

# Neurodevelopmental Disorders

Neurodevelopmental disorders are a group of conditions with onset in the developmental period. The disorders typically manifest in childhood or even before a child enters school and impact the child's functioning in a number of areas: social, personal, and academic functioning.



The neurodevelopmental disorders include:

- Intellectual disabilities
- Autism spectrum disorder
- Motor disorders
- Communication disorders
- Attention-deficit/hyperactivity disorder
- Specific learning disorder



# Autism Spectrum Disorder

Autism spectrum disorder (ASD) is a developmental disorder that is originated in early childhood and impairs everyday functioning. People with ASD tend to have difficulties with social communication and interaction, such as responding inappropriately in conversations, misreading nonverbal interactions, or having difficulties building friendships appropriate to their age. They also have restricted interests and repetitive behaviors. Severity is based on social communication impairments and restricted, repetitive patterns of behavior.

## *Difficulties with communication and interaction with other people*

- 👤 Language deficits, such as language delays, poor comprehension of speech, echoed speech.
- 👤 Making little or inappropriate eye contact.
- 👤 Little or no initiation of social interaction and no sharing of emotions with others.
- 👤 Often talking at length about a favorite subject without noticing that others are not interested or without giving others a chance to respond.
- 👤 Having facial expressions, movements, and gestures that do not match with what is being said.
- 👤 Having trouble understanding another person's point of view or being unable to predict or understand other people's actions.
- 👤 Difficulties in understanding socially appropriate behavior and the different ways of using language to communicate (e.g., irony, white lies).

## *Restricted interests and repetitive behaviors*

- 👤 Repeating certain behaviors or having unusual behaviors, such as repeating words or phrases, simple motor stereotypies (e.g., hand flapping, finger flicking), repetitive use of objects (e.g., line up toys, spin coins).
- 👤 Having a lasting intense interest in certain topics, such as numbers, details, or facts.
- 👤 Having overly focused interests, such as with moving objects or with parts of objects.
- 👤 Getting upset by slight changes in a routine and rigidity in thinking.
- 👤 Being more sensitive or less sensitive than other people to sensory input, such as light, noise, taste, clothing or temperature.

# Treatment for ASD

Although there are no medication that can cure ASD or treat the core symptoms, there are medications that can help some people with ASD function better. For example, medication might help manage high energy levels, inability to focus, depression, or seizures.

If a child is diagnosed with ASD, it is important to seek early intervention services as soon as possible. Early intervention can greatly improve a child's development and help the child talk, walk, and interact with others.

There are many different types of treatment available. For example, auditory training, speech therapy, vitamin therapy, music therapy, occupational therapy, physical therapy, sensory integration and communication training.



# Attention-Deficit/ Hyperactivity Disorder



Attention-deficit/hyperactivity disorder (ADHD) usually begins in childhood and may continue through adolescence and adulthood. People with ADHD can present with a persistent pattern of inattention, hyperactivity-impulsivity, or a combination of both.

## Inattention

Finding it difficult to pay attention to details, making careless mistakes frequently, being unable to remain focused on a specific task or even play, having problems following instructions and organizing activities. Often forgetful, avoid tasks that require sustained attention (e.g., homework, reading lengthy papers) and easily distracted.

To be diagnosed with ADHD, the above symptoms have to be severe and cause problems for the individual across their school, work and social life.

