

Welcome to Holland

Our travel plans were original to travel to Italy. However, we arrived in Holland! When you expect to visit The Colosseum and see Michelangelo's Artworks, and you end up seeing the tulips, it takes some time to adjust. Holland is not half bad - it is just different and needs time to get to know and feel familiar.

All parents have grand plans and aspirations for their children that start before they are born. We all have "travel plans" for our children - to become doctors, lawyers, accountants, or the next Elon Musk. More often than not, these early ideals we naively carry, morph and change along a child's life journey into those that they choose. Holland is not all bad, just different, and it takes parents time to re-align their mindset to envision a different future for their child.

Over the past twenty years as a paediatrician, I have assumed a travel guide's role, helping families that seem confused and lost, finding different and alternative destinations that are individualised to the child's personality and skill set to that of the parent's wishes.

In my experience, I have identified two categories of children that think and learn differently. In other words, these are learning and behaviour problems. Some of these include ADHD, Learning disabilities(LD), Oppositional defiant disorder(ODD), Autistic spectrum disorder(ASD) and mood problems with anxiety and depression.

In the first category are parents that experience the pain and frustration of the condition at home and are more willing to get help and accept the diagnosis. These families can make early "travel plans" and find help and solutions to their child's difficulties with a clear final destination in mind. These families know that the final destination is not Italy and yet continue to make plans to visit Holland.

The second category is parents who do not believe that their child has a problem because the issues and concerns come from other sources outside of the home, school, or friends and family. These families are unaware that the final destination is Holland and continue to stubbornly believe Italy is the only destination for their child. An essay was written about 30 years ago by Emily Perl Kingsley about expecting a typical child and finding yourself the parent of one with a disability. (Lookup 'Welcome to Holland' and watch the youtube video)

I have developed a 5 step plan for managing ADHD, based on the acronym ADHD & T. (A)Acceptance, (D)Diagnosis, (H)Help, (D)Direction and (T)Treatment. The first four steps, representing each of the four legs of the table, must be first completed before the treatment, the last and final fifth step, can be placed on the table to be implemented. After 'acceptance' is the Diagnosis. A diagnosis of ADHD does not require blood tests and complicated brain scans. An ADHD diagnosis is an information collection process and not a "blood test collection process." The diagnosis of ADHD needs to be performed by someone with both an in-depth understanding of ADHD and the associated problems that commonly occur, called comorbidities. These include such problems as Learning disabilities, autism and behaviour problems. Only once a diagnosis has been made can families move forward and find the right help. Help is an active process and can only be found if actively sought. Many families and adults with ADHD do not find help because of non-acceptance of the diagnosis and cannot move forward. The process of finding help includes understanding the true meaning of the diagnosis of ADHD. The next step is 'direction'. Direction is becoming an executive parent, or in the case of an adult with ADHD, taking ownership of the diagnosis and connecting with professionals such as psychologists, occupational therapists, speech therapists, and medical professionals who specialise in managing ADHD.

Only once all these four steps have been completed can treatment be implemented. ADHD medications are among the safest and most efficacious therapies available to treat mental health. There are many other treatment dimensions to ADHD, such as exercise, behaviour therapy and alternative therapies.

In my clinical practice, the most important determining factor in the successful treatment of ADHD is acquiring knowledge and understanding of ADHD. 'Understanding' forms the bedrock and foundation for interventions and treatments that are available.

Without understanding and acceptance, I have found that treatment compliance is low and does not stand the test of time.

Since entering paediatric practice some 20 years ago, I have been fascinated by the transformation possible in the lives of children and adults struggling with unsatisfactory task completion, learning difficulties and low concentration.

With the right approach and medication, lives can be transformed in a relatively short space of time.

I have been alarmed at how little general Doctors, specialists, psychologists, neurologists, and therapists know about the treatment of ADHD. Considerable stigma is attached to the diagnosis of ADHD, even amongst my doctor colleagues who continue to believe ADHD is a condition of bad parenting, poor schooling, too much sugar, preservatives in the diet, too much technology exposure, an American invention and a way for pharmaceutical companies to make a lot of money. If this is how doctors view ADHD, imagine how much more progress is needed to convince parents, teachers and the general society that ADHD is *real* with *real* consequences.

ADHD can be confusing "what is it all about."

Firstly starting with the naming of ADHD, this doesn't tell you what it is. So what if you just have an attention problem and are a bit busy? This naming is misleading and unfortunate because it gives a simplistic view of what it is and, as a result, delays parents getting appropriate treatment for their child.

