Attention Deficit Hyperactivity Disorder

What is Attention Deficit Hyperactivity Disorder and What Causes it?

Scientists agree that ADHD is a medical neurobiological disorder. It is an illness or deficit of the nervous system most often due to genetic or biological factors. Family, twin and adoption studies have found that heredity is the most common cause of ADHD. Medical research has shown that some dopamine genes have been found to be associated with ADHD. If a child has ADHD there is five times more likelihood that another family member will also have the disorder. While ADHD symptoms may be caused by injury to the brain, or exposure to alcohol, nicotine or lead in the developing brain, this is not the cause in the vast majority of children with ADHD.

ADHD is not new; it has been described in literature and medically documented for more than two centuries. ADHD is a chronic condition that can present at all levels of severity and rarely occurs by itself. There are three core symptoms: the inability to regulate attention, the inability to regulate activity, and difficulty with inhibitory behavior resulting in impulsivity. However, difficulty with regulating emotions is often an issue as well. It is important to note that symptoms of ADHD can vary from day to day and hour to hour, and while many children may exhibit these symptoms, it is the degree of presentation, the inability to regulate them and the level of impairment, that results in a diagnosis.

How Do Executive Functions Play a Role in ADHD?

New research has shown us that children and adults with ADHD often have weaknesses in the areas of executive functioning (EF). Executive functioning is the mental process that allows us to plan ahead, evaluate the past, start and finish a task and manage our time. Executive functioning skills enable us to: identify a problem, find solutions, organize ourselves, regulate our behaviour and emotions, control our attention levels and resist distractions. Working memory, an important part of executive functioning, is a skill that allows us to keep information in the brain and work with it at the same time. Working memory directly impacts reading comprehension, written expression, math skills and the ability to pay attention and resist distraction. Students with ADHD also frequently process information coming in and going out at a slower speed. Children with deficits in these areas are frequently mislabeled as being unmotivated, defiant, and lazy.

For more information please access Executive Functioning Disorder on the CADDAC web site.
http://www.caddac.ca/cms/page.php?69

How Often Does ADHD Occur?

ADHD is the most common mental health disorder of childhood. Studies throughout the world have reported the occurrence of ADHD in school age children as being between 5% and 12%. This means that on average there are at least one to three children in every class with ADHD. More boys than girls are diagnosed at a rate of 3 to 1. However, since girls are less likely to display outward hyperactivity and impulsivity, and as many women as men are diagnosed in adulthood, we know that we miss diagnosing many girls with ADHD in childhood. Females with ADHD are equally impaired in the areas of attention and social and academic problems as males. Eighty per cent of adolescents who were diagnosed as children continue to meet the criteria for diagnosis, and of those children, over sixty per cent report continued impairing symptoms into adulthood.

Are There Different Types of ADHD?

ADHD is classified into three subcategories based upon the clustering of three core symptoms. Children and adults who only have hyperactive and impulsive symptoms are diagnosed as “ADHD, primarily hyperactive-impulsive subtype” (very rare); those who display significant impairment in inattention are referred to as “ADHD, primarily inattentive subtype” (formerly known as ADD), and those who display all three symptom clusters are referred to as “ADHD, combined subtype” (the most common).

How is ADHD Treated?

Treatment for ADHD should always include multiple elements and approaches. The first element of treatment should always be education about ADHD for caregivers, other family members, and individuals affected by ADHD. Studies have shown that providing education on ADHD greatly increases the chance that individuals will continue with their treatment long term. Along with education, best practices in treating ADHD include: regular follow-up visits with a medical practitioner, continued support for families with information about ADHD and its management, patient, parent and teacher training, special educational accommodations and behavioral interventions along with medication if required. Additional treatments such as cognitive behavior therapy, ADHD coaching, tutoring, counseling, and most recently mindfulness have been shown to also be somewhat beneficial. It needs to be noted that not all people with ADHD require medication. It is often the type of symptoms displayed and the level of their impairment that dictates this. When required, medication can often have a significant impact on symptom control.

In uncomplicated cases of ADHD, medication management is fairly straightforward and typically effective with minimal side effects. The medications that are most often used to manage ADHD symptoms are classified as stimulant medication, however non-stimulant medications are now also available. Stimulant medications have been around for more than fifty years with thousands of research studies indicating their safety and effectiveness. However, as with all medications, even over the counter products, side effects can occur so routine follow-up visits with a physician are always advised to assess the level of effectiveness and occurrence of side effects. Immediate contact with the prescribing physician is recommended if side effects are significant. Often a change in dose or switching to another medication can alleviate side effects.

In the last five years, the development of once a day, time released medications, both stimulant and non-stimulant, have significantly improved the life of many children and adults with ADHD. These new medications are difficult to abuse, reduce the stigma of having to take medication if front of others, prevent gaps in symptom relief and decrease the chances of exaggerated rebound symptoms happening several times a day. As with all medication, reaching the highest level of effectiveness with the least amount of side effects is always the aim of treatment. Building a strong working relationship with your practitioner is the key.

Studies have shown that while treating ADHD symptoms with medication alone, doctors are now able to improve many of the symptoms of ADHD in a short period of time however, a multi-modal approach is much more effective and is always recommended.

For information on medication treatment approved in Canada please go to the CADDAC website www.caddac.ca and access the medication option under the ADHD Subjects menu dropdown.