

ADD-vantage



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Attention Deficit/Hyperactivity Disorder

Newsletter

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Dear Members,

The Committee would like to thank all those of you who attended the Third Annual General Meeting since the Group was set up. We realize that a lot of you find it difficult to make it to our meetings but it is very disheartening for those who work on your behalf to see a poor turnout for events such as these.

Our last meeting before the summer is scheduled for Friday, July 13th (I hope no one is superstitious). This will be at the Gian Francisk Abela 6th Form, as usual. Those of you who are old members will remember that we do not meet in August. There is no meeting in June because we held the Annual General Meeting instead.

At the July meeting, Neville Dimech will be talking to the parents for a change. I say this, because he generally works with our children helping them to develop social skills and learn better methods of communication etc. Unfortunately this initiative of ours is not turning out as popular as we were originally led to believe it would be. For this reason we have asked Neville to explain to parents just exactly what it is he hopes to achieve given your co-operation. Personally I feel it is a very important job that he is doing and it is also a very necessary job.

During August we will be placing collecting boxes in the branches of HSBC and invite those of you who can to lend a hand with delivering these to branches and collecting them at the end of the month.

We would also like to take this opportunity of thanking Jason Copperstone and Josanne Pisani for all the help and support which they have given over the past few years and wish them the very best during the next 3 years they are in England. Without their backing we would not have been able to achieve as much as we have. Study hard Jason and come back to Malta. (Continued on back page)

****A PROCEDURE FOR PREDICTING RESPONSE TO STIMULANT MEDICATION TREATMENT****

(By Dr. David Rabiner at <http://www.attention.com>)

When considering the use of stimulant medication treatment for their child, parents often wonder whether it is possible to know in advance if it will work and if there will be any adverse side effects. To date, the answer to this question has been that it is not possible to determine such outcomes. Thus, although most children with ADHD will show clear reductions in ADHD symptoms when stimulant medication is administered appropriately, results from prior research suggest that predicting the response for individual children is not possible. The same holds true for predicting which children may experience unpleasant side effects.

Making accurate predictions would be useful for several reasons. First, if parents reluctant to consider medication could be assured that it would help their child, they might be more willing to give it a try. Second, for those children who were unlikely to benefit and were likely to experience adverse reactions to the medication, an unpleasant and ineffective treatment experience could be avoided

A study appearing in a recent issue of the journal *Biofeedback* provides intriguing evidence that such predictions may be possible (Monastra, V., vol. 28, 2000). A bit of background information is necessary before discussing these important findings.

In an issue of *Neuropsychology*, Dr. Monastra and his colleagues demonstrated that individuals with ADHD showed a distinctive pattern of results on a quantitative electroencephalography (QEEG) reading. (For a review of this study, please use this link: <http://www.attention.com/library/articles/article.jsp?id=63&parentCatId=3&categoryId=19>.)

QEEG is a procedure in which the pattern of electrical activity in different brain regions is recorded and measured. The research of Dr. Monastra and others indicates that most individuals diagnosed with ADHD via traditional methods, such as diagnostic interviews and standardized behaviour rating scales, show a QEEG pattern that indicates under-activity in prefrontal brain areas. It is suggested, although not yet confirmed, that under-activity in this brain region causes the behavioural symptoms that individuals with

ADHD display. In contrast, very few individuals not showing the behavioural symptoms characteristic of ADHD showed this same pattern of cortical under-activity. Of course, because ADHD is currently diagnosed based on the presence of observable behaviours rather than any particular QEEG pattern, not all individuals who meet diagnostic criteria for ADHD show this pattern of cortical slowing in their QEEG results. This fact is the basis for the current study.

Participants in this study included 144 individuals between the ages of 6 and 20 who were diagnosed with ADHD using DSM-IV diagnostic criteria. QEEG recordings were then conducted with these individuals. As expected, the majority (103) demonstrated the anticipated cortical slowing on their QEEG. The other 41 individuals did not. Remember, all 144 had already shown a sufficient number of inattentive and/or hyperactive-impulsive symptoms to warrant a diagnosis of ADHD. The difference between the two groups was not in the behavioural symptoms they displayed, but rather, whether a particular type of QEEG result was received.

After the diagnostic and QEEG procedures, all patients received a careful trial of stimulant medication. Participants were started on a low dose of methylphenidate (the generic form of Ritalin) two times per day and were given up to a maximum dose of 20 mg twice per day as needed. If methylphenidate was not helpful, a switch was made to Adderall, and the titration procedure began again. Careful measures were taken to determine whether each individual obtained clinically significant benefits from stimulant medication. Those who responded to medication (either medication or any dose) received behaviour ratings on an ADHD rating scale from parents and teachers that placed them in a non-clinical range, and they obtained a "normal" score on a computerized test of sustained attention while on medication. Individuals who did not attain such benefits on either medication were classified as non-responders.

RESULTS

Of the 103 participants who showed the cortical slowing pattern on their QEEG, 96 responded positively to stimulant medication. In contrast, of the 41 participants who showed no cortical slowing on their QEEG, none responded positively to methylphenidate or Adderall. (Remember, a positive medication response was defined as normalized

behaviour ratings from parents and teachers as well as a "normal" performance on a computerized test of sustained attention. The criterion for determining positive responders was quite strict.) In addition, each of these 41 non-responders exhibited at least 3 of the following side effects: headaches, increased irritability, sedation, rapid speech, increased impulsive behaviours, or increased hyperactivity. These side effects were rarely reported among those who responded positively to medication.

When efforts were made to predict medication response according to the number and severity of ADHD symptoms or performance on the computerized attention tests, no accurate predictions were achieved. Thus, it was only the indication of cortical slowing on the QEEG that enabled accurate predictions to be made.

SUMMARY AND IMPLICATIONS

The results of this study are impressive. Although almost every participant with ADHD who showed cortical slowing obtained substantial benefits from medication, those showing the behavioural symptoms of ADHD without this QEEG pattern never obtained a similar benefit. While these results require careful replication, they are exciting. Not only may QEEG prove to be a useful tool to assist in the ADHD diagnostic process, but it may also help to identify individuals showing the behavioural manifestations of ADHD who are (and are not) likely to benefit from stimulant medication.

As noted earlier, this would be quite helpful for treatment planning purposes. Although not examined in this study, it is also possible that individuals not showing the cortical slowing pattern would have responded to a different class of medication, such as an antidepressant. This would be an interesting question to explore in subsequent research.

