipment, clothing. • Spends a lot of time looking for things • Stores things in wrong place. • Gets upset if others move things	• Difficulty shutting out irrelevant stimuli • Day dreaming • Difficulty following conversation	• Forgets events and objects • Uses lists ++ • Has to be reminded all the time

Symptoms of ADHD: Hyperactivity / Impulsivity

Present in childhood and adulthood, in multiple settings (e.g. work, home, school)

Difficulty with staying still	Difficulty sitting	Feeling of restlessness	Difficulty engaging quietly
• Fidgeting legs • Tapping fingers • Fiddling with hair or nails • Stressed if try to keep still	• Stands and walks around often • Always on move • Avoids events that require sitting such as church, lectures • Eats standing up and moving	• Finds it hard to relax • Feeling restless • Constantly needing to do something	• Talking in films/TV shows • Being loud • Speaking out of turn. • Talking when should be quiet.

Symptoms of ADHD: Hyperactivity / Impulsivity

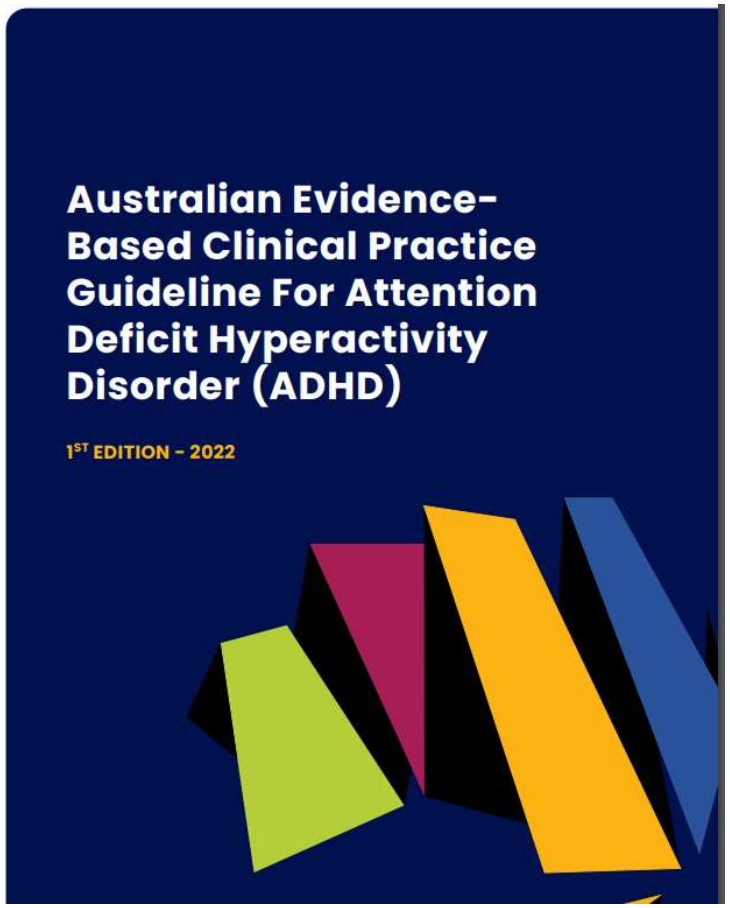
Present in childhood and adulthood, in multiple settings (e.g. work, home, school)