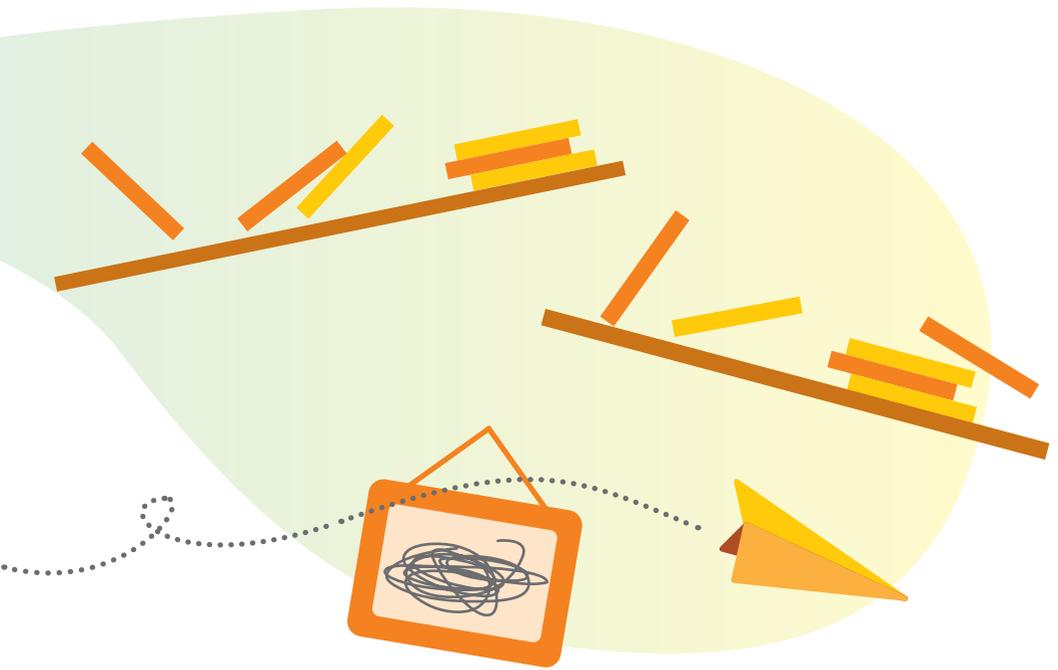
## Hyperactivity

Finding it difficult to sit still or to participate in activities quietly. Excessive motor activity when it is not appropriate (e.g., run or climb in class), excessive fidgeting, tapping or talkative, extreme restlessness and active. Often on the go, as if “driven by motor”.

## Impulsivity

Including social intrusiveness, interrupting others excessively, making impulsive decision without considering long term consequences and being unable to control behaviors.





## Treatment for ADHD



### Medication

ADHD medications help reduce symptoms of hyperactivity and impulsivity, and improve functioning and concentration. The treatment must be closely monitored by psychiatrist to observe the possible side effects during the treatment.

### Psychotherapy

Cognitive behavioral therapy is effective in improving social skills, setting helpful routines, reviewing time and stress management techniques and getting organized.

### Support Network

Building a support network including families, teachers, university staff and peers to help people with ADHD to live up their full potential and enjoy total campus life is important.

Specific Learning Disorder Specific Learning Disorder  
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## Specific Learning Disorder

According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), specific learning disorder is a neurodevelopmental disorder with a biological origin that is the basis for abnormalities at a cognitive level. The biological origin includes an interaction of genetic, epigenetic, and environmental factors, which affect the brain's ability to perceive or process verbal or non-verbal information efficiently and accurately.

Students with learning disabilities usually present persistent difficulties in learning academic skills including reading of single words accurately and fluently, reading comprehension, written expression and spelling, arithmetic calculation, and mathematical reasoning. They demonstrate a significant discrepancy between their levels of expected achievement and actual performance.

Examples of specific learning difficulties include the following:

**Dyslexia:** Disorder of reading, writing and spelling

**Dyscalculia:** Marked difficulty in making arithmetical calculation or computation, remembering mathematical facts and concept of time

**Dysgraphia:** Inability to write coherently, problems with accurate spelling and organizing ideas, illegible handwriting

Specific learning disorder commonly co-occurs with neurodevelopmental (e.g., attention-deficit/hyperactivity disorder, communication disorders, developmental coordination disorder, and autistic spectrum disorder) or other mental disorders (e.g., anxiety disorders, depressive and bipolar disorders).