These results also highlight something that is important for clinicians and parents to be aware of: the behavioural symptoms of ADHD can have different origins. Typically, recently published research suggests that individuals diagnosed with ADHD using the current behavioural criteria will show the pattern of cortical slowing that researchers like Dr. Monastra have identified. However, other individuals showing the ADHD behaviours will not. This suggests that some individuals with ADHD have developed their symptoms for other reasons. Accurately identifying those

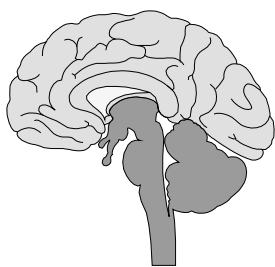
reasons may be key to providing appropriate treatment.

There is other published research which suggests that dietary factors, elevated lead levels, deficiencies in trace minerals like iron and magnesium, along with a variety of other factors may be important contributors to ADHD symptoms in individuals without the pattern of cortical slowing. When specific causes are identified for an individual, it is often directly linked to a specific treatment. For example, providing magnesium supplementation to children with ADHD found to be deficient in magnesium. This is an area where additional research is needed, and it is important to note that such ideas are not widely accepted within the medical and scientific community.

SIGNS THAT YOU'VE HAD TOO MUCH OF THE NINETIES:

1. You try to enter your password on the microwave.
 2. You have a list of 15 phone numbers to reach your family of three.
 3. You e-mail your buddy who works at the desk next to you.
 4. You chat several times a day with a stranger from South America, but you haven't spoken to your next-door neighbour yet this year.
 5. Your reason for not staying in touch with friends is that they do not have e-mail addresses.
 6. You hear most of your jokes via email instead of in person.
 7. When you go home after a long day at work you still answer the phone in a business manner.
 8. When you make phone calls from home, you accidentally insert a 9 to get an outside line.
 9. You've sat at the same desk for four years and worked for three different companies.
 14. Your supervisor doesn't have the ability to do your job.
 10. Vacation time is something you roll over to next year.
- AND THE CLINCHERS ARE....,
11. You read this entire list, and kept nodding and smiling.
 12. You got this joke from a friend that never talks to you anymore, except to send you jokes from the net!

(PS I got this as an e-mail from a relative in USA)



**** NEW SUPPORT FOR THE USE OF QEEG SCANNING IN DIAGNOSING ADHD****

(By Dr. David Rabiner at <http://www.attention.com>)

Quantitative Electroencephalographic (QEEG) scanning is a technique used to measure electrophysiological activity in particular regions of the brain. In a prior issue of Attention Research Update, I discussed a study describing the use of QEEG scanning as an objective procedure for diagnosing ADHD. Results from this study indicated that individuals with ADHD could be reliably distinguished from non-ADHD individuals by QEEG scan results of the prefrontal cortical areas. Approximately 90% of individuals who had been carefully diagnosed with ADHD using standard diagnosed procedures showed a pattern of under activity in these areas (referred to as "cortical slowing"). In contrast, 94% of a control population did not. These data provided good initial evidence that QEEG scanning might be a useful "objective" procedure to assist in the diagnosis of ADHD. Recent work from the same research team provides additional support for the use of QEEG scanning in the ADHD diagnostic process. The first paper reviewed below encompasses 3 separate studies and was published in the January 2001 issue of Neuropsychology. (Monastra et al. (2001). The Development of a Quantitative Electroencephalographic Scanning Process for ADHD: Reliability and Validity Studies. Neuropsychology, 15, pp. 136-144.)

Study 1

The initial study described in this report was designed to replicate findings from the prior work. Participants were 96 individuals between the ages of 6 and 20 who were diagnosed with ADHD, and 33 age-matched comparison subjects. ADHD diagnosis was based on a combination of structured clinical interviews and behavioural rating scales. Comparison subjects received a similar evaluation to rule out ADHD, as well as other neurological conditions that could affect attentional

functioning. The ratio of males to females was approximately 3 to 1, which is consistent with the rates of referral for ADHD evaluations to clinical settings.

The QEEG scanning procedure utilized measured the ratio of theta waves to beta waves in the prefrontal cortical area during 4 different activities: a baseline procedure in which participants were instructed to focus on a single stimulus; a 90-second silent reading task; a 90-second listening task; and a 90-second drawing task in which the subject was asked to reproduce geometric shapes.

Theta waves are low-frequency waves associated with a mental state that has been described as "day-dreamy" and inattentive. Beta waves are higher-frequency waves associated with focus and attention. All individuals produce both theta and beta waves. However, in individuals with ADHD, the ratio of theta waves to beta is typically greater during tasks that demand focus.

During the QEEG scan, electrophysiological activity is measured in prefrontal cortical areas of the brain using electrodes attached to the scalp. These data are used to compute the ratio of theta waves to beta waves -- referred to as the "Attention Index". Attention Index scores above a certain level are indicative of "cortical slowing" and are associated with greater difficulties sustaining attention (i.e. higher Attention Index scores indicate more likelihood of difficulty). Such scores are rarely found in individuals without ADHD. As you would expect, because the ability to sustain attention typically increases with age, adults generally obtain lower Attention Index scores on a QEEG scan than children. (Remember, lower scores are "better" in the sense that they are presumed to more a more highly developed ability to focus attention.)

Results from this study provided a strong replication of those previously reported. Specifically, ADHD individuals were substantially more likely than comparison subjects to show Attention -Index scores above the age-appropriate cut-off score. The exact figures were virtually identical to those that had been found earlier - 90% of individuals with ADHD had scores above the cut-off and 94% of those without ADHD did not. (It should be noted that none of the participants were on stimulant medication at the time the QEEG scan was taken.)

In considering these results, it is important to

remember that ADHD is currently diagnosed by determining whether individuals display a particular constellation of behavioural symptoms. That is how the participants in this study were diagnosed as well. A pattern of abnormal results on a QEEG scan -- or any other type of physiological measurement -- is not one of the diagnostic criteria. Thus, the results reported above indicate that most participants diagnosed with ADHD according to the behavioural criteria outlined in DSM-IV also had atypical QEEG scan results. Conversely, individuals not showing the behavioural symptoms of ADHD almost never showed the abnormal QEEG scan.

Study 2

The second part of this study included an entirely different sample of 285 6- to -20-year-old participants -- all of whom were diagnosed with ADHD using structured interviews and behaviour rating scales. The purpose of this study was to determine how well participants' Attention Index scores (from the QEEG scan) compared with scores they obtained on established procedures used in the diagnosis of ADHD. The other procedures used were parent ratings on the Attention Deficit Disorder Evaluation Scale (ADDES), and two computerized tests of sustained attention -- the Conners' Continuous Performance Test (CPT) and the Test of Variables of Attention (TOVA).

