

ADHD and ADD: Guide for Families



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Where to Get this Handout

This handout is available from <http://www.drcheng.ca> in the Mental Health Information section. Any comments and suggestions are welcome and will help ensure this handout is helpful.

Purpose of this Handout

This handout provides information about attention-deficit hyperactivity disorder (ADHD) and attention-deficit disorder (ADD) to families. Note that there is also an accompanying handout for primary care physicians which has more details about medication treatments.

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What is it?

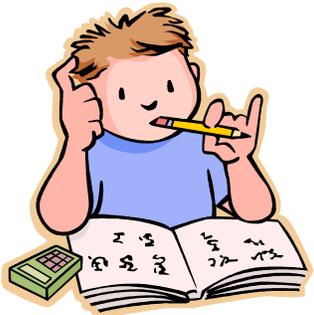
Attention Deficit Disorder (ADD) and Attention Deficit/Hyperactivity Disorder (ADHD) are both neurologic (brain) conditions that cause troubles with attention and distractibility.

The main types of ADHD are:

- Problems with both inattention and hyperactivity, known officially as “ADHD, Combined Type”, with the classic example being the boy who can’t sit still in class (hyperactivity) and who is distracted and can’t pay attention
- Attention deficit mainly, but not problems with hyperactivity; known as “ADD, attention deficit disorder”. (The official term is ADHD, Primarily Inattentive Type.). The classic example is the girl who has troubles paying attention, but is not hyperactive like the other boys with ADHD in her class.
- Problems with hyperactivity mainly, known officially as ADHD, Primarily Hyperactive Type, where a student can’t sit still, but otherwise has good attention

ADHD Symptoms In More Detail

Everyone has problems with inattention, and get hyper from time to time, but in ADHD, it is so severe that it causes problems with school, or work and relationships. Compared to people without ADHD, those with ADHD can have more difficulties in the following areas:

- Troubles with attention: Inattention is trouble paying attention to (boring) things that one is supposed to be paying attention to, e.g. the teacher, homework or chores. On the other hand, when doing interesting things like their hobbies/interests, or video games, they can pay really great attention, sometimes to the point of being “hyperfocused” and being unable to switch their attention to other things as appropriate. Distractibility happens because the person gets distracted easily (from paying attention to the teacher in class), and focuses on other things easily (like what’s happening outside in the hallway or outside the window.)
- Troubles needing things to be exciting: Because the person with ADHD needs things to be very stimulating in order to pay attention, this means that because most things in life aren’t that exciting, it means that the person with ADHD gets bored easily. This then leads to:
 - Trouble finishing tasks, because the person with ADHD gets bored quickly with things. Hence, they have troubles finishing homework, or chores.
 - Because they don’t like boring things, they often rush through tasks, thus making lots of careless mistakes
 - Being organizing things is boring, they often tend to be messy, or lose and misplace things.
 - Frequent complaints of boredom, which leads the person with ADHD either needing to keep busy all the time, or needing to seek out other people for their stimulation or entertainment.
- Troubles with hyperactivity-impulsivity (seen in those with the hyperactive-impulsive type of ADHD)

- Hyperactivity is the need to move around, or fidget, which can cause problems in a classroom setting where there is not enough opportunity for movement. Examples include:

- Extreme need for movement
- With milder cases, may simply need to constantly fidget with hands or feet, or need to shake legs
- With more severe cases, may be unable to sit still, and have to move frequently
- May run around too much, or climb on things



- Impulsivity, which is the tendency to act first, and think afterwards, which can lead people to frequently have problems with poor decisions. Examples of impulsivity include:

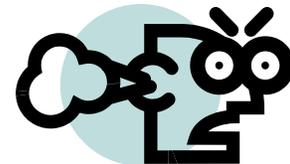
- S/he often blurts out answers in class;
- Troubles waiting his/her turn
- Often interrupts others a lot, because of troubles waiting
- Tends to do things without thinking about them first, or without thinking through consequences, and later regrets it



- Troubles regulating effort and alertness/arousal level: troubles maintaining alertness over long periods. Many people find that they can do short-term projects well, but have troubles sustaining their effort over longer periods of time. They often have troubles regulating sleep and alertness. When its time for them to go to bed, they report their mind being overly active, and cannot sleep until they are exhausted. In the morning when they are supposed to wake up, they may report having troubles waking up. During the daytime, they may report that they can be okay as long as they are moving around or talking a lot, but if they sit down for listening to a class, meeting or paperwork, then they find themselves falling asleep.



