Autism & Attention Deficit Hyperactivity Disorder (ADHD)
Autism and Attention Deficit Hyperactivity Disorder (ADHD) are both conditions that affect a person from an early age and can greatly impact their development and social functioning. Whilst these disorders are often found independently of one another you will notice when reading this brochure that they do share some similarities and in some cases these conditions will both affect a single individual at the same time. They both unfortunately do not have a cure, but instead treatments exist to manage the symptoms and to improve the quality of life of the sufferer. This brochure will outline the basics of each of these disorders, as well as showing how often they occur and what treatments are available to improve the symptoms. We will look at these disorders individually and will then briefly touch on the instances where they both affect the same individual.

It is important to note that in this brochure we will be using the terms Autism and ADHD. Whilst we do appreciate that both of these conditions can be broken down into other disorders or sub-groups and sub-classifications, such as a selection of Autism Spectrum Disorders and Attention Deficit Disorder, these are beyond the scope of this brochure. We need to also highlight that in many instances the research and general information in the area looks at the disorders when they appear in children. This is because these are developmental disorders that need to be present since early childhood. This does not mean that adults are not suffering, in many instances without a diagnosis or the help that they deserve. Where we can we shall endeavour to include information that also pertains to adults.

What is Autism?

Autism, and the related disorders, can be summarised as complex neurological disorders that affect all aspects of a child's life, including communication, interaction, development and behaviour. The exact cause of this complex disorder is not yet known, although it is theorised that genetics may play a role, with environmental factors also having an effect. In the past people have claimed that vaccinations, such as the MMR vaccine, were the cause of Autism. However extensive research shows that this is not the case, with no link between the MMR vaccination and Autism onset being found.

Autism is a disorder that is evaluated on a spectrum and for this reason many people have their own personal experience of Autism. This can make it difficult for health professionals to predict how a sufferer will develop. In fact, there is such a wide variety of potential symptoms and aspects of Autism that two sufferers may both have a diagnosis but will show very different symptoms. This is also why any interventions work best when they are personalised to the patient, but we will touch on this later. Whilst each experience is generally very personal, there are some key symptoms that many Autism sufferers do experience and can be used to highlight to parents and carers that Autistic traits may be present in their child. Here we will highlight a small selection of the potential behaviours that are synonymous with suffering from Autism.

It is important to note that this section should not be used for self-diagnosis. Many children will exhibit some of these behaviours at some point in their lives and they shouldn't immediately be taken to signify a problem. If you do look at some of these symptoms and have concerns then we encourage you to speak with a medical professional.
The symptoms of a child with Autism are in most cases present to some degree before the age of three years old, but some children may take longer to receive a diagnosis. In some cases a diagnosis may not be made until a person reaches adulthood, although they will still have shown and experienced symptoms in childhood. Whilst certain symptoms and behaviours may be more commonly seen at earlier or later ages of childhood, most symptoms may occur at any time.

Communication is one area where those who suffer from Autism differ from the general population, and this is one symptom that is often highly recognisable to professionals and parents. In younger childhood, those with Autism may not use vocal sounds or babble and the onset of speech development may also be delayed. As they grow older those with Autism may struggle with the use of non-verbal cues. For example, they may not be able to comprehend gestures and they may struggle with eye contact. When a child becomes of school age, people may notice that a child who suffers may struggle to initiate and maintain a conversation. When they do converse they may speak using pre-learned phrases instead of language that may be more appropriate. They may also struggle with metaphors and symbolism, taking words and phrases at their literal meaning. This can be harmful to the development of meaningful friendships and relationships.

The way those who are suffering interact with their peers is often noticeably different to those who are not suffering. Whilst others of the same age group may be actively seeking to play with friends and build relationships, those with Autism tend to prefer solo play and will avoid group activities. They may also struggle with imaginative play altogether, or may instead repeat the same imagined play scenario many times. Repetition is not just seen in the solo play and pre-learned phrases of sufferers. Repeated physical movements may also be noticed by those around the child; this may include flapping their hands or twisting their fingers to deal with their emotions. Many sufferers also find that they prefer to stick to heavily regimented daily routines, which are the same each day or week, with any deviations causing extreme emotional distress.