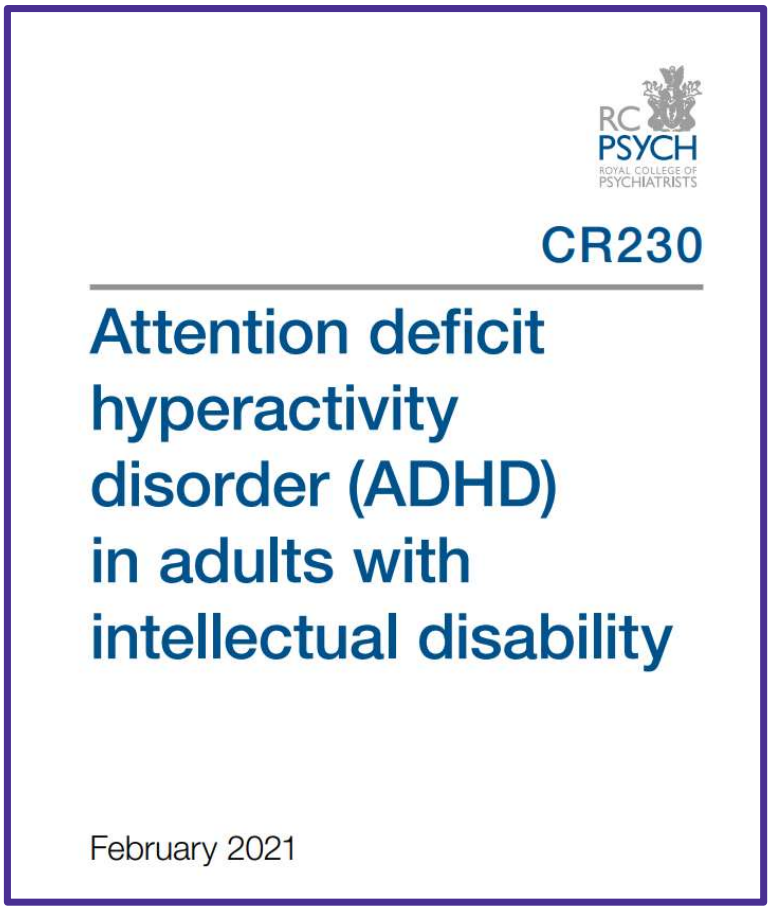
Always on the go	Always talking	Answering too soon	Difficulty waiting
• A lot of energy • Always doing something • Driven like a motor	• Chatting when others are bored • Talks a lot • Interrupting others • Not listening to others • Not giving others a chance to talk	• Saying what you think without thinking • Answering questions before they have been finished • Completing sentences for people • Expressing opinions about everything	• Jumps or avoids queues • Starting and ending relationships quickly • Difficulty taking turns

ADHD Disability

TREATMENT AND MANAGEMENT

ADHD Guidelines





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Reasons to Treat ADHD

Children	Adults
• Behaviour (hyperactive in particular) • Social rejection • Injuries • Carer stress and burnout • Social consequences • Academic consequences • Risk management re NSSI, exacerbation of other risks • Poorer mental health	• Occupational risks • Driving risks • Interpersonal conflict • Risk of substance use and incarceration • Parenting and relationship risks • ADHD increases the risk and riskiness of NSSI and suicide attempts • Poorer mental health

Issues in Treatment

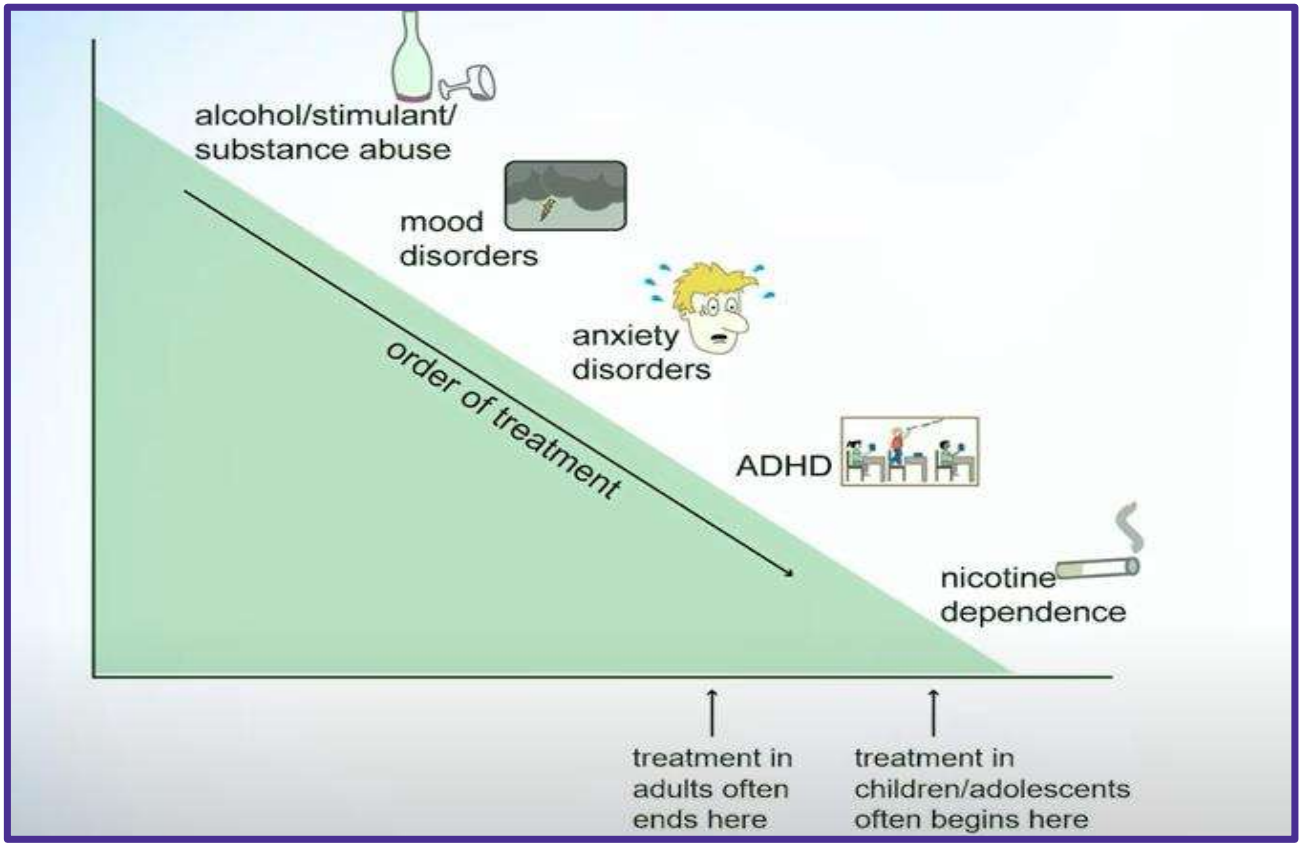
- Variable access and availability between jurisdictions
- Access block to assessment, diagnosis & treatment options especially for adults
- Cost of clinical services
- Cost of medications
- Medication diversion risk.
- Risk of stimulant medication triggering side-effects (e.g. psychosis)
- Lack of experienced clinicians for adults
- Co-occurring neurodevelopmental, mental health and medical conditions
- Limited evidence base