The name attention deficit belittles the condition. It is so much more than inattention. The same could be said about autism. It is far more than having repetitive behaviours.

ADHD is a real disorder with real consequences.

Some of these problems are seen in the first three months of life when colicky babies cannot regulate their emotions and cry.

Or a toddler that is crazy busy and has excessive tantrums.

Or a preschooler struggling to make friends or who has behaviour problems.

Or a primary school child with poor organisation and cannot complete tasks in the classroom.

Or the child that daydreams and is lost in thought, in "other worlds", loses things and gets easily sidetracked.

Or the fidgety, impulsive child who cannot sit still in the classroom and at home and seems addicted to technology. The child is always emotional and easily offended, lashes out physically and verbally, and eventually is rejected by their family and friends. When the teacher and family begin to see poor work performance, they blame it on a medical condition because of a combination of these problems.

Parents are told to “go off sugar, or go and get tested for allergies and low iron’.

Our children are so impulsive and reckless that they get easily injured, needing visits to emergency rooms for stitches and x-rays for suspected fractures.

Let’s fast forward to adolescence and adulthood and observe some of the behaviours that can be expected:

Chronic unexplained underachievement.

Poor self-esteem because of constant criticism.

Poor self-care, over-eating, weight gain, and related health problems because of the limited sense of time and the future.

Addictions and substance abuse due to poor impulse control.

Teenage pregnancies and poor anticipation of the future.

Poor grades, repeating grades, dropouts, no higher education, unemployment due to reduced and attention low motivation.

Driving violations, speeding, accidents and road rage due to impulse control.

Financial and money management problems due to inattention and procrastination.

Criminal acts and imprisonment.

Relationship conflicts and divorce.

Anxiety and depression.

Lowered life expectancy.

Does this sound like just a problem with concentration and busyness?

What is the natural consequence of these behaviours?

The combined risks of obesity, high blood pressure, diabetes, high cholesterol, smoking and alcohol abuse reduce life expectancy by 9,6 years. Unmanaged ADHD reduces life expectancy by a more significant number of years.

ADHD is a serious problem that’s worth doing something about?

The above descriptions are merely symptoms of ADHD and do not represent what is wrong with your child.

Where do the symptoms of ADHD come from? What functions in the brain cause the behaviours?

The new understanding of ADHD as a self-control disorder of executive functions of the brain or the CEO(Chief Executive Officer) functions.

Where is the brain’s CEO, and what exactly does it do?

“WHERE IS THE MIND’S SELF-CONTROL?” The brain’s brakes!

The behaviours of ADHD are in the front part of the brain called your frontal lobes or cortex, the part behind your forehead.

The frontal lobe is the centre of the executive functions and, in other words, where your self-control centres lie.

Executive functions is a fancy word for your brain’s self-control “office” or the chief manager’s office.

The front of our brain is what makes humans unique in the animal kingdom.

Think of our head shape compared to other animals; their heads are triangular because they lack a frontal cortex like ours.

The brain is divided into two main areas.

The back part is the knowing and ability part, and the front part is the controlling and doing part. The back part is the intelligence or knowledge part, and the front part controls how we use these abilities.

The problem with ADHD lies in the front part of the brain.

ADHD is a self-control problem and not ability or knowledge or intelligence problem.

Anyone with ADHD knows what they should do but cannot do what they know!

The brain is like a powerful sports car. The engine is the back bit, And the front part is where the driver sits and controls the car. ADHD is a driving and braking problem. ADHD has been described as a “race car brain with bicycle brakes.”

The ADHD brain develops slower than that of others for the same age.

ADHD is a physical problem due to a glitch in the development of the brain.

This is called a developmental problem of the brain’s control centres, where our executive functions control our behaviour.

This developmental problem of the brain is genetically inherited 80% of the time.

ADHD affects 5-7% of all children, so there are at least 1-2 children in every classroom.

A developmental problem does not only affect the brain, and it is when something goes wrong in the body’s physical, learning, language or behaviour areas during early development that may impact day-to-day functioning throughout a person’s lifetime.

Other examples of developmental disorders are; autism, cerebral palsy, hearing loss, vision impairment and learning disabilities.

The brain’s front part only starts to develop after birth and reaches full maturity at age 25.

Its job is to transform a helpless baby into a self-sufficient, independent adult.

In the case of ADHD, this maturity is delayed until the age of 30.