For each of these procedures, scores within a certain range are believed to be indicative of ADHD. In this study, all participants had previously been diagnosed with ADHD, so one would expect that most would have abnormal scores on each of the different "tests". Of course, no test is perfect, so not every individual would show abnormal results on each test.

Because the QEEG procedure is relatively new, and the other procedures are all well-established and widely used, the researchers were interested in the rate of agreement between classification results based on the QEEG scan with classification results based on results from each of the other instruments. In other words, if a participant's QEEG scan fell in the "abnormal" range, how likely was it that his or her score on the other procedures would also be in the abnormal range? Demonstrating that classification results from a new procedure are consistent with results obtained from established procedures is one strategy that researchers use to validate a new test.

Results indicated that classification agreement percentages between the QEEG and the other procedures were as follows: 83% for the ADDES; 70% for the TOVA; and 48% for the Conners' CPT. For the ADDES and the TOVA, these rates of agreement are significantly higher than would be expected by chance. For the Conners' CPT, they were not. Recent studies using the Conners' CPT, however, indicate that it has questionable validity in the diagnosis of ADHD, so this low-level of agreement is not surprising.

Because all participants in this study were carefully diagnosed with ADHD using standard procedures, each participant would have received abnormal scores on each measure if the QEEG scan, ADDES, TOVA, and Conners' CPT were perfectly accurate diagnostic instruments. This, of course, was not the case. It is interesting to note, however, that more participants obtained abnormal results on the QEEG scan than on any of the other procedures. The rates of abnormal results were 80%, 78%, 72%, and 49% for the QEEG, ADDES, TOVA, and Conners' CPT, respectively. Thus, results of this study indicate that QEEG scan results show significant consistency with other well-established procedures used in diagnosing ADHD, and that it is as least as accurate as these other procedures.

(It is important to note that classification agreement between the different procedures was not perfect, and that some individuals who met DSM-IV diagnostic criteria for ADHD did not score in the deviant range on each of the instruments. This makes clear that errors can be made if too much emphasis is placed on results obtained from any single diagnostic procedure. Instead, it is important to obtain data from a variety of sources in the evaluation process, and then make a careful diagnostic judgment that reflects a thoughtful integration of these different data sources.)

Study 3

In the final study in this paper, the researchers examined the consistency of QEEG scan results that individuals received on different occasions. The consistency of results obtained on a test is one measure of a test's reliability, and high test-retest reliability is especially important for tests intended to help with diagnosis. Fifty-five individuals between 6 and 20 participated in this reliability study. Each was given the QEEG scan on 2 occasions, one

month apart. The correlation between individuals' scores for the 2 administrations was .96, which is really very high (i.e. the highest possible correlation that can be obtained is 1.00). This result means that individual's Attention Index scores from the QEEG scan were remarkably stable over the 30-day period. Thus, the score one obtains on a particular day is likely to be very similar to the score one would obtain at another time. An abnormally high score that is suggestive of ADHD is thus unlikely to occur because of chance. Instead, it is likely to reflect a stable characteristic of an individual's underlying EEG activity.

SUMMARY AND IMPLICATIONS

Collectively, the 3 studies described in this paper replicate prior results showing that: QEEG scanning provides an accurate tool for differentiating between individuals with and without ADHD; QEEG scan results demonstrate adequate agreement with more established evaluation procedures; and, results obtained on QEEG scans are remarkably stable over at least short time intervals. Such results provide strong support for the utility of QEEG scanning as an objective procedure to assist in the diagnosis of ADHD.

Although these results are encouraging, they are limited by the fact that the utility of QEEG scan results in distinguishing between individuals with ADHD and individuals with other psychiatric disorders was not tested. Instead, when QEEG results between individuals with and without ADHD were compared, the comparison group was comprised of normal individuals without any other disorder. Thus, we don't know whether individuals without ADHD, but with other psychiatric disorders, would also score in the abnormal range on the QEEG scan. Thus, the utility of this procedure for differentiating between ADHD and other conditions -- which clinicians are often required to do -- remains undetermined. This critical test of the utility of QEEG scanning as a diagnostic procedure for ADHD was examined in a more recent study from this research group. That study is described below.

Young Joanne, the editor of a New York publication, was having trouble with her computer. So she called Tim, the computer guy, over to her desk. Tim clicked a couple buttons and solved the problem. As he was walking away, Joanne called after him, "So,

what was wrong?" And he replied, "It was an ID ten T error."

A puzzled expression ran riot over Joanne's face. "An ID ten T error? What's that ... in case I need to fix it again??"

He gave her a grin... ;-) ... "Haven't you ever heard of an ID ten T error before?"

"No," replied Joanne.

"Write it down," he said, "and I think you'll figure it out."

(She wrote...) I D 1 0 T

****DO QEEG SCAN RESULTS DIFFERENTIATE ADHD FROM OTHER PSYCHIATRIC DISORDERS? ****

(By Dr. David Rabiner at <http://www.attention.com>)

Data from this study are not yet published, but were presented at the recent annual meeting of the American Psychological Association (APA). Participants in the study were 209 individuals ranging in age from 6 to 30. Of the 209 participants, 177 had been diagnosed with ADHD, 16 with Oppositional Defiant Disorder (ODD), and 17 with a mood or anxiety disorder. The authors indicate that these were pure diagnostic groups, meaning that although members of each group may have displayed symptoms found in other psychiatric disorders, none met full diagnostic criteria for any disorder other than their primary diagnosis.

In order to determine whether the QEEG scanning process could differentiate patients with ADHD from those with other psychiatric disorders, Attention Index scores were computed for each participant as described above. The table below shows the average Attention Index scores for each diagnostic group across the different age ranges. Because there were relatively few individuals with ODD or an anxiety or mood disorder, these individuals were combined into a single group labelled Other Diagnosis in the table below. As noted above, higher Attention Index scores indicate high theta/beta ratios and are associated with more limited attention.

Age	ADHD- Inattentive	ADHD Combined	Other Diagnosis
6-11	6.31	6.56	2.90
12-15	3.85	5.48	1.77
16-20	3.89	4.18	1.94
21-30	2.92	2.84	1.63

As indicated above, the average scores for participants with either the inattentive or combined subtype of ADHD are very similar to each other and substantially higher than the average score for participants with other psychiatric diagnoses. At each age level, the difference between the ADHD groups and the other diagnoses groups is statistically significant. The decline in Attention Index scores with advancing age is expected because the ability to maintain focused attention is an ability that typically increases with development.