Additional Considerations in ID

- Carer stress and burnout more likely due to intersectional burdens
- Risk of diversion may be increased due to psychosocial / exploitation concerns
- Less likely to respond to treatment (40-50% response to stimulants vs 70-80% in the general population
- Co-occurring conditions (psychosis, epilepsy) complicate management.
- **Diagnostic overshadowing**
- Heart abnormalities more common: increased risk
- Higher rate of tic disorders which may be exacerbated in this population
- People with ID / ASD are more likely to have unusual side effects and less able to report on these.
- **Limited access to services!**

Address Co-occurring Conditions

Stahl S, ADHD and Comorbidities: What Should Be Treated First?



"Once my psychosis was stable, anxiety became biggest hurdle. Once my anxiety was stable, ADHD became my biggest problem" – AMHS consumer

Non-pharmacological Approaches

- CBT / 'Brain training'
- Supportive Psychotherapy
- Neurodiversity Affirming approaches
- Psychoeducation, family therapy/training, support groups, ADHD coaching
- Environmental optimisation
  - sitting at the front of class / activities, 1:1 attention
  - minimising disruptions and both acute and chronic stressors
  - encourage high levels of physical activity
  - manage sleep disturbances
  - optimising nutrition
  - ? avoiding food additives or food related triggers
- Risk minimisation
- Addressing co-occurring conditions (substance use, mood disorders, anxiety disorders, sleep)

Artwork by Matthew McVeigh

Non-pharmacological Management of ADHD in Intellectual Disability

- Very little evidence
- Non-pharmacological interventions using personalised approaches based on cognitive & behavioural principles
- Reasonable adjustments & modifications
- Increased focus on behavioural techniques
- ADHD coaching actively including family/carers
- Structure environment & routine (minimise distractions)
- Promote regular exercise / outdoor activities

Medication in ADHD and Intellectual Disability

- Limited evidence, ? extrapolate from general population
- Lower response to stimulants 40-50% vs 70-80%
- Higher doses may be needed but beware S/E
- Adverse effects reported as similar to general population
- Treat co-occurring anxiety disorder prior to starting ADHD medication in people with ID and ADHD
- Start low, go slow & monitor frequently

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Pharmacological Management in ID Considerations - Stimulants

Pre-treatment assessment

- History of underlying cardiac disease?
- Physical examination (where possible)
- Consider ECG

Consider who will be managing the medications

- Setting
- Reliability
- Risk of diversion / non-prescribed use

Contraindications / Concerns

- Schizophrenia, especially if any residual symptoms
- cardiac history
- thyroid abnormalities
- antidepressants including MAOIs and TCAs

Medication in ADHD and Autism

- Same medication choices as those with ADHD only.
- ADHD medications, such as methylphenidate and atomoxetine, do have effect on ADHD symptoms in ASD.
- BUT - lower response, higher side effects.
- Stimulants and Atomoxetine do not improve core features of ASD.
- Clonidine & Guanfacine can help reduce irritability & oppositional behaviour.