- Troubles regulating emotions: many individuals with ADHD report getting frustrated easily, and having strong emotions. The ability to experience strong emotions can make someone passionate and fun to be with, but the unpleasant emotions also experienced can cause troubles with anger and frustration.



- Troubles with memory: many people with ADHD report having good memory for things that happened a long time ago, but that they have troubles remembering where they put something, or what someone was just telling them.

How Common is Attention Deficit Hyperactivity Disorder?

Approximately 5% of children and 3% of adults have ADHD.

What does undiagnosed ADHD look like in real life? (i.e. unofficial criteria)

Adapted from Driven to Distraction by Ed Hallowell, M.D. and John Ratey, M.D.

- A sense of underachievement regardless of how much you have accomplished.

- Often feeling overwhelmed. "Little things" in your life add up to create huge obstacles. Not knowing where to start first - you may simply not do anything.
- Chronic procrastination or trouble getting started on tasks. You may experience anxiety and be fearful that you won't do it right.
- Many projects going simultaneously. You may either have a difficult time saying - NO or everything just may be so interesting to you. But - since you may have trouble seeing each project to the end, you wind up with many things unfinished.
- A tendency to say what comes to mind without necessarily considering the timing or appropriateness of the remark. The adult (or child) with ADD gets carried away with enthusiasm. As the idea comes, it must be spoken. An explanation often heard is "I'm just very honest!" While "honesty is the best policy", this often reveals that you haven't been able to consider your words before they are spoken.
- A frequent search for high stimulation. Since the ADD brain needs to be stimulated, you may always looking for something novel to do. However, sometimes this can be dangerous or unhealthy (i.e. sexual promiscuity, gambling, etc.)
- A tendency to be easily bored. However, you're probably never bored for long, because the moment you sense boredom, you immediately find something new (i.e. channel surfing, etc.).
- Easily distracted and trouble focusing your attention on something not of interest (i.e. not stimulating to you). You may tune out or drift away in the middle of a page or a conversation. When you are interested in something (i.e. stimulating to you) you can hyperfocus on it and be difficult to reach.
- Often creative, intuitive, highly intelligent. You look at the world differently from someone who is not ADD. Although you may be creative and intuitive, you're probably very often the only one who sees the situation as you do.
- Trouble going through established channels or following "proper" procedures. Since you see the world differently, the "rule" may not make any sense to you, or you may be bored with the same routine. However, we all sometimes have to follow rules.
- Impatient and have a low tolerance for frustration. The impatience comes from your need for constant stimulation. Getting frustrated may remind you of previous failures.
- Impulsive, either verbally or in action. The need for stimulation is exhibited as impulsive behavior. Spending money, changing plans, developing new schemes or changing careers or jobs often are some examples. This is one of the more dangerous of the adult symptoms, or depending on the impulse, one of the more advantageous.
- Sense of insecurity. Many adults with ADD feel chronically insecure, no matter how stable their life situation may be. They often feel as if their world could collapse around them ("the bubble is always about to burst")
- Frequent mood swings. You may find yourself going in and out of moods. You may get excited about something and then be let down. You may be feeling good one moment and then something (may be unconscious) may pull you back into unpleasant thoughts.
- A restlessness or "nervous energy". You may have a difficult time "relaxing". You may pace, shift positions often while sitting, frequently have to leave a room or table and feel edgy while at rest.
- Tendency towards addictive behaviors. As a result of your impulsivity and seeking stimulation you look to substances such as alcohol or cocaine, or to an activity, such as gambling, or shopping, or eating, or overworking for your excitement.
- Inaccurate self-observation. Whether you realize it or not, you are a poor observer of others and yourself. You don't accurately gauge the impact you have on other people and probably see yourself as less effective or more powerful than other people do.

Prognosis -- Can someone outgrow their ADHD?

Over time, with proper treatment and management strategies, things generally improve.

About 50-60% of youth with ADD/ADHD will outgrow most of the symptoms by their 20's.

Hyperactivity tends to diminish over time, and change into restlessness/fidgetiness.

Impulsivity also tends to diminish, but can cause problems such as interrupting others, or suddenly quitting jobs.

Attentional problems may also continue into adulthood, making it hard to get things done.