When a criterion of 1.5 standard deviations above the mean for non-ADHD individuals was used as the cut-off between "normal" and "deviant" QEEG scan results, 78% of the ADHD group had scores in the deviant range. This means that the majority of individuals with ADHD have Attention Index scores that individuals without ADHD infrequently obtain. In contrast, 97% of individuals with other psychiatric diagnoses had Attention Index scores that fell within the normal range. Thus, although these individuals had a clear psychiatric disorder, their results on the QEEG scan were highly unlikely to fall in the range associated with ADHD.

SUMMARY AND IMPLICATIONS

This is a very important study. The results demonstrate that QEEG scan results indicative of high theta/beta ratios in prefrontal cortical areas are specific to ADHD, and are not likely to be found in those with other psychiatric conditions. In other words, the QEEG scan procedure is not only accurate in distinguishing between individuals with ADHD and "normal" individuals, but can also aid with differential diagnosis (i.e. distinguishing individuals with ADHD from those with other psychiatric problems). Because the differential diagnostic question is what clinicians typically face, it appears that this procedure has promise as a useful clinical diagnostic tool. This stands in sharp contrast to results recently reported for the Conners' CPT, which was found to be of

little value in distinguishing individuals with ADHD from those with other diagnoses.

Collectively, results from these studies provide strong support for QEEG scanning as an important technique for assisting in the diagnosis of ADHD. This does not mean, however, that this -- or any other individual test -- can be the sole basis for the diagnosis of ADHD. For example, in the studies reviewed here, between 10 and 20% of individuals who met standard diagnostic criteria for ADHD did not show abnormal QEEG results. In addition, a small number of participants who did not display the behavioural symptoms of ADHD did produce abnormal QEEG scans. These apparent errors point to the importance of basing an ADHD diagnosis on a variety of different data, obtained from a variety of sources. Thus, in addition to the benefits of an objective procedure such as QEEG scanning, information on children's behaviour collected from parents and teachers will always be a critical component of a thorough ADHD evaluation. It is also important to remember that a thorough evaluation for ADHD needs to include a broad assessment of an individual's functioning so that other difficulties that often occur with ADHD -- or which may be present instead of ADHD -- are not missed.

Because a thorough diagnostic evaluation for ADHD requires this broad assessment of an individual's functioning in addition to a specific focus on ADHD symptoms, in all likelihood there will never be a single test that is adequate for this purpose. Nonetheless, the QEEG scanning procedure examined in these studies appears to be an excellent tool for assisting clinicians in the evaluation of ADHD. Other research on this procedure has suggested that QEEG results also provide an accurate prediction of whether an individual will show a positive response to stimulant medication treatment. Thus, this technique may have important utility in treatment planning in addition to a role in the initial evaluation. In the upcoming years, it will be interesting to see whether QEEG scanning -- which is not yet in widespread use -- will begin to be implemented by a greater number of clinicians. For clinicians considering the possibility of incorporating this diagnostic aid into their work, the studies reviewed here certainly suggest there is a reasonable basis for doing so.



Question 1:

If you knew a woman who was pregnant, who had 8 kids already, three who were deaf, two who were blind, one mentally retarded, and she had syphilis; would you recommend that she have an abortion?

Read the next question before turning to the back page for to the answer to this one. Yeah, it's done the rounds a few months ago, but it'll give you something to do while you ponder

Question 2:

It is time to elect a new world leader, and your vote counts. Here are the facts about the three leading candidates:

Candidate A:

Associates with crooked politicians, and consults with astrologists. He's had two mistresses. He also chain smokes and drinks 8 to 10 martinis a day.

Candidate B:

He was kicked out of office twice, sleeps until noon, used opium in college and drinks a quart of whiskey every evening.

Candidate C:

He is a decorated war hero. He's a vegetarian, doesn't smoke, drinks an occasional beer and hasn't had any extramarital affairs.

Which of these candidates would be your choice?

Decide first, (no peeking!) then turn to the back page for the answer.



****IS ALL DISRUPTIVE BEHAVIOR ADHD?***

Sam Goldstein, Ph.D.

To contact Sam Goldstein, Ph.D., please visit his Web site at <http://www.samgoldstein.com>.

Take the bus test. Imagine sitting on a public bus along side a nine-year-old child. There might be a variety of behaviours the child might engage in that would disturb or disrupt you. There might be other aspects of the child's behaviour, while not disruptive that might cause you concern or worry about the child's development, adjustment or welfare. Thus, from this common sense perspective children can exhibit two basic kinds of problems. Those that disturb, disrupt or annoy adults and those that cause adults to worry about the child's welfare, adjustment or behaviour. The latter set of behaviours is usually not disturbing or disruptive. We can easily sit along side a child experiencing depression and learning disability without being disturbed or disrupted on our ride. Yet we would worry about that child's welfare and adjustment. In contrast, we become disturbed and often angered when children act in hyperactive, impulsive, defiant or aggressive ways. At one time, all of these descriptions were considered part and parcel of Attention Deficit Hyperactivity Disorder. It is not difficult to understand why this belief existed. Certainly a child experiencing problems sustaining attention, prone to act in hyperactive and impulsive ways most certainly will exhibit aggressive and oppositional behaviour.

Over the past ten years, however, an emerging solid body of research literature has demonstrated that not all disruptive behaviour is symptomatic or consequential of ADHD. From a common sense perspective I choose to view ADHD as resulting from incompetence as opposed to non-compliance. Because of their impulsive, often unthinking ways of interacting with their environment children with ADHD are prone to behave in resistant or oppositional ways. However, oppositional behaviour, we have come to understand, is also fuelled by environmental adversity, including parents' behaviour and psychiatric status, parenting strategies and even more important, the consistency with which discipline is provided. Thus, while many children with ADHD are described as oppositional and in fact in clinic settings perhaps as many as half also receive a diagnosis of Oppositional Defiant Disorder, an equal if not greater number of children

exhibiting oppositional behaviour do so in the absence of experiencing Attention Deficit Hyperactivity Disorder. In this month's article, I will briefly review the condition we have come to describe as Oppositional Defiant Disorder.

All children misbehave occasionally. In many circumstances when this misbehaviour defies adults' rules, limits or directions, we refer to the behaviour as oppositional. All children are oppositional at times. Certainly oppositionality could in part be viewed as a process by which children begin to develop independence. Most of us, however, recognize when a child's defiant behaviour is not the normal, predictable assertion of independence but arises instead from resentment, anger, unhappiness or impulsivity. Excessively oppositional children are extremely negative and provocative in their behaviour. At times they can even be spiteful or vindictive based upon how they are treated. Such children lose their tempers frequently and without good reason. They argue with adults, appear angry, resentful and are easily irritated. They often blame others for their misbehaviour, defy rules, deliberately annoy people and may use inappropriate language. At times adults view this pattern of behaviour as not only resistant but an effort on the child's part to draw negative attention, suspecting these behaviours resulted from the child's inability to draw positive attention. Some children exhibit what has been described as passive aggressive behaviour, agreeing to comply but never following through. Children with the inattentive type of ADHD are often accused of this problem despite the fact that their difficulties result from lack of focus rather than planned resistance.