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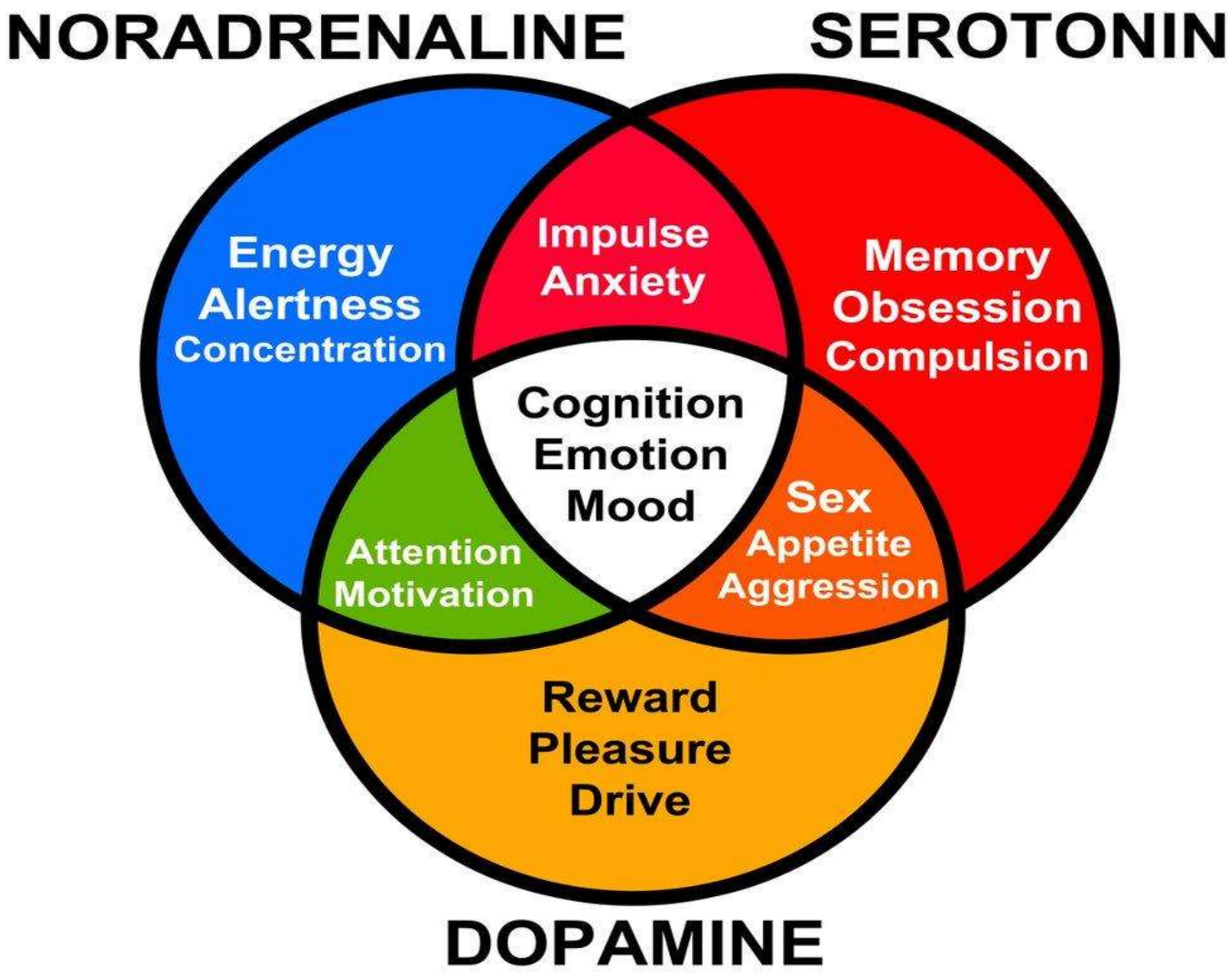
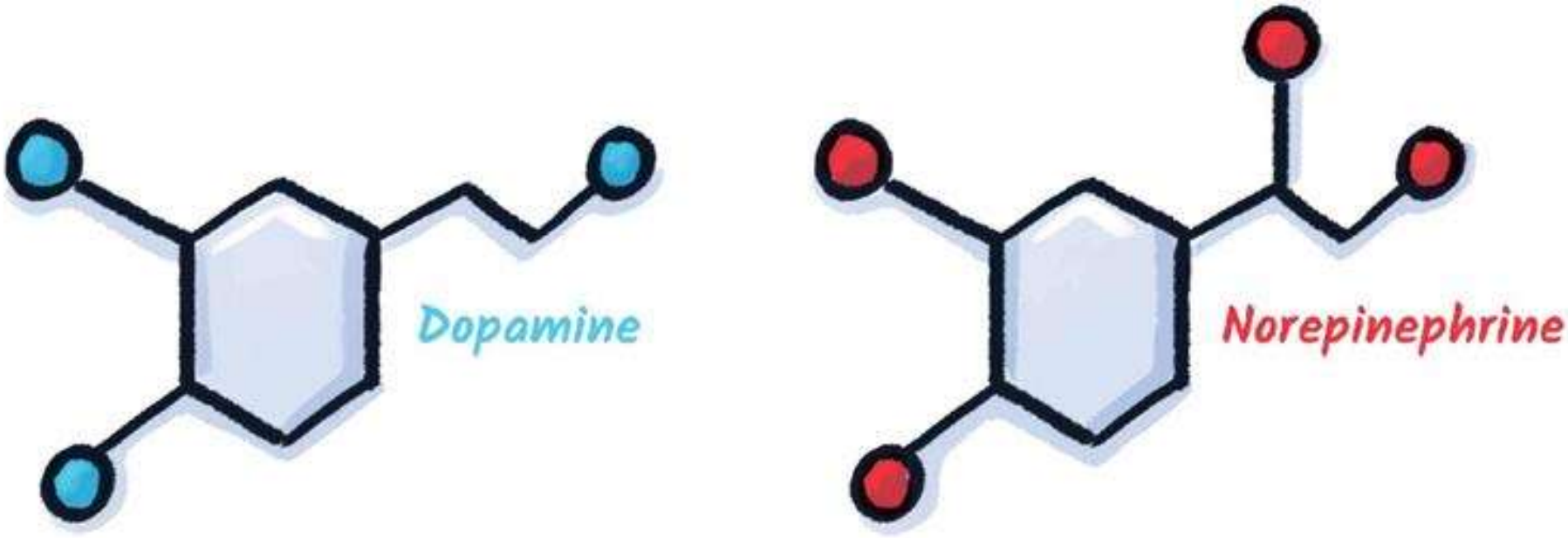