Although things may improve, many youth will continue to benefit for treatment for the ADHD even as adults.

As an adult, it becomes important to find careers that a good match with typical ADHD characteristics.

Myths about ADHD

Myth	Truth
ADHD is due to bad parenting	ADHD is a neurologic condition with definite brain differences in individuals with ADHD – just like epilepsy is not the result of bad parenting, neither is ADHD. At the same time, problems with parenting (i.e. matching a parenting style to a particular child) can still occur with ADHD.
People with ADHD can't focus at all. My child can focus on things he is interested in, like video games... he can't have ADHD, can he?	<p>In reality, people with ADHD can focus; its just that things need to be very stimulating for them to do so. Thus, just because a child is able to focus on interesting, stimulating activities doesn't mean that s/he doesn't have ADHD.</p> <p>Unfortunately in life, its not enough to be able to focus just on interesting things. To be successful, one also has to be able to focus on boring, unstimulating things, like homework or chores...</p>

ADHD as Hunter Traits

Why do people even have ADHD? The "Hunter Theory" suggests the reason we have ADHD is because these traits were essential for our survival from our early days when humans survived through hunting and gathering (Hartman, 2003; Jansen, 1997).

Key points of the theory are:

- ADHD, as often implied by its name, is often thought about as an attentional disorder but it is perhaps better to think of it as an attentional difference.
- ADHD traits may actually be helpful 'hunter' traits that were essential to human evolution,
- ADHD traits can actually be an advantage in the current circumstances
 - The theory of ADHD children is the idea that they are the "hunters" who are able to take in continuous stimuli and react quickly to changing circumstances. Whereas, non-ADHD children are the "farmers" who are patient, methodical, and focused over long periods of time.
- Unfortunately for ADHD children, traditional schools are a bad match for their hunter traits



<u>Trait</u>	<u>Advantages of Hunter Trait in a “Hunter’s World”</u>	<u>Disadvantages of Hunter Trait in a “Farmer’s World”</u>
Acting quickly	Acting quickly is necessary to survive certain dangerous situations, because those who fail to react get eaten	Impulsivity is when a person acts too quickly, e.g. acting before thinking
High energy	Having a high activity level enables the hunter to catch his/her food (that is trying to run away)	Excessive energy in the classroom leads to difficulties sitting still, or troubles fidgeting
High need for stimulation	Able to tolerate high amounts of stress and stimuli, but thus has difficulty with boring tasks Better at exciting, new tasks	When there is insufficient stimulation (e.g. in a classroom), the person either gets bored, or tries to self-stimulate by day-dreaming, talking to others, etc.
High visual perception	Excellent visual perception helps one look for dangers in the environment	Easily distracted by extraneous visual stimuli
ADHD traits and jobs	Ideal jobs: jobs that are high energy, possibly outdoors work, that are hands on Visually stimulating jobs Extreme sports, stock broker, retail sales, entertainment industry, hospitality industry (e.g. restaurants, hotels, resorts, social director, etc.)	Worst job: sedentary jobs that do not permit movement or activity, jobs that focus on boring, repetitive tasks

Positives of having ADHD

Classic strengths of people with ADD/ADHD include the following (sources include Bob Sea at <http://www.netacc.net/~gradda/sp0150or.html>):

- Extremely interesting and exciting to be with (due to their need for excitement)
- Are spontaneous (due to their impulsivity)
- Tend to be very passionate with their feelings – although they may be quick to anger, they are just as easily quick to get over something and move on, and not ruminate and dwell on things (due to their impulsivity)
- Having an awesome sense of humor and wit (due to their impulsivity)
- Tend to be very energetic (due to their hyperactivity)
- Tend to be laid back and relaxed, and have a superior tolerance for chaos
- Intuitive understanding of technology such as computers
- Tend to be creative, as ADD is especially common among artists, musicians, and other creative people (due to their right-brained, visual strengths)
- Do well with hands on tasks

Management and Treatment of ADHD

Taking Care of the Physical Self (the Body and Brain)

- **Regular exercise – for your child with hyperactivity-impulsivity, this is especially helpful for giving an outlet to your child’s high energy and improving attention.**

This CBC feature entitled Brain Gains, discusses how a simple exercise program at a high needs school improved behaviour, learning and moods in students.

http://www.cbc.ca/national/blog/special_feature/brain_gains/

Children in this school received 20-minutes of sustained aerobic exercise daily, that pushed them to 65-75% of their maximal heart rate. This was done primarily with individual exercise with students on treadmills, or stationary bikes.