Oppositional and delinquent behaviour are not one in the same. Although their attitudes may be negative and even hostile, children with oppositionality tend to direct their negative behaviours towards adults and children with whom they interact on a regular basis at home or at school. They tend to be very pleasant with strangers or other individuals they don't know well. Delinquent children by contrast behave badly towards unfamiliar adults and children as well as their families. They often do so in public settings and with an aggressive component.

More often than not when children experience school problems, they also experience emotional or behavioural problems at home. However, they are much more likely to let it all hang out at home where they feel comfortable rather than at school where a teacher might

think badly of them. When called by the school to discuss their child's academic problems, parents may come away with the distinct impression that the conference was about two entirely different children. The well-behaved, cooperative student the teacher sees at school and the defiant, angry and temperamental child parents view at home. This is especially true when children experience anxiety as well. Such children would never consider misbehaving in school yet at home their anxiety and anger translates into negative behaviour. When children in fact act out at school, they have usually crossed a line emotionally and display a willingness to let the world view their problems and unhappiness. A significant number of these children appear at great risk for developing outright delinquent behaviours.

It is not completely understood why children become excessively oppositional. As noted, oppositionality may be contributed to by four primary factors, including the child's temperament, parents' temperament, parenting strategy and consistency of discipline. There may in fact be a biological basis to this problem as well. Many youngsters exhibiting oppositional behaviour as Dr. Barbara Ingersoll has described, appear to be looking for a fight almost from the moment of birth. Researchers report that some adopted children, even though they live with calm and accommodating adoptive parents in a supportive environment behave in an oppositional manner that closely resembles the behaviour of their birth parents.

The fact is, some children appear to come to the world wired to be oppositional. As infants they can be fussy and difficult to comfort. Their terrible two stages are truly terrible with every frustration leading to a tantrum. As they grow older they continue to be quick to anger and do not seem to care about the feelings of others. Some of these children are defiant in all situations. Others can be defiant in one or another situation. Some appear to be easy going until they begin to experience school problems, at which point they become angry, negative and deliberately oppositional at home as well as at school. After years of being calm and easy to please they suddenly appear to be spoiling for a fight.

It is also not surprising that children struggling at school academically frequently develop defiant patterns of behaviour. Their academic performance may not meet the expectation of the environment. This leads them to regularly receive huge doses of negative

feedback and criticism. Eventually this constant flow leads to frustration and these children begin pushing back in retaliation. Parents may come to believe that these children are merely being disobedient and that disobedience is the cause rather than the consequence of school problems. Closer scrutiny frequently reveals, however, that the behaviour has followed rather than preceded poor school performance.

For many children with ADHD also experiencing oppositional behaviour, a positive, robust response to medication often leads to increased self-control and subsequently reduced oppositionality. Nonetheless, oppositional behaviour with or without ADHD places children at increased risk for later life problems and thus this pattern of behaviour must be addressed. There are a number of good texts and parent training resources. Here are a few of my favourites.

Resources

Barkley, R. (1997). *Managing the Defiant Child: A Guide to Parent Training*. Guilford Press.

Barkley, R. (1998). *Your Defiant Child: Eight Steps to Better Behaviour*. Guilford Press.

Bloomquist, M.L. (1996). *Skills Training for Children with Behaviour Disorders*. Guilford Press.

Green, R.W. (1998). *The Explosive Child*. Harper Collins Publishers.

Phelan, T. (1996). *1-2-3 Magic*. Child Management, Inc.

Robins, A.L. (2000). *ADHD in Adolescents: Diagnosis and Treatment*. Guilford Press.



****THERE'S MORE TO SUCCESS THAN ACADEMIC SMARTS, A BLAZING SAT SCORE AND A HIGH IQ****

By Dr. Alice D'Antoni-Phillips

I've met quite a few bellmen and porters in my life as I have traveled to most of the seven continents. One stands out in my mind

distinctively. Gavin worked at the Ritz Carlton in Laguna Nigel, California. As I was waiting for my taxi to the airport, I observed Gavin for than an hour. People shuttled in and out of the hotel lobby; many were tired, grumpy and persnickety. Some looked as if they had been weaned on a pickle or had sucked on a lemon prior to walking through the revolving doors. Gavin enthusiastically greeted each person with a huge smile and a perk in his gait. "Hey, how are you doing?" he'd say. "Where are you arriving from? Here, let me help you with your load." Some would acknowledge Gavin; others acted as if he were invisible. As they walked (either with a quick clip or slow saunter) toward the guest registration desk Gavin would assure them that he would take care of their luggage and ready their room with a filled ice bucket and any other special needs. His parting comments were something like; "I'm so pleased you have chosen the Ritz Carlton for your visit to the Laguna Nigel area. My name is Gavin, and if I can help, just let me know.

Now, you may be thinking, "Well, no wonder, that's the Ritz Carlton; he's getting paid to do that, or he's trained to do that, or everyone at those posh hotels have to do that." Well, yes, there is some validity to that thinking; however, after observing many, many bellmen and porters in many fine, five-star hotels worldwide, I can assure you that only one-Gavin-has etched a memory in my mind.

What did Gavin have that made him so unique? Why was he distinctive? No doubt, Gavin was truly successful at what he was doing. Granted Gavin was motivated and so bright (we talked and he was also attending college), but more important than Gavin's IQ and motivation were other features in his personality. Gavin had a high EQ level! According to research into success, IQ really accounts for only about 20% of success. The remaining 80% are other factors, one of which is "Emotional Quotient" or EQ. Now, if you don't know what EQ is or how to develop it, then continue reading.

Emotional Quotient is comprised of some clear-cut traits.

Know Yourself

In order to better develop your EQ, your first step is to learn more about yourself. This is called "self-awareness." Self-awareness puts you in the driver's seat in life; you are less likely to be manipulated; you are aware of your

"hot buttons," and you know more about your emotions. People who have high levels of self-awareness are keenly tuned into what makes them tick. Because of this sensitivity, they are able to better control their lives and not allow external factors to put them in a crummy mood.