NORADRENALINE
SEROTONIN
Energy
Alertness
Concentration
Impulse
Anxiety
Memory
Obsession
Compulsion
Cognition
Emotion
Mood
Attention
Motivation
Sex
Appetite
Aggression
Reward
Pleasure
Drive
DOPAMINE

Risks of Stimulants

- Sleep difficulties
- Poor appetite
- Weight loss / failure to gain weight in children
- Irritability
- Social withdrawal
- Increased motor activities e.g. Tics
- Cardiac including unexplained sudden death
- Headache
- Behavioural rebound (wear-off effect)
- Psychosis, mania, depression (rare)

Dopamine vs Noradrenaline



Gender Differences

Artwork by Ellen Walker

- **Less classical presentation**
- **Complicated by gender role expectations**
- **Masking issues**
- **Less externalising behaviour**
- **Hormonal Changes:**
  Oestrogen alters sensitivity to stimulants – puberty / menopause may unmask symptoms

Summary

- ADHD is associated with a poor functioning and poor health outcomes.
- Diagnosis requires a thorough and longitudinal diagnostic process, which can be started before they see the specialist to save time and money.
- Symptoms must be present in childhood, and occur in multiple contexts.
- Implement non-pharmacological strategies while waiting for diagnosis (ADHD coaching, support groups).
- Be aware of and manage co-occurring conditions, risks and interactions.
- Usually stimulants are used as first line, however present with the risk of serious side-effects and medication misuse.
- Aim for lowest effective dose, smoothest blood levels.
- Monitor, fine-tune.

Thank you

For a copy of these slides, please email vdds@svha.org.au with subject header *“Please send ADHD webinar slides”*

Further Reading

Jacopo Santambrogio, Gabriele Masi & Marco O. Bertelli (2021) Attention Deficit Hyperactivity Disorder in Adults with Intellectual Disability: Report 230 of the Royal College of Psychiatrists, Journal of Mental Health Research in Intellectual Disabilities, 14:3, 344-348

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Further Reading

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