Significant improvements in mood, behaviour and learning were seen, e.g. some students made improvement in grades as much as one grade level within a matter of months; some students no longer required medication for ADHD.

But don't kids get physical education already? Yes they do, but the average phys ed class doesn't push kids sufficiently; they spend much time waiting around in a team sport, or they don't even participate.

Thus, even if your kids don't get this type of exercise at school, it is easy for parents to do this with their children on a daily basis on their own!

- Getting enough sleep
- Having a healthy diet: having regular breakfast, lunch and dinner, including snacks, which conforms to the Canada Food Guide. Missing meals (particularly breakfast) worsens people's concentration, and thus their ability to function.



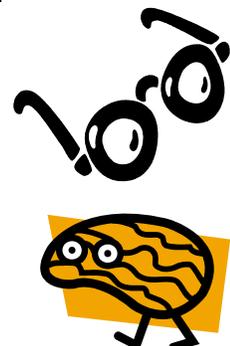
Medications for ADHD

Decades of research show that medications can help with ADHD, and they appear to work by stimulating or improving function in the brain's attention and impulse control centers.

Just like some people wear glasses to help their eyes focus better, medications can be like 'glasses for the brain' in order to help the person's brain focus and work better.

Commonly used medications include, but are not limited to:

- Medications such as
 - Methylphenidate (Ritalin™ regular, Ritalin™ SR, or Concerta™)
 - Dextroamphetamine (Dexedrine™, or Adderall™)
- Other medications such as
 - Bupropion (Wellbutrin™)
 - Atomoxetine (Strattera™)



- Commonly used medications to reduce hyperactivity or impulsivity include:
 - Clonidine (Catapres™)
 - Risperidone (Risperdal™)
 - Quetiapine (Seroquel™)

(Note that medications have a generic name, which describes the name of the medication, as well as a tradename, which describes the company that makes the medication. For example Methylphenidate is the name of the chemical, whereas Ritalin, Concerta are different brandnames. When medications first come out, there is only a tradename version available, but after a period of time, more and more generic versions become available.)

Frequently Asked Questions (FAQs) about Medications

- How are medications used?
 - For ADHD, physicians usually start with long-acting versions such as
 - Methylphenidate (e.g. Concerta), or
 - Dextroamphetamine (e.g. Adderall XR, or Dexedrine spansules)
- Why use medication?
 - Studies have shown that with true AD(H)D, the best treatment is usually a combination of medications and coping/behavioral strategies
 - In youth that truly have ADHD, When comparing 1) medications alone vs. 2) coping/behavioral strategies alone, studies have shown that 1) **medications alone were superior**
 - And the best treatment was with both medications, and coping/behavioral strategies
 - These results make sense because brain scans of people with ADHD definitely show that there are distinct brain differences – they show **decreased** activity in the prefrontal cortex, whereas normal people have increased activity in the prefrontal cortex.
 - Hence, stimulant medications work by stimulating, or increasing activity in those ‘concentration’ centres in the prefrontal cortex
 - After taking stimulant medications, brain scans of people with ADHD show that their brains more closely resemble those of people without ADHD
- How long until the medication shows an effect?
 - With the stimulant medications, usually effects are seen the same day, and one can see continued improvement over time
 - With the non-stimulant medications (e.g. Bupropion SR, atomoxetine), it can take a few weeks
- How long does the patient need to be on medication?
 - Every person is different
 - Some people take medications on weekdays only; others find they also have benefit from weekends, so they take their medication every day
 - Some people take the medication during the school year only; some continue because they have continued benefit during the summer
 - Some people continuing to take the medication as they become adults, others do not
 - Often medication is unnecessary as people become adults, because
 - They find careers where having untreated ADHD traits is no longer a severe liability, e.g. having jobs which are high energy, high excitement, spontaneous
 - They find that their brain ‘matures’, and they are less impulsive, and more able to focus and pay attention
- Won't the person taking medications lose control or become dependent on them?