Emotional Quotient also means being able to regulate your moods. True, we all have up and down periods, days, and experiences; but the person who will not let someone else "jerk his chain" is the one with a high EQ. For instance, on a hot and humid day you're driving in backed up traffic on the way to an appointment. Suddenly, someone cuts in front of you; you have to slam on your brakes, your engine stalls, and the person behind you starts laying on his horn. Your instinct might be to become outraged, yell at them, shake your fist, maybe even tailgate them just to be aggravating. You might angrily shout, "What a jerk! That creep could have caused me to have a wreck!" Continuing to gripe and grumble will only worsen the situation. Those individuals with well-developed EQ's have learned how to talk to themselves and calm themselves down. They may say in their minds, "hey, no big deal. Maybe this dude has to be somewhere fast." Another thing high EQ people use to control their moods is physical activity. Exercise helps them to relax; it clears out the cobwebs of the mind and is a great way to help them "not sweat the small stuff" in life.

Coach Yourself

"Self-motivation" is part EQ. Gavin was hired to do a job, but no one could instill in him the gregarious attitude and all of the self-initiated activities (those little extras) that he displayed. He was optimistic and certainly saw the positive side of almost everything. When he did not get responses from people (not even a nod, smile or thank you) or received "funky," ineffectual looks from them, this did not dampen his self-motivation to remain bright, cheerful and perky. Self-motivation was also characteristic in Gavin's commitment to a full-time college education and a demanding, grueling, full-time works schedule on top of that. As Gavin and I chatted, he admitted that he did spend time reading self-improvement books and had even attended several personal improvement seminars-definitely examples of self-motivation. So if you don't have an ability to turn bad things into good things, or turn lemons into lemonade, then don't complain. You CAN learn a new way of thinking if you're self-motivated!

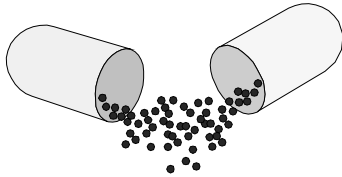
Control Yourself

What happens when you go through the drive-through fast food joint and you're told that your order will be a few more minutes (They have to fry those chicken tenders or your order to hold the mayo on the burger will throw the assembly line into a tailspin). You may not want to wait. Learning to wait and control impulsive actions is important to EQ. People who can set long-term goals where the payoff is not immediate are more successful in life. Distractions and temptations swirl around you everywhere. You have to train yourself to stay focused and wait. With practice of impulse control you'll learn to handle frustrations and disappointments better. In our pop culture we're accustomed to everything being quick and fast; we want it and we want it NOW. Good things come to those who wait-patience and persistence are important virtues. There's no such thing as shedding 20 pounds overnight, pumping up for bodybuilding competition in three days, or the quick-fix medical degree. You must stay on track and not let other people or things side track you.

People...People

If you're going to make it in this world, then you have to have good people skills. This is more than just getting along with people, being courteous, or answering the phone with a pleasant voice. People skills go deeper than the obvious. You need to be able to empathize which means trying to feel what another person may be feeling. For instance, if you get tied up with something and can't be home at the time you indicated to your parents, then a call would be in order to let them know you're delayed, but O.K. Otherwise your parents will be really worried; by calling them, you are showing that you have some understanding of their feelings. You also need to learn how to read people beyond just their words. You've probably heard that actions speak louder than words. Well, good people skill means you can pick up signals from people (that may not come across in their direct words). You've probably experienced situation with friends when you know something is wrong but they say nothing's wrong' however, you just KNOW something is going on and they're not doing a real good job of hiding it. This is your sensitivity working, your sixth sense, and your good people skills. If you can pick up on signals like this, then you're in a better position to handle the signals you send.

Emotional Quotient is something you can start working on now. In your travels, start looking for those "Gavins." Better yet, start being a Gavin. Another place you can learn about EQ is in the Power Organizer Success System. You'll find out the 10 Power Principles of Success and the 9 Power Skills of Success; you can begin practicing these principles and skills that will sharpen your EQ if you use the tool daily in your life. Regardless of your IQ, GPA, and SATs, it's the EQ that makes stars in life-just ask Gavin!



****CONCERTA: A NEW
MEDICATION FOR TREATING
ADHD****

(By Dr. David Rabiner at <http://www.attention.com>)

For parents who have a child taking medication to help manage ADHD symptoms, a frequent source of difficulty is the need for multiple doses each day. Among children who take Ritalin (the generic is methylphenidate), a second dose while at school and a third dose in the late afternoon is often necessary to provide good control of symptoms over the course of the day. Administration during the school day can be associated with complications, and is often a source of concern or embarrassment for the child. As children move into adolescence, this can frequently lead to a refusal on the part of the teen to continue on meds, even though medication may still be necessary to help manage the child's symptoms and help with behaviour and academic performance.

Although sustained release forms of Ritalin last longer and can help somewhat with this problem, the additional duration of benefit provided by a single dose varies substantially across children. Adderall, a more recently approved stimulant medication for treating ADHD, also has a therapeutic effect that lasts longer than Ritalin, and many children on Adderall can get by with a single dose during the school day. Even with Adderall, however, a second dose in the afternoon is often required.

Recently, a new medication called Concerta was approved by the FDA for the treatment of ADHD and is expected to be widely available very shortly. Concerta is simply

methylphenidate in which a unique and patented system is used to maintain a smooth and optimal level of medication in a child's system throughout the entire day. In fact, the benefits of Concerta are reported to persist throughout the school day and into the evening. This would make the administration of medication to children with ADHD much more convenient, and should help to eliminate many of the problems associated with multiple daily doses.

Results of a study on the effectiveness of Concerta was presented at the May meeting of the American Academy of Paediatrics. This study was supervised by Dr. James Swanson from the University of California at Irvine, a leading researcher in the field of ADHD. His work has included studies of both medication and behavioural treatment so I believe he has a broad perspective on the treatment of ADHD.

Participants in this study were 64 6 to 12 year old children with a confirmed diagnosis of ADHD, all of who were being treated currently with methylphenidate. During the study each child received 3 different treatments: methylphenidate on their regular dose 3 times per day, Concerta once per day, and a placebo. Each treatment was received for 7 consecutive days and neither parents, teachers, nor children were aware of what treatment the child was receiving each week. At the end of each week, standardized behaviour rating forms were completed by parents and teachers, as were ratings of possible adverse side effects. (To be sure that participants would not know when the child was on the Concerta, one "real" dose and 2 placebo pills were given each day. This way, 3 "doses" each day were required during every week of the trial.)

Results indicated that both Concerta and the 3 daily doses of methylphenidate resulted in significantly lower symptom ratings compared to placebo from both parents and teachers. The two medications, in contrast, did not differ from one another. This means, of course, than a single daily dose of Concerta was as effective as 3 doses of regular methylphenidate in managing the symptoms of ADHD. Side effects were reported to be mild and were quite similar to regular methylphenidate. Only 3 side effects were reported to occur in over 2% of the children - abdominal pain, headaches, and fever - and these all occurred in less than 5% of the participants.