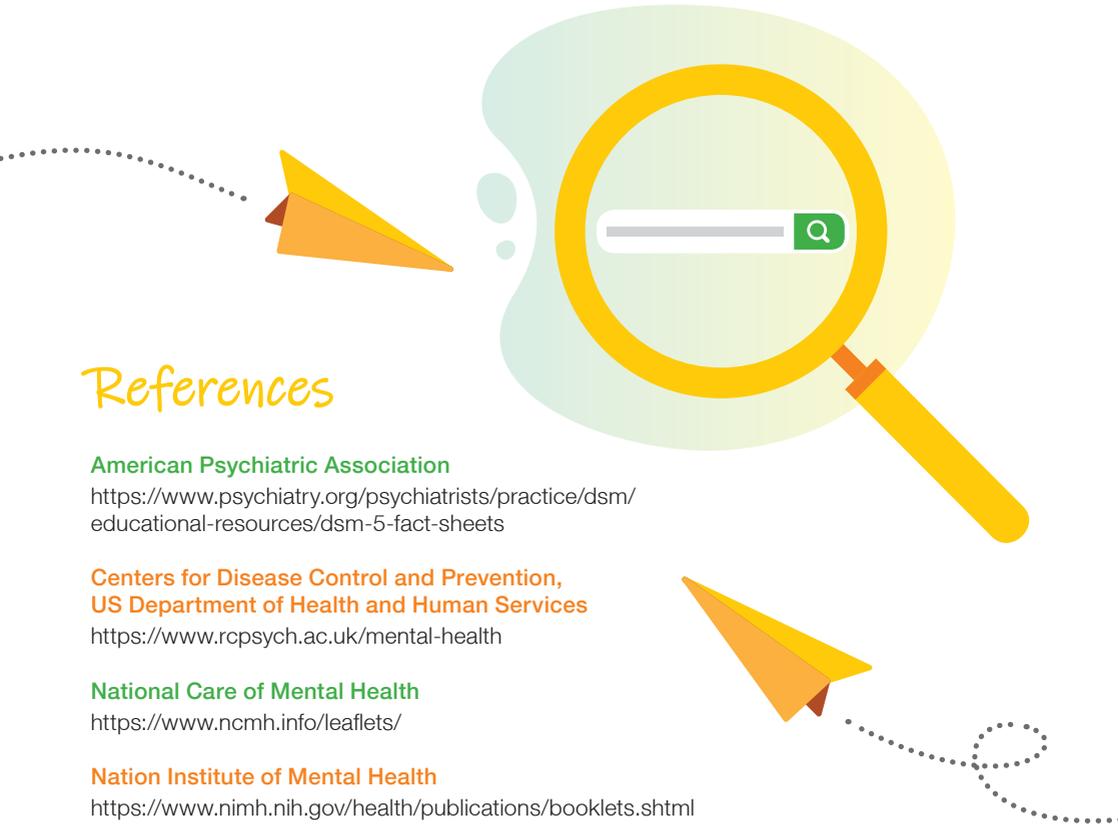
# Diversability On Campus

The SEN Support under the Counseling and Wellness Center provides a wide range of services and resources to ensure that all students benefit equally from university life, and to cultivate a campus culture of inclusion. SEN Support has the following objectives:

- Embracing diversity and inclusiveness
- Cultivating a caring and mutually supportive atmosphere
- Raising awareness of diverse-ability and initiating a cultural change in the University
- Promoting integration and equal opportunities on campus
- Providing a one-stop service to students with special educational needs (SEN) and faculty / staff working with these students

If you are diagnosed or suspect that you might have any type of SEN, you are strongly advised to self-identify and contact the SEN Support (<http://sen.ust.hk/>). Reasonable accommodations or adjustments will be worked out amongst student, instructor(s) and the SEN Support. All information is handled in the strictest confidence.





## References

### American Psychiatric Association

<https://www.psychiatry.org/psychiatrists/practice/dsm/educational-resources/dsm-5-fact-sheets>

### Centers for Disease Control and Prevention, US Department of Health and Human Services

<https://www.rcpsych.ac.uk/mental-health>

### National Care of Mental Health

<https://www.ncmh.info/leaflets/>

### Nation Institute of Mental Health

<https://www.nimh.nih.gov/health/publications/booklets.shtml>

## Professional Help-seeking

The University provides counseling services for undergraduate and postgraduate students. You may check out Counselors' profiles on our webpage and make an online appointment with us. Three weeks' advance reservation is allowed. All personal information and details shared and discussed in counseling or therapy sessions are strictly confidential.

### Counseling and Wellness Center

🏠 Room 5003 (via lift 3) ☎ (852) 2358 6696  
🌐 <http://counsel.ust.hk> ✉ [counsel@ust.hk](mailto:counsel@ust.hk)

### 24/7 HEARing ☎ (852) 8208 2688

This is a 24-hour helpline that supports exclusively all HKUST students 7 days a week. The service is made available by our Counselors in collaboration with the Christian Family Service Center.



Meet Our Counselors