ADHD may not be noticeable for many years and only becomes a problem when more demand is required overloads the ability to cope, such as at school and finding a job.

In ADHD, this part of the brain is 10% smaller and more immature than other children of a similar age.

Children with ADHD, therefore, behave like a younger child, which is 30% younger for age. A 10-year-old behaves like a 7-year-old.

We are not talking about intelligence but behaviour. For these reasons, executive functions in ADHD lag behind other children of the same age.

Inside the front part of the brain, there are seven mental abilities called the executive functions.

They allow us to act as a director on a movie set, coordinating and organising actors, sound crew, camera operators.

The individual actors may do their job, but the camera and sound and lighting are not working together. There will be a movie with a jumbled, chaotic story.

The executive functions monitor and direct actions over many parts of the brain.

Like a company's CEO, or a self-employed business owner overseeing everything and guiding what is best for the company.

Without these executive functions, we would all move from one impulse to another without a clear plan and go nowhere.

These seven mind tools are kept in a toolbox called the frontal lobe.

Essentially, ADHD IS AN EXECUTIVE FUNCTION DEFICIT DISORDER, that causes the symptoms of attention, hyperactivity and impulsivity.

The umbrella term "ADHD" is simply another way of referring to these issues.

What are the seven executive functions? Model of executive functions by Prof. Russel Barkley, the American psychologist.

1. Inhibition: The Mind's Brakes

This is the most important ability humans have developed; no other animal can pause and think the way we do.

The famous psychologist Brodsky wrote the book "the ascent of man", credits our species' success to our ability to inhibit and delay responding to an event. This delay led humans to develop internal speech and the ability to change their behaviour internally. The inability to inhibit and have a good "brain braking system" is the key to understanding ADHD.

The ability to inhibit actions and impulses and think before acting. "Like your parents taught you to "think before you act", "count to 10"

Analogous to a pause button between an event happening and your response.

This gives the child time to think and be proactive rather than reactive to events.

A child with a lack of self-control can appear thoughtless, selfish, irrational or immature. By pausing and thinking, better choices can be made.

2 Self-awareness: The mind's mirror.

The ability to look "inside" ourselves and be "honest" about our behaviour.

The ability to look "outside" ourselves in the environment and how it changes and impacts our behaviour. We observe our actions and change them depending on the situation, whether we make a mistake.

For most of us, we can change our behaviour appropriately to the changing environment.

Children and teens with ADHD are less able to modify what they say and do and feel and end up running on autopilot even when the circumstances require a change of direction.

Like a driverless car, going through traffic lights and stop signs without attention to the dangers.

3. Minds GPS: The Mind's Eye

We all have a GPS in our brains that allows us to call up the past and use visual images to plan a future destination, which is foresight. Like playing "mini Youtube videos" of our past experiences

It's called your working memory.

It's like a GPS. It has two parts: one uses images or maps, and the other is voice; it tells you where you are going.

Working memory is like the ram in a computer. It holds information while you are working and thinking about the task at hand.

Working memory is different from long-term storage memory.

Knowledge is uploaded from the back of the brain to the frontal cortex or from the thinking brain into working memory.

Often distractions with daydreaming and other thoughts prevent the task from being completed.

Working memory is holding in mind the instructions on the task at hand.

A SENSE OF TIME AND TIME MANAGEMENT

Children and teens with ADHD are caught in the "now". Their time is "now and not now." Time doesn't seem to influence their behaviour.

They cannot complete tasks on time. They are uninterested in the future and the consequences of poor time management.

They do not think about events before they happen. ADHD children are caught in the now. A child with ADHD has a relatively narrow window into the future of time and can't think far ahead.

4. Self-Directed Speech: The Mind's Voice

Animals can only talk to others; however, humans can talk to themselves to change behaviour. Childhood is a process of talking aloud, and with age, the speech becomes internalised. ADHD kids 'Just keep talking' and have delayed internal speech.

The ability to give yourself a "pep" talk and "advise yourself" "listen to your inner voice."

Younger children develop rules for themselves to follow. 'Sticking to a diet' rather than cheating. Children with ADHD don't stick to rules.

5 Mind's Heart EMOTIONAL SELF CONTROL (Mind's Heart)

Emotional control is the ability to pause and split incoming information into emotional and non-emotional content. ADHD kids have problems regulating their emotions and make them seem more emotionally immature. ADHD children have difficulty moderating emotional responses.

They seem to wear their emotions on their sleeves and are easily hurt or offended.