How common is Autism?

Unfortunately Autism is not an uncommon disorder, with many people suffering worldwide. In fact, as Autism is not always overtly visible, the number of people suffering may be greater than statistics suggest. Not only is Autism a fairly commonly occurring condition, it is thought that the number of reported cases has increased rapidly over the last 30 years’. Whilst it is important to acknowledge that this may be in part due to an increased awareness of the condition and a change in diagnostic criteria, it is also likely due to a true increase in cases.
Some studies across continents such as Asia, Europe and North America have suggested that between 1% and 2% of the total population suffer from some form of Autism\(^2\). When looking more specifically at the USA, research looking at birth rates finds that 1 in 68 children are identified as having Autism\(^2\). When looking at the number of people this means are affected, it is suggested that 3.5 million Americans are living with Autism\(^1\). The research also suggests that Autism is a much more male centric condition, with 4.5 times more boys affected\(^2\). The previously mentioned increase in Autism prevalence worldwide has also been seen in the USA, with an increase of 119.4% being seen in the decade to 2010. This makes Autism the fastest growing developmental disability in the USA\(^3\).

UK estimates for Autism are more similar to the worldwide estimates than those seen in the USA, with UK researchers finding that approximately 1 in 100 children are affected\(^4\). In 2007 this equated to approximately 100,000 UK children who had Autism\(^5\). When looking at the whole population of the UK it is thought that 700,000 people suffer with Autism, which is greater than 1 in 100 people\(^6\). Interestingly, researchers also looked at the impact this has on family members and found that Autism is thought to be a part of 2.8 million people’s daily life in the UK\(^5\).

Australia and New Zealand both also have substantial populations of Autism sufferers. In Australia, one study found that the number of people suffering from Autism had risen 79% over a three year period up to 2012. With 64,400 people suffering in 2009 compared to 115,400 people in 2012\(^7\). This 2012 figure represents 0.5% of the Australian population\(^7\). Other research in 2012 found that, when looking at formal diagnoses, 1 in 63 school children were suffering from Autism and registered to receive state carer benefits\(^8\). This compares to the findings out of New Zealand that suggest 1 in 88 children are suffering with Autism, which is estimated to be 50,000 children\(^9\).

You may also be feeling some level of guilt due to this diagnosis but we want to emphasise that the emergence of Autism in a child is not the fault of the parent.
What are the treatments for Autism?

As we have previously mentioned there is currently no cure for Autism. However, that does not mean that there are not a number of treatment options that can be used to improve a person's symptoms to give them a better quality of life. In fact there are a number of different interventions that are likely to be utilised to help a person improve the different aspects of their life that are affected by Autism. As we have touched on previously, each sufferer of Autism experiences the condition in their own unique way and so it is important that their treatment plan is tailored to them. The treatments that are suitable will also change as a child grows older and develops more social and learning skills. It is therefore important that the health care providers review the treatment plan and adapt to a child's changing needs.

Medications may be used to help improve some symptoms, as well as helping to treat conditions that may appear alongside Autism, such as depression or sleeping problems. When treating children special care needs to be taken when using medications, and some medications will be ruled out for younger children. A specialist in the area of childhood Autism will be able to discuss with any parent the pros and cons of using medications and the likely side effects these will have on a child. There are also a number of behavioural therapies that can be used to help improve Autism symptoms. These should focus on the key areas affected by Autism and may include speech and language therapy and occupational therapy. These treatments may also coincide with educational support to ensure that a child does not fall too far behind academically, and that the child receives an appropriate level of school support.

The best results are seen in those who seek treatment early but this does not mean that older children or adults should not seek support. Unfortunately there are some areas where adult services are under-funded when it comes to Autism but we encourage anybody who is suffering to continue pushing for the support they deserve. Some areas will provide social programmes for children and adults that suffer from Autism to help them learn to cope in social situations, as well as learning daily skills. These programmes also provide a place for people to socialise with those who are experiencing the same issues that they are.