Overall, parents reported preferring Concerta to the methylphenidate used during the study and to the treatment their child had been receiving prior to the study. Remember, this preference for Concerta was reported even though during the study, 3 administrations of what they thought was medication were required. (During the time they were receiving Concerta, it was just the first dose each day that was real medication. The second two "doses" were actually placebos.) The most likely reason for this preference, I think, is that with Concerta, the smoother release of medication throughout the day may have resulted in more consistent management of symptoms than regular methylphenidate.

A SECOND STUDY OF CONCERTA

I also recently saw a press release describing a second study involving Concerta. A larger number of participants - 407 children with a confirmed diagnosis of ADHD - were included and these children were followed over the course of an entire school year. Children in the study ranged in age from 6 to 13 and had previously completed a short-term controlled study that included regular methylphenidate, Concerta, and placebo conditions. In this second study, children were assigned to one of three dosing levels - 18, 36, or 54 mg. - based on the dose level administered in the short-term study. Data on the results of this study are not yet published in a peer-reviewed journal, but were presented at a recent meeting of the American Psychiatric Association.

During the course of the year, children were evaluated with varying frequency using standardized ratings of behaviour and attention. Results indicated sustained improvement in behaviour and attention over the course of the year. In a global assessment of treatment effectiveness obtained at the end of the study, over 60% of teachers and 84% of parents rated treatment as good or excellent. Thus, it appears from these results that the once per day treatment with Concerta provide effective symptom management over the course of the entire year. Side effects reported were similar to those that have been reported before for regular methylphenidate.

Note: I was previously advised by a subscriber to note when studies reporting effective medication treatment have been funded by the pharmaceutical company who manufactures the drug. I believe this is the case here. While some would argue that this means the results are suspect, I do not personally feel this to be

correct.

Such medication studies are typically conducted by independent academicians, and I have several colleagues who are routinely involved in pharmaceutical trials. The clinic where they work is paid by the drug company to conduct the study, but this does not influence - in my opinion - the integrity with which the data is collected and reported. It is also important to be aware that there is not really an alternative to the drug company paying for such studies. These studies are necessary to obtain FDA approval and no one else is going to fund studies of a medication that has not yet been approved by the FDA.

Should you make the switch to Concerta for your child?

The answer to this question is not necessarily straight forward. If your child is currently taking another medication that is working well, and having to take multiple doses each day is not a problem, there may be no good reason to switch. Basically, why tinker around if everything is going fine?

If you and your child's physician do elect to try Concerta, you should be aware that because Concerta is methylphenidate that is being delivered in a way that maintains a steady dose over the entire day, children doing well on regular methylphenidate should do well on Concerta. If your child has been on another type of medication such as Adderall or Dexedrine, however, one could not necessarily assume that Concerta would be equally effective in managing ADHD symptoms. It is possible, for example, that your own child's symptoms would not be managed as well if the switch were made.

If your child's current medication seems to be working well, but he/she requires multiple doses each day which is resulting in compliance problems, than discussing a switch to Concerta with your child's physician should be considered. As noted above, the need for only once a day dosing may be especially helpful with teens who often balk at needing to take medication during the school day.

If your child is not currently taking medication to manage ADHD symptoms, but this is something you are considering, it may be worth asking your doctor about starting out with Concerta. So far, it appears to be as effective as regular methylphenidate in

managing ADHD symptoms, and to produce no additional side effects. The caution to keep in mind, however, is that it has not yet been studied as extensively as regular methylphenidate or even Adderall, and there can be no guarantee that these initially encouraging results will hold up to further study. There is no compelling reason, however, to think that they will not. My own personal expectation is that they will.

One other issue that I think is important in the decision to use Concerta is whether a child really needs medication throughout the entire day, which is what Concerta provides. For example, some children require medication primarily to assist with academic functioning during the school day, and really do not need it except for these times. For these children, a single morning dose of methylphenidate or Adderall may be all they require. In such instances, it seems like a legitimate question to ask is whether Concerta would really be preferable.

In summary, although Concerta appears like it will be an extremely helpful and valuable new medication for many children with ADHD, it is not necessarily going to be the best choice for everyone. As always, carefully evaluating what is required by each individual child is still required to make the best decisions about medication.

One day, at a local restaurant, a woman suddenly called out, "My son's choking! He swallowed a cent! Help! Please, anyone! Help!"

A man from a nearby table stood up and announced that he was quite experienced at this sort of thing. He stepped over with almost no look of concern, wrapped his hands around the boy's gonads and squeezed. Out popped the coin. The man then went back to his table as though nothing had happened.

"Thank you so much!" the mother cried. "Are you a paramedic?" "No," replied the man, "I work for the Inland Revenue Service."

****NEW OUTCOME REPORTS FROM THE MTA STUDY****

(By Dr. David Rabiner at <http://www.attention.com>)

The MTA Study is the largest and most comprehensive treatment study of ADHD ever conducted, involving 579 children between the ages of 7 and 9, each diagnosed with the

combined subtype of ADHD (i.e. these children had both inattentive and hyperactive-impulsive symptoms). The study took place at 6 different sites around the country (USA).

Children participating in the MTA study were randomly assigned to one of 4 different treatment conditions: combined treatment - a combination of carefully administered medication treatment and intensive behavioural intervention; medication management only; behavioural treatment only; and community care (i.e. these children received treatment as usual in their communities.) Fourteen months after treatment began, the children were assessed on a variety of different outcome measures covering a variety of domains of functioning, including primary ADHD symptoms, oppositional behaviour, parent-child relations, peer relations, self-esteem, anxiety/symptoms of emotional distress, and academic achievement.

As is typical of a study of this size, the initial results were complex, but can be reasonably summarized. First, children in all 4 groups were doing better at the end of the study than they were when treatment began. Second, on some outcomes, combined treatment and medication management alone were superior to behavioural treatment or community care. Finally, no statistically significant differences were found between combined treatment and medication management on any of the 19 individual outcomes examined (although there was some indication that children receiving combined treatment fared somewhat better). For a comprehensive review of this initial set of findings, including a careful description of the different treatments provided in this study, click here. Reviewing this extensive summary of the initial MTA publication will be helpful in considering the information that follows.

The absence of significant differences between the combined and medication management treatments has been widely interpreted to indicate that behavioural interventions do not provide any incremental benefit to well conducted medication treatment. The MTA researchers themselves, however, never made this conclusion. In fact, two papers published in the February 2001 issue of the Journal of the American Academy of Child and Adolescent Psychiatry suggest that the combination of medication and treatment is preferable in many cases to medication alone.