They appear to be self-centred, demanding, aggressive and immature.

Other children may start to avoid your child with ADHD. Unfortunately, they do not understand problems with emotional self-control and ADHD.

6. Self-motivation(Mind's Fuel Tank)

This is linked to emotional control. Control of emotions and keeping them private and internal helps us decide if they are positive or negative. Those that can internalise their emotions can automatically internalise their motivation. This is called drive, persistence, ambition and willpower. When we create our motivation, we don't need external rewards to incentivise younger children's needs. We can "stick" to our plans. When you hear that children with ADHD have short attention spans when completing a task, it is really poor motivation.

Teens with ADHD spend more time on risky activities and enjoy extreme sports like motorcycle racing and skydiving. They can also hyper-focus and become addicted to playing sensational internet video games(motivated on the wrong things)

Even when things are initially impressive, they lose their appeal with time as they become more routine and " boring") ADHD children have a problem working for long periods to get further rewards out in the future.

ADHD children need incentives that are rewarded in the short term to achieve goals.

The motivation fuel tank in ADHD is empty or full.

7 Self-Directed Mental Play: The Source of Problem Solving and Innovation

This is related to internal speech and has two parts.

The ability to take large incoming messages and break them down into smaller parts called analysis.

The ability to reorganise and combine the parts into a new outgoing message we call synthesis.

By pausing, we can analyse and solve problems. Problems with this ability are seen when doing comprehensions or long projects.

Seeing an enormous task can be overwhelming. Breaking up the task can assist and will seem manageable.

Children with ADHD are distracted by events around them, are easily bored, and less able to keep paying attention to their plans and goals.

They appear chaotic and disorganised. They leave things without putting things away after use. They leave dirty dishes and food wrappers in their rooms, misplace cell phones and lose money. Self-hygiene, messy workspaces and disorganised school workstations

People with ADHD simply don't plan things out or problem-solve them very well. This problem has a significant impact on their social and academic success when mental problem-solving is essential.

Children that are hyperactive and impulsive have problems with emotional control.

Those with inattentive type have bigger problems with motivation but don't have problems with emotional control.

Understanding these seven functions of the brain is the cornerstone of my approach to helping parents understand their child and why they behave in the way they do.

By understanding these seven principles, you will have more sympathy and empathy for children or as teachers and pupils in the classroom.

These principles provide a logical understanding of all the treatment interventions that are needed.

The bottom line is the front part of the brain is the brain's brakes and self-control.

As a parent, you may start to feel a little uneasy and recognise some of these problems in your past. After all, this is a problem that is *inherited* in 80% of children.

What causes ADHD? What causes the mind's braking system to fail? The key to understanding the "mind's braking system and supply of brake fluid" is understanding the chemistry in the brain?

Scientists have concluded that ADHD is caused by a delay in the brain's maturity of the frontal region.

Current evidence suggests that certain brain chemicals or neuro-chemicals ("braking fluid") are deficient in those with ADHD, and the brain tissue is less sensitive to these chemicals.

These chemicals allow information to be passed on from one nerve (neurons) to the other. There are 100 billion neurons in the human brain, and only 250 million of these neurons reside in the frontal lobe or the self-control centre. These neurons in the front of the brain are, in reality, responsible for the entire control of our brains. When these control neurons "misfire" our brains' braking system fails!

The nerve cell looks like a long tube (the Axon) with a swollen round end. Nerves are arranged with lots of swollen round ends together. The gaps between the swollen round ends are called a synapse. The nerve signals travel down the tubes and trigger a small drop of the neurochemical into the gap between the nerves. The chemical in the drop "jumps the gap" like a spark plug and triggers the electrical impulse on the next nerve. This is how nerves communicate.

There are two main chemicals in the brain's control centres lacking in ADHD, dopamine and noradrenaline.

The nerves or synapses have tiny little vacuum cleaners(or transporters) that clean up excess chemicals to reload the neuron after being fired.

In ADHD, the vacuum cleaners are overactive and remove the chemicals preventing the nerve from firing. Methylphenidate or Ritalin works by blocking the vacuum cleaner, like a sock, so that the chemical can build up in the gap and fire the next nerve.

All medications increase more chemicals in the nerve gap, making signalling stronger.

Recent studies show that continual use of medication in some children and adults have improved brain growth and size in the brain if they remain on their medications for several years or more.

The brain chemicals are controlled by important genes that are inherited.