Whilst there may not be a full cure for Autism, it is possible to achieve a status that some refer to as 'best outcome' in which a person only suffers from milder symptoms of Autism on tests regarding personality, whilst scoring in the normal range for intelligence, language and functioning.
What should you do if you feel your child is suffering from Autism?

If you are a parent and think your child is suffering from Autism then you will understandably be concerned about their welfare and want the best treatment for them. You may also be feeling some level of guilt due to this diagnosis but we want to emphasise that the emergence of Autism in a child is not the fault of the parent. This is a developmental condition that is not reflective of parental practices.

As we have mentioned it is best to start this treatment as soon as possible. Therefore we would encourage you to arrange an assessment for your child with your general practitioner. If your general practitioner does not feel able to do the assessment, or feels there is a problem, then they will refer you to your local child mental health services. Here your child will be treated by a range of professionals including mental health specialists, language therapists and social services. They should keep you updated and involved throughout every step of treatment. They may also be able to provide some services to provide education to you as a parent, on Autism and living with Autism. They may also provide local support groups for carers of those with Autism, which we would encourage you to attend. You will also benefit from being in close collaboration with your child’s school throughout the assessment and treatment process. A teacher is a useful person as they can record and highlight key behaviours they are seeing throughout the school day, and may have been the reason that you sought medical advice to begin with. It is also important to stay in contact with the school to ensure reasonable adaptations are made to ensure the best educational experience for your child. This may include additional teaching assistance, or discussing the need to move to a more suitable school.

Communication is a challenge for those with Autism and as a parent you may struggle to communicate with your child. However, achieving a level of communication can help improve behaviours of those who are suffering. Some tips to improve your ability to communicate with an autism suffering include using their name when addressing them, using simply language and avoiding metaphors, keeping background noise to a minimum and allowing more time for responses or actions to be processed.
What is ADHD?

ADHD is the most common behavioural disorder in children. ADHD involves symptoms that include inattentiveness, hyperactivity and impulsiveness. Whilst most people have symptoms that are made up of all three of these areas, there are others whose symptoms are more representative of just one area. Therefore we can look at ADHD as having three main types; mostly hyperactive-impulsive, mostly inattentive, and a combination of these two. Whilst a lot of the behaviours that make up these classifications are normal amongst children, it is when they persist and begin to negatively impact the life of the child and those around them, for instance impacting educational attainment, that they may reach a level for diagnosis. When we talk about inattention in ADHD we are referring to behaviours that include lacking attention to detail, making careless errors and not listening when being spoken to. When we talk about hyperactivity we mean behaviours that include being fidgety, and being inappropriately restless or overactive, for example running around a classroom when everyone else is working. When we talk about impulsivity we mean behaviours including having difficulty waiting before acting, for instance in lines or raising a hand in class, and interrupting others. As ADHD is a complex disorder, the few behaviours that we have listed to highlight these phrases are not all inconclusive, in fact they are far from it. Instead we include them to highlight the potential behaviours that may be seen. If you are concerned that your child may suffer from ADHD we encourage you to seek professional advice.

Usually ADHD is considered in the context of children as the majority of cases are diagnosed when a person is between 6 to 12 years old; with symptoms usually improving with age. In fact it was previously thought that ADHD could not occur in adulthood, however it has now been shown that the condition can persist, although the symptoms shown in adulthood can differ slightly from childhood, often being more subtle. In many cases symptoms of hyperactivity are not seen as much in adult life, with inattentiveness increasing. This leads to behaviours in the workplace that can jeopardise employment, including disorganisation, forgetfulness and procrastination. It has also been argued that as a person grows older, from childhood to adulthood, they begin to internalise the hyperactivity that they once felt, leading to an internal restlessness. Whilst ADHD is not thought to onset in adulthood, as it needs to have started before the age of 12 years of age to receive a diagnosis, people can reach adulthood without a formal diagnosis. Whilst it may be harder for adults to be diagnosed we would encourage anyone who feels they are suffering to seek help as adult ADHD is thought to be associated with other issues such as substance misuse.
As we have mentioned, ADHD appears to be exhibited differently in adults compared to children which may make diagnosis difficult. This appears to also be the case for the different genders. On the surface it is thought that the disorder is more common in boys than in girls. However, it is now thought that this may be because the disorder in females is often overlooked due to differing symptom displays. Whilst in boys, behaviours tend to be more overt and bordering on anti-social in some cases, girls tend to become more withdrawn, they tend to daydream more, and they tend to show their aggression verbally.