In the first paper -- "Multimodal treatment of

ADHD in the MTA: An alternative outcome analysis" (Conners et al., JAACAP, 40, 159-167) – the authors take a different approach to examining treatment outcome than that used in the initial publication. Rather than examine each outcome measure separately -- which was done initially to determine whether response to the 4 different treatments varied for specific outcomes -- the authors of this paper created a single composite outcome measure by averaging children's scores on the individual measures. This composite measure can be thought of as an indicator of how each child was doing in general, across multiple domains of functioning. Although this approach eliminates the possibility of comparing treatment outcomes in individual domains, comparing the composite outcome scores for children in the 4 groups enables one to obtain a more global perspective on the impact of the different treatments.

The second "re-analysis" of the treatment outcome data -- "Clinical relevance of the primary findings of the MTA: Success rates based on severity of ADHD and ODD symptoms at the end of treatment" (Swanson et al., JAACAP, 40, 168-179) -- takes a slightly different approach. Rather than creating a composite outcome score that reflects how children were doing in multiple domains of functioning, the authors focus on parent and teacher ratings of core ADHD symptoms and symptoms of ODD (Oppositional Defiant Disorder). And, the primary question examined is the degree to which each treatment resulted in children displaying levels of ADHD and ODD symptoms similar to what is typical for children without ADHD. When this was true, treatment was considered to be successful. This approach to examining the data (i.e. the percentage of children showing non-deviant levels of symptoms at the end of treatment) is especially instructive.

RESULTS

The results from analyses using the broad composite outcome described above are informative, and modify (somewhat) conclusions drawn from the initial study results. The authors report that, when this composite was used to measure outcome, children receiving combined treatment did significantly better than children in any other group. They did much better than the children who received community care or behavioural treatment alone, and modestly better than children whose treatment was restricted to

careful medication management. This latter result differs from previously published findings in which researchers did not find statistically significant advantages for combined treatment relative to medication management for individual outcomes. When medication management alone was compared to behavioural treatment alone, medication treatment demonstrated a modest superiority. .

Results from the second paper help put these results in a somewhat clearer perspective. Recall that in this paper, the authors focused on the percentage of children in each group who had average parent and teacher ratings of ADHD and ODD symptoms at the end of treatment -- i.e. symptom ratings were similar to those of children without ADHD. Results from this analysis are shown below.

Combined	Medication	Behavioural	Community Care
68%	56%	34%	25%

As the numbers indicate, over two-thirds of the children receiving combined treatment had "normalized" scores after 14 months, compared to only 1 in 4 treated in the community. Normalized outcomes were more likely when treatment included the careful medication component (i.e. combined or medication) rather than intensive behavioural interventions alone. Finally, combined treatment alone was modestly superior to medication management.

Specifically, these data suggest that if children in the medication group had also received the MTA behavioural interventions, a greater number would have been in the "normal" range at the 14-month outcome assessment.

While these results demonstrate the dramatic improvements in core ADHD symptoms that are provided by effective treatment, it is also important to point out that such improvement is not always the case. Even when state-of-the-art medication and behavioural interventions were combined, about one-third of children continued to show elevated levels of ADHD/ODD symptoms 14 months later, relative to non-ADHD peers. Among those receiving the most carefully conducted medication treatment available, over 40% continued to show elevated levels of core ADHD symptoms. This does not mean, of course, that these children were not benefiting from the treatment. It does indicate, however, that many continued to experience difficulties despite receiving the best possible care currently available.

SUMMARY AND IMPLICATIONS

In general, results from these two papers are consistent with the initial set of published findings. As reported in the initial outcome paper, children in all 4 groups showed significant improvement. Children receiving careful medication treatment were doing somewhat better than children whose treatment was limited to intensive behavioural interventions. What is evident here that was not initially reported, however, is that adding behavioural interventions to careful medication management yields significantly better outcomes when a composite outcome measure is used (i.e. study 1 above) or when one considers the likelihood of normalized scores on core ADHD/ODD symptoms (i.e. study 2). Thus, the benefits of "multi-modal" treatment for ADHD are more clearly supported by these results. (Note: It is important to remember that participants in the MTA study were restricted to those with the combined subtype of ADHD and included no children with inattentive symptoms only. Thus, these results do not inform us about the efficacy of the different treatments for children with the inattentive subtype.)

In translating these findings to the issues faced by individual parents and clinicians, several things are noteworthy. First, parents need to be vigilant about trying to obtain treatment for their child that is as close as possible to treatments used in the MTA study. In regards to medication, this means a careful initial trial is necessary to determine the optimum dosage and medication for their child, followed by systematic monitoring to determine how their child is doing and make adjustments as indicated. The excellent results obtained by children treated with medication – either alone or in combination with behavioural interventions -- points to the importance of this careful approach. (Note: You can use the Behavioural Observation System, available as a FREE tool within the Learning Circle, to monitor the ongoing effectiveness of your child's treatment, whatever the nature of that treatment may be.)

The results also indicate that the addition of well-designed and carefully implemented behavioural interventions could reasonably be expected to provide some modest additional benefit. One caveat to mention here, however, is that the behavioural interventions used in the MTA study would be difficult to duplicate in most communities. Thus, it remains unclear

whether the intensity of behavioural interventions that are more routinely available in this age of managed care would be similarly effective.

Finally, it should be noted that the treatments tested in the MTA study were limited to medication and comprehensive behavioural treatment. As noted above, although these treatments were clearly shown to be helpful, many participants continued to experience important difficulty despite receiving state-of-the-art care using these approaches. This highlights the need for continued efforts to develop other types of interventions. Parents should be aware that promising results have been reported for a number of alternative treatments including dietary interventions and neurofeedback. Thus, should traditional approaches to treating ADHD (i.e. medication and/or behavioural therapy) prove to be insufficient for a particular child, there are other options that may prove fruitful.

Answers to Quiz on Page 7

Candidate A is Franklin D. Roosevelt
Candidate B is Winston Churchill
Candidate C is Adolph Hitler

And by the way, the answer to the abortion question: If you said yes, you just killed Beethoven.

Pretty interesting huh?

Makes a person think before judging someone.

Remember amateurs built the ark.
Professionals built the Titanic.

Continued from Front Page.....We are currently working on the issue of our children being administered their medication during school hours. We know a lot of you have problems in this area and the Federation of Organisations of Persons with Disabilities is backing our efforts since it is not only our children who are affected by restrictions in this sphere.