- For those with AD(H)D, taking the medication will actually help the person gain more control over their life – by improving concentration, self-control, organization, it helps the person be more successful in life
- Won't taking stimulant medications like Ritalin or Dexedrine lead to substance abuse?
 - Studies have found that taking stimulant medications actually may reduce the risk of substance abuse, compared with untreated youth with ADHD (Wilens et al., Pediatrics 2003;111:179-85).
- What are the side effects of medications?
 - Stimulant medications can cause side effects such as increased agitation, troubles with sleep, troubles appetite, and increased anxiety
 - In cases where there are side effects, usually these only last a short while and go away, or some way can be found to deal with them
- What if the medication turns the person into a “zombie”?
 - This is an uncommon side effect, where a small proportion of people report feeling ‘dulled’ by the medication. In these cases, one’s physician should be informed so that changes can be made. For people in whom medication is helpful however, the medication usually has an ‘anti-zombie’ effect because it helps them function better at home, work and school.
- What can be done about side effects?
 - The good news is that usually side effects won't last and that one can wait it out. If side effects persist however, it is important to tell the physician, and one option is to lower the medication dose until the side effects go away.
- This table lists common side effects, and possible coping strategies:

<u>Side effect</u>	<u>Strategy</u>
Trouble with sleep	<ul style="list-style-type: none"> • Take medication earlier in the day • Switch to shorter-acting medication • See the Sleep Strategies Handout • If despite the use of various sleep strategies, another option is a low dose of a medication to help with sleep, e.g. Clonidine or Risperidone are examples
Loss of appetite	<ul style="list-style-type: none"> • Eat more when medication is not active in the body <ul style="list-style-type: none"> • E.g. having breakfast BEFORE taking medication, or having a meal before bedtime) • Eat many small meals rather than a few large meals • Eating food in smaller portion sizes may be psychologically easier than eating a larger size <ul style="list-style-type: none"> • E.g. instead of giving a whole sandwich, cut it up into four pieces • Serve foods in smaller ‘hors d'oeuvre’ size portions • Eat snack and finger foods, especially while relaxing – naturally, try for healthy examples such as yoghurt, fruit, dried fruit (e.g. cranberries, raisins), energy bars, nuts, but if there are troubles getting enough calories, then junk food in moderation would be acceptable • Have drinks and fluids that have calories such as homogenized milk (as opposed to skim milk), fruit juices, or milk-shakes • Eat more high calorie meals

Stomach Ache	<ul style="list-style-type: none"> • Whenever possible, offer favorite foods/meals • Catchup by eating more in evening, or on weekends • Take medication with food and not on an empty stomach
Growth	<ul style="list-style-type: none"> • Studies show that on average, people with ADHD are taller than the general population • The best approach is to follow the child's growth on a growth scale, and if there is a significant drop in the child's growth rate, then alternates an be discussed with the physician, which include lowering the dosage of the medication
Headache	<ul style="list-style-type: none"> • May occur
Tics	<ul style="list-style-type: none"> • Tics are muscle movements that the person has, but that they are not entirely in control of. Examples include movement such as winking, eye blinking, arm or facial twitches, and sounds such as humming, throat clearing, sniffing. • It has been wondered whether or not ADHD medications cause tics, but the consensus nowadays is that they do not; however, a large percentage (~ 50%) of people with underlying tic disorders (such as Tic Disorder or Tourette's) also happen to have ADHD, and usually it is the ADHD that is diagnosed first. • If it really appears that the tics are truly worsened by ADHD medication, then there are various options such as reducing the dosage (if possible), or switching the medication

- Newer medications such as non-stimulants (Bupropion SR aka Wellbutrin SR), as well as the newer stimulants (such as Adderall XR and Concerta) tend to have less side effects than the original stimulants such as Methylphenidate (Ritalin) or Dextroamphetamine (Dexedrine)
- Aren't people with ADHD already 'hyper'? Wouldn't taking a stimulant make them worse?
 - In fact, stimulant medications will stimulate the focus and impulse control areas, thereby helping ADHD.
 - In fact, many people with ADHD report that stimulants such as caffeine (and nicotine) can be soothing and unlike people without ADHD, many ADHD individuals even report that a mild dose of stimulant in the evening helps them sleep!
- Will taking stimulant medications lead to drug addiction?
 - In fact, studies show that proper treatment of ADHD will REDUCE the risk of future problems such as drug addiction, or troubles with the law
 - By helping people function better at home, school and work, it keeps them from negative behaviors such as street drug use, and crime...

Diet and Nutrition in ADHD

There are many different theories about the role of diet and nutrition in ADHD, supported by varying amounts of data.