How common is ADHD?

Research suggests that, much like Autism, ADHD is a fairly substantial problem worldwide. Some estimates suggest that 5% of children worldwide suffer\(^a\). Other analyses have looked at ADHD and found a prevalence rate in children and adolescents of between 5.29% and 7.1\(^{11,12}\), with the adult rate at approximately 3.4\(^{13}\). Another worldwide investigation found a rate of 7.2% of children were suffering worldwide\(^{14}\), which equates to approximately 129 million people\(^{15}\), which is a staggeringly high number. Studies are also showing that whilst adults who suffer may not show full ADHD symptoms, many are showing at least some signs of retaining the disorder. Whilst one study found only 15% of children with ADHD retained the full diagnosis at age 25, they also found that 65% had at least some partial symptoms\(^{16}\). This highlights the enduring nature or this disorder.

Sometimes it can be difficult to comprehend the magnitude of global data, especially with the reliance on extrapolating to population estimates. It can therefore be useful to look at some countries individually. In the UK it is thought that between 2% and 5% of school age children are suffering from ADHD\(^{17}\), a finding that has also been supported in research out of New Zealand\(^{18}\). Findings also support the idea that rates are higher in UK boys, with one suggestion being that 3.62% of boys are suffering, compared to less than 1% of girls\(^{19}\). Although it is important to remember here that the differences in the way symptoms are exhibited may play a role.

A lot of research has also been conducted in the USA where there appears to be a lack of consensus when it comes to ADHD estimates. Some estimates suggest that 5% of American children are suffering from ADHD\(^{20}\), whereas other estimates put the number at 11\(^{\%21}\), over double the 5% estimates. The rate of 11\% of children and adolescents suffering is however supported by findings in the Australian population\(^{22}\). This is problematic but still highlights that this is a wide spread condition, one which is thought to have increased in the USA by 42\% in eight years\(^{23}\). Whilst the discrepancy in estimates can make population estimates difficult, it is suggested that approximately 6.4 million Americans between the ages of 4 and 17 years of age are suffering\(^{23}\). Unfortunately research is also showing that many children are not being treated for their condition, with some suggestions being that 20\% of those who have been diagnosed not being treated\(^{21}\). Importantly this figure does not include those children who have not yet been diagnosed. When looking further into the USA figures we can see that 4.4\% of adults are also thought to be suffering with ADHD\(^{24}\), although the gender disparity is less extreme than seen in the UK, with 38\% of those suffering being women, compared to 62\% being men\(^{24}\). It is important to highlight here that the yearly incidences of ADHD in the adult US population is 4.1\%, of which over 40\% of cases are seen as severe\(^{25}\).
What are the treatments for ADHD?

Unfortunately, as we have mentioned previously, there is no cure for ADHD. There are however treatments that can be utilised to improve the symptoms of a sufferer to improve their quality of life. These are mainly broken down into two categories, medications and psychotherapies, and these are often used in conjunction with each other. The best course of treatment is also partially determined by the age of the sufferer, with psychotherapies needing to be adapted for the age of the sufferer and certain medications needing to be avoided. In general behavioural therapies are the first line of treatment for those under the age of 6 years, and behavioural therapies alongside medications are suggested for those 6 years and older. This is generally due to the fact that many medications used to treat ADHD are not suitable for those of a younger age. The medical professional who is treating the child will discuss with parents the pros and cons of using medications, as well as their side effects, as well as deciding whether a medication is appropriate due to the age of the child. The first line of treatment in adults with ADHD tends to be medication with psychological treatment being taken up if the sufferer decides to partake in this.