The brain tissue or neurons in the frontal cortex need enough of two chemicals called dopamine and noradrenaline to work and function. It has been found that the brain is not as sensitive as it should be to these chemicals.

We now understand that the genes responsible for the nerve chemicals called DRD4 and DAT1 are faulty, causing the frontal brain nerves to misfire, leaving the brain starved of these chemicals, leaving the brain's executive control centre that acts as the mind's brake, working erratically. To put it another way, we all have a "bit" of this ADHD because we all have executive functioning and self-regulation. Those who are diagnosed with ADHD simply represent an extreme variation of normal.

How does the changing maturity of the brain's executive functions with increasing age influence the symptoms and life experiences of those with ADHD?

Adolescents with ADHD

It is a myth that children outgrow ADHD by adolescence; 70 to 80% of children diagnosed with ADHD are likely to continue with symptoms until 16. Unmanaged ADHD in adolescents may lead to abusing substances such as alcohol, nicotine and marijuana.

The untreated 60% of adolescents failed at least one grade at school.

In adolescence, new challenges develop as major life activities relevant to young adults, such as sadness and depression. Increase poor self-confidence, worried about completing school, social acceptance.

38% have teenage pregnancies, and 17% were being treated for a sexually transmitted disease by the time they were 19 years old.

Problems with driving occurred with increased accidents and injuries sustained in crashes.

Parents need to be vigilant about monitoring and encouraging compliance with medication to prevent these negative outcomes.

Adults with ADHD

60% of children with ADHD will continue to have symptoms when they reach adulthood, and 20% have anti-social behaviour.

Only 20% reach adulthood free of any psychiatric diagnosis and are functioning well and without any significant symptoms. The rest continue to have many problems they had as children and as teenagers. They are more likely to have problems with poor work record and low job status than those of other adults.

Like children, adults with ADHD have considerable problems with attention, poor inhibition, difficulties resisting distraction, poor emotional control, and poor self-discipline.

They are not as hyperactive as they were when they were children. They are often described by themselves as feeling restless, needing to be "on the go", and doing things.

They constantly need to be busy. Some describe themselves as uneasy and jittery and internally restless.

Other areas of life that are impacted are driving, sexual activity, money management, health management and marriage. And relationships impact their jobs and responsibility for others, including their children.

In general, the approach to treatment and adults is the same as children getting a proper diagnosis, being educated about ADHD and using the same medications used in children.

Stimulant medications remain the mainstay of the management of adults with ADHD. These stimulant medications are one of the safest treatments and are non-addictive.

Some alternative approaches to manage ADHD have been backed by science.

These include:

Exercise: 20 minutes of intense exercise at least three times a week releases dopamine and serotonin. "It is like taking Ritalin and Prozac without the drugs."

Omega supplements: Research has found a small improvement in ADHD symptoms.

Mindfulness: Mindfulness is a practice that encourages focusing on the present moment. Learning to focus on the present helps let go of what's already happened, which can reduce negative feelings.

Some of the alternative approaches are not supported by research.

These include:

Vitamin, mineral, and herbal supplements: You may hear that zinc, magnesium, iron, and other kinds of supplements can improve behaviour and reduce ADHD symptoms.

Melatonin: To help with insomnia associated with ADHD.

"Train the brain" Games: Claim to improve memory, attention and other skills. There is no research to support these claims.

Chiropractic care: Some chiropractors believe that if the skull isn't aligned correctly, it can cause uneven pressure on the brain, leading to ADHD symptoms. They claim adjustments through chiropractic care can correct this imbalance, reducing ADHD symptoms. No research supports this claim.

Lavender and other scents: You may have heard that using certain scents can help with ADHD symptoms. But no research supports aromatherapy as an effective treatment for ADHD.

CBD for ADHD: This may be a beneficial factor for epilepsy and autoimmune and inflammatory diseases, but there is no scientific benefit for ADHD. 'Natural' Doesn't Necessarily Mean 'Safe.'

When ADHD is properly treated, children can achieve great heights: doctors, lawyers, CEO's, dreamers, innovators, explorers and even Harvard grads. If left unrecognised and treated ADHD can be harmful.

The flip-side of distractibility is curiosity - try and change your perspective.

When you see hyperactivity and restlessness, think energetic, instead of disorganised think spontaneous. Instead of impulsive, think creative. Instead of stubborn, think persistent.

ADHD is real and can be treated at any age. It is never too late! If managed early and effectively, the outcome can be great!

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