What's up with Ritalin?

When any diagnosis is made, the next step is always to identify the treatment options, choose one and implement it. Sometimes this decision is easy, but often it requires a little more thought and research. When it comes to a diagnosis of ADHD there seems to be a consensus among most teachers that some children need Ritalin. Many parents, however, feel that medication for ADHD is dangerous and should be avoided at all costs.

In order to gain a better understanding of how ADHD medications work, I visited Dr Shabeer Jeeva, a psychiatrist at the ADHD clinic in South Africa which has a patient base of over 10 000. Dr Jeeva is personally affected with ADHD, as are his two children.

Before delving too deeply into the different medications, it must be made very clear that there is a definite biological component to ADHD. In fact, at the end of September 2010 a study was completed by British researchers, which found that "children with ADHD were more likely to have missing or duplicated segments of DNA" (The Lancet). These DNA anomalies result in lowered levels of two neurotransmitters in the brain: dopamine and noradrenaline.

Importance of neurotransmitters

Dopamine's function is primarily to focus our attention and help us identify signals in our environment, such as a disapproving glance from a parent when misbehaving. In addition, it is strongly connected with the pleasure centres of the brain. This means that when we are doing an activity we enjoy, dopamine is released, thereby keeping our attention focused. Noradrenaline's function is to control our behaviour and limit impulsive outbursts. The levels to which these neurotransmitters are decreased vary from person to person and with the type of ADHD experienced: there is the inattentive type (lowered concentration), the hyperactive type and the combined type, which makes up 64% of the ADHD community.

The treatment for ADHD, therefore, is to increase the levels of the neurotransmitters, but unfortunately there are no natural remedies which can achieve this, barring exercise, which can temporarily boost dopamine levels for approximately two hours. There are a number of natural products and treatments available that improve the symptoms of ADHD, but they cannot increase dopamine and noradrenaline levels.

Three main medications

There are three main medications used to treat ADHD: Ritalin and Concerta are known as stimulants, as they stimulate the ability to focus attention. These medications work on dopamine and noradrenaline levels. Strattera only works on noradrenaline levels and is known as a non-stimulant. Ritalin has acquired the worst reputation of all these medications, with reported side effects of children withdrawing from their friends and family, moodiness and appetite suppression. Interestingly enough, Ritalin and Concerta share the identical active ingredient, with Ritalin's effects lasting about four hours and Concerta about eight to 10 hours.

Ritalin's quick release results in quick action, but is then followed by similarly quick "come off". These rapid peaks and falls are responsible for the negative effects associated with Ritalin. Dr Jeeva therefore rarely prescribes Ritalin as the first port of call. Ritalin LA (long acting) is effective for approximately seven hours, but shares the peaks and dips of its short-

acting counterpart. Concerta, which is longer-lasting, has a slower release and therefore a more gradual rise-and-fall effect.

According to Dr Jeeva, about 30% of all people who take any form of medication will experience side effects. He also explained that side effects are manageable, either by changing the dose or adding a supplement or medication to compensate. When a diagnosis of ADHD is first made and the treatment options around medication are discussed, there seems to be a belief that these three medicines are available and that the doctor just needs to pick one and prescribe a dosage based on the child's weight. This is simply not the case: a rigorous and careful assessment is required before treatment is embarked upon.

Holistic action

22% of people with ADHD will not respond to stimulants and will require medical treatment of another kind, such as certain tricyclic antidepressants or mood stabilisers, to name only two. The unfortunate side to this is that the names of these medications are frightening and tend to have negative connotations. These are, however, only names and if the effects are positive, one should not be put off.

There have been articles written about the probability of people becoming addicted to drugs at a later stage if their ADHD is treated with medication. Dr Jeeva showed studies indicating that the use of stimulants in treating ADHD actually reduces the risk of taking drugs. Untreated, people with ADHD have a 75% risk of turning to drugs; treated, this percentage drops to 25%, which is fairly close to the 18% risk among the non-ADHD population. This makes sense when one considers the impulsive behaviours caused by a lowered sense of self esteem and lowered levels of noradrenaline.

Far from insisting on medication as the only treatment, Dr Jeeva expressed the need for holistic action that includes effective parenting, diet, exercise, sleep patterns and quality, as well as natural supplements. For those who cannot take medication, daily intake of Omega 3, 6 and 9 fatty acids, together with a high protein diet, exercise and coaching is the route to follow.

Whichever avenue of treatment offers you the best results, education remains crucial: ADHD is still largely misunderstood, with many viewing the diagnosis as an excuse for children to misbehave, which, of course, is completely wrong.

For further information please visit www.adhdclinicjeeva.com.

(Delia A. Strondl, registered counsellor and Health24's ADHD expert, February 2011)