There are a vast number of medications that can be used to treat the various symptoms of ADHD, often they fall into the stimulant category. Some commonly used medications are atomoxetine and methylphenidate, which many people will know better under the brand name Ritalin. Again these medications are not a cure for ADHD but they can cause temporary improvements in symptoms, which can be useful in improving concentration to allow the sufferer to benefit fully from psychological therapies. Behavioural therapy is a commonly used psychotherapy for ADHD which revolves around a system of rewards and reward removal in order to encourage a child to try to control their ADHD. If a child is at a suitable developmental age, and able to comprehend their own thoughts and feelings then Cognitive Behavioural Therapy (CBT) may be employed. This goes further than behavioural therapy by having the sufferer look at the ways they think about a situation in the hopes of changing behaviours. Psychoeducation is also important for both the child and the family in order to better understand ADHD and to better understand how to handle the symptoms.

What to do if you feel your child is suffering from ADHD?

If you feel your child is suffering from ADHD then you will likely be concerned about the impacts this will have on their life, as well as worrying about what the next step is for them. The first thing to do is to arrange an assessment to see if your child meets criteria for ADHD. There is no single test or procedure that can predict ADHD and instead healthcare professionals will need to make a decision based on observations and feedback from both your child and yourself. To arrange this assessment you can contact your general practitioner who should be able to refer you to the appropriate services for an assessment. You may also benefit from discussing your concerns with the school, especially if they have a school counsellor, as they may also be able to refer the child for an assessment, depending on your local legislation. In fact, it may be the school that has first reported symptoms to you. Regardless of whether this is the case or not it can be beneficial to have the school involved in the assessment and treatment process, as they can also provide feedback to the clinical team treating your child, and they can work with local school and medical authorities to ensure the best care is available for your child.
It can be a daunting task going to the doctor or going to the assessment. It is likely that there will be a lot of stress and confusion, and this can cause you to forget key questions or points you may have wanted to make. Your child may also behave differently in the assessment or during follow up appointments, due to the changes in environment. It is important to highlight these changes to the doctor, and you may benefit from keeping a symptom log of behaviours and medication side effects for any doctor’s visits. It is also important to highlight to the medical professional if you as a parent need help dealing with the stresses of having a child with a mental illness. They may be able to refer you for your own treatment. It is also important to remember as a parent that a child developing a disorder is not your fault and is not a reflection on parental style or upbringing.

**When Autism and ADHD occur together**

Whilst one of the main bodies involved in developing diagnostic criteria, The American Psychiatric Association, once thought that Autism and ADHD could not occur in the same person, their official stance has changed with the publication of new guidelines. It is now agreed that these conditions can occur together, which is also known as occurring comorbidity. It appears this change in stance was more than justified as some research suggests that 18% of people with ADHD show some signs of also suffering from Autism [26]. Other studies have found that this number is closer to between 30% and 50% of ADHD sufferers [27]. The reason why these conditions often occur together is not yet known, although it has been theorized that there could be a genetic basis for this. There is also some overlap in the diagnostic criteria’s of the conditions and so this may account for some of the comorbidity.

Whilst neither condition is curable, the good news is that treating the symptoms of ADHD has also been found to improve the symptoms of Autism in dual sufferers. Although caution should be taken in this area as those suffering from Autism can be more vulnerable to the side effects of ADHD medications. Therefore it may be suggested that psychotherapies should be trialled first and medications should be introduced at lower doses than traditionally seen in ADHD treatments. The behavioural techniques learnt in behavioural therapy for ADHD have also been shown to be effective on Autism symptoms. CBT can also be used but should be specially adapted for dual sufferers and should be administered by experts in both fields due to the complexities of the conditions.

For more information on living with a mental illness please visit our website: [www.shawmindfoundation.org](http://www.shawmindfoundation.org)
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