Omega 3 fatty acid

Omega 3 fatty acid has some evidence that suggests it may be helpful for brain conditions such as ADHD, enuresis, manic depression and depression. For ADHD, The Durham Trial (www.durhamtrial.org) showed positive results with 500 mg daily of EPA in school children with ADHD, at www.durhamtrial.org, and their research, including dosages, is summarized at The University of Maryland Website also has info



at www.umm.edu/altmed/ConsSupplements/Omega3FattyAcidscs.html.

Some commercial Omega 3 formulations include:

- Nordic Naturals <http://www.nordicnaturals.com/professional/products.asp>
- Omega Joy, produced by Greenpluscanada.com http://www.greenspluscanada.com/en/programs/greens_fatig.html. Their "Omega-Joy" formulation provides 500 mg EPA daily per capsule.

Iron

Some evidence shows iron deficiency in children is associated with severe ADHD (Konofal et al.: Iron deficiency in children with ADHD, Arch Pediatr Adolesc Med 2004 Dec; 158(12):1113-5.) Hence, it is very important to ensure that a child with ADHD is not iron deficient.

Artificial sweeteners/food additives

Some (but not most) parents notice that certain food additives may worsen behavior/concentration in some children/youth with ADHD. One theory is that these food additives may get turned into excitatory neurotransmitters. Some would suggest a trial of avoiding the following:

- MSG (monosodium glutamate), which is used in many restaurants and fast foods, and in some packaged processed foods
- Artificial food colorings, especially red dyes (avoid Jell-O, Kool-Aid, fruit "drinks" like Hi-C, etc.) (Reference: Bateman et al.: The effects of a double blind, placebo controlled, artificial food colourings and benzoate preservative challenge on hyperactivity in a general population sample of preschool children, Archives of Disease in Childhood, 2004;89:506-511.)
- Artificial sweeteners such as Nutrisweet (aspartame)



Mild stimulants

Interestingly, some parents report that drinks with caffeine (such as Mountain Dew, cola drinks) can be mildly soothing for their children, for example helping them calm down in the evening; some even find that caffeine can help sleep. This may be because caffeine is a mild stimulant, and helps calm the ADHD brain in a similar way as the prescription stimulant medications.



Sleep and ADHD

It is important to get enough sleep, because some people who are inattentive and distractible do not actually have ADHD, but simply they are sleep deprived!

For those with genuine ADHD however, many find that they have trouble sleeping because they simply have too much energy in the evenings; this may translate to being physically active and restless, or mentally being active and restless.

- Ensure regular routine





- Ensure that the person with ADHD is going to bed and waking up at the same times on weekends as well as on school days
- Going to bed late and sleeping in on weekends, makes it so much harder to switch back when Monday comes around
- Some people report that they actually need 'just enough' stimulation in the evening to help them sleep
 - Auditory or sound stimulation:
 - For those who need sound stimulation, then consider playing a CD player, stereo or radio to play some background music, or sleep/relaxation music
 - Consider having a fan or some other 'white noise' generator
 - Visual stimulation:
 - In general, most people find visual stimulation is overstimulating, but there are some who report just enough visual stimulation from a TV can be helpful – in general however, having a TV in a child's bedroom is NOT recommended, as studies have shown lower academic test scores in youth with TV in their bedrooms
 - For those who need movement stimulation:
 - Rhythmic movement can be soothing, so consider having a rocking chair to sit in before bedtime
 - Consider sleeping in a hammock or waterbed

Self-Regulation and Sensory Processing in ADHD

Self-regulation: Individuals with ADHD may often have troubles with self-regulation, i.e. troubles regulating their nervous system. Keeping one's nervous system running 'just right' is essential in order learn and function at one's best.

Shellenberger makes the analogy that people's nervous systems are like a car engine, which can be running in 3 states:

- a) Running 'too slow', or underaroused – when a car engine is running too slow, it stalls. When a nervous system is running too slow, the child feels bored, or understimulated, or sluggish. Individuals with ADHD tend to often be underaroused, and many of their behaviors are actually an attempt to increase their stimulation, e.g. being fidgety and moving around; needing lots of background noise; doing a million things at once. Sensory diet interventions attempt to help provide sufficient arousal, but in a more positive, adaptive manner.
- b) Running 'just right' or optimally aroused. When a car engine is running at the right speed, it works the best. When a nervous system is running 'just right', people feel alert, able to focus and concentrate on the task at hand.
- c) Running 'too high' or over-aroused, or overstimulated. When a car engine is running too high, it burns out. When a nervous system is overstimulated, the person feel stressed, or even worse, may feel in danger and react with fight, flight or freeze, i.e. anger, tantrums, withdrawal, or shutting down.

Self regulation strategies teach a child how to keep their engine running just right.

For example:

- First thing in the morning, people tend to be underaroused. Thus, they need arousing, or activating routines.

- During the daytime, people generally flip between between underaroused, just right and overstimulated.
- When underaroused, they are “bored” → strategies during these times include giving the child an activity – either a leisure activity, or a responsibility like helping out their parent.
 - Specific ways to improve arousal can include:
 - Providing optimal movement stimulation, e.g. ball chairs in the classroom, Sitfit cushions. Interestingly, many children with ADHD sleep better in beds that can provide movement, e.g. waterbeds, or hammocks.
 - Oral stimulation, e.g. being allowed to chew on straws, plastic tubing, or gum
 - Auditory stimulation, e.g. some people with ADHD benefit from auditory stimulation, such as having a radio or television playing in the background.
- When overaroused, they are overwhelmed and can't focus → strategies during these times include taking a break, giving the child a time outs, a quiet space, or minimizing the stimulation/distraction, or using soothing stimulation (e.g. rocking chair, background music).

Sensory processing: people rely on their nervous system to efficiently process sensory input, which includes our vision, hearing, touch, taste and movement sense. Children with ADHD often have troubles processing these senses, and thus can have a variety of behavior problems as a result.

For example:

- a) Oral/gustatory defensiveness, which may lead a child to avoid foods on the basis of their sensitivity to smells, or because of the food's texture and the 'way it feels.'
- b) Touch or tactile hypersensitivity, as exemplified by sensitivity to tags on clothing, light touch. Strategies include using regular deep pressure (e.g. Willbarger brushing protocol) to desensitize the child.
- c) Vestibular/movement seeking behaviors, which lead a child to seek out sensory stimulation from movement, e.g. needing to fidget, move around.

Strategies for this might include:

- permitting movement whenever possible, e.g. allowing the child to use the washroom liberally; allowing the use of "Sitfit" cushions or ball chairs, which are special seating devices which allow for movement, thus allowing the movement-seeking child to focus better; getting a water bed, which may help the movement-seeking child sleep better.
- d) Visual sensitivities, such as Irlen syndrome, which is a condition with sensitivities to certain light frequencies. Note that Irlen syndrome is somewhat controversy and not necessarily accepted by mainstream optometrists.
 - e) Tactile/touch seeking behaviors, which lead a child to need to touch or fidget with things. Strategies include providing "stress balls" that can be squeezed; ideally one would allow the child to use chewing gum, but alternatively, other strategies include chewing on straws, wooden coffee stir sticks, plastic tubing.

For more information about self-regulation and sensory issues:

- [Sensory Smarts: A Book For Kids With ADHD or Autism Spectrum Disorders Struggling With Sensory Integration Problems](#), by Kathleen A. Chara;
- [Teaching the Tiger](#), by Marilyn Dornbush;
- [The Out of Sync Child](#), by Kranowitz.
- "ALERT Program: How does your engine run?" at www.alertprogram.com which is a program to teach children self-regulation

Self Regulation Strategies for the Classroom

Increasing Stimulation

- Visual stimulation
 - The key is getting just enough visual stimulation
 - E.g. sitting at the front of the class; study at a table rather than a library cubicle; having a room with sufficient visual stimuli but not too much!
- Sound, e.g. background instrumental music, or background white noise/music to sleep
- Touch, e.g. fidgets to increase stimulation, elastic bands, hair bands, deep pressure (e.g. lap pads)
- Oral stimulation, e.g. chewing gum, hard candies, ice chips, water, spicy foods, sour foods, straws, coffee stir sticks, pencils/pens
- Smell, e.g. incense, aromatherapy oils, scented candles to increase stimulation, Scents Stories

Reducing Stimulation

- Visual
 - E.g. reducing visual stimulation/distraction by moving away from the back, or away from windows
- Sound
 - E.g. limit excess distracting noise, ear plugs to sleep, studying in quiet place, background noise
- Touch
 - E.g. avoid crowded places or situations, use soothing deep pressure
- Oral stimulation
 - E.g. avoiding food with certain textures, eating one food group at a time
- Motion
 - , e.g. avoiding movement activities
- Smell, e.g. avoid strong smells/perfumes

Parenting Strategies for ADHD Children

- While consistent and reliable parenting is important for all children, it is even more crucial with children with ADHD. Because children with ADHD lack their own internal structure, they need it to be provided by their parents and their environment.



- Praise motivates better than punishment – hence, catch your child doing something right, and praise, no matter how small the success. (“You organized yourself and got your homework done! Good job!”)
- The foundations of good parenting would include the following:
 - Setting reasonable, healthy and appropriate expectations.
 - Setting positive consequences/privileges for when expectations are met (i.e. when positive behaviors occur); because ADHD children tend to think in the short-term, immediate or short-term consequences are the best.
 - Not giving positive consequences/privileges if expectations are not met
 - Always encouraging positive interactions and positive quality family time to build relationships with your children.
 - If your child is having difficulties with behaviours, then a good start is to put together a chart where you write down those daily expectations / routines and consequences.
- **Use “When, then” rather than “No”** -- If a child complains that s/he isn’t getting their privilege, e.g. “I want to watch TV now” – instead of saying, “No, you can’t watch TV”, try saying instead, “When you finish putting away the dishes, then you can watch TV.”
- **Always be empathetic** – When your child wants something, show your child that you are hearing what s/he is saying, by repeating back what they want. Dr. Harvey Karp talks about the “Fast Food Rule” in the Happiest Toddler on the Block – when you order fast food, the employee always starts with repeating back what you said, in order to make sure that s/he understands what you are saying.
- **Strive for regular routines**
 - Try to ensure that the ADHD child has a consistent, and reliable environment – e.g. do this by having routines and structure for your child.
 - If a routine must change, or if there is a change, it is often helpful to give your child advance notice about transitions – e.g. giving reminder 10-minutes, then 5-minutes before a transition. For example, saying “Television time is over in 10 minutes”... “Television time is over in 5-minutes”.... “Television time is over in one minute!”
 - Another related option is to give the child choices about transitions, e.g. “We need to leave soon for the doctor’s appointment. I’ll you a choice. You can stop watching TV now, or you can stop watching in 2-minutes. Your choice... What do you choose?”
 - For more information about helping kids with change and transitions, see Ostrosky’s excellent article on Helping Children Make Transitions between Activities. Available from <http://www.vanderbilt.edu/csefel/> and then typing in the name of the article in the search box.

References

Jensen P et al.: Evolution and revolution in child psychiatry: ADHD as a disorder of adaptation, JAACAP, 1997.

Hartman T: The Edison Gene: ADHD and the Gift of the Hunter Child, 2003.

Web Resources

This is a list of some websites with more information about ADD/ADHD; this list is not meant to be exhaustive, but thru these websites, one will find links to many more useful sites...

- <http://www.ldac-taac.ca> Learning disabilities association of Canada
- <http://www.caddac.ca> Centre for ADHD/ADD Advocacy, Canada
- <http://www.aqeta.qc.ca> Learning Disabilities Association of Quebec
- <http://www.addresources.org> is a great site with many links to free articles about ADHD

Useful Books to Read

- You mean I'm not lazy, crazy or stupid?, by Kelly and Ramundo (for Teens and Adults with ADHD).
- For parents with children with ADHD, Taking Charge of ADHD: The Complete, Authoritative Guide for Parents, 2000, Russell A. Barkley.
- Driven to Distraction: Recognizing & Coping with Attention Deficit Disorder from Childhood through Adulthood, 1995, Edward M. Hallowell.
- The Explosive Child, Ross Greene.
- How to Talk So Kids Will Listen and Listen So Kids Will Talk, 1999, Adele Faber (general all-purpose book for communicating with children).

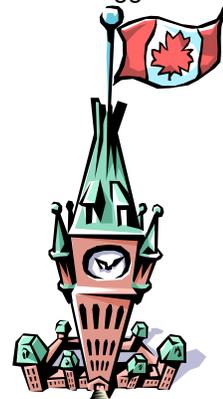
For children with ADHD (see <http://www.ncpamd.com/books.html>)

- Otto Learns About His Medicine, by Matthew Galvin

Local Ottawa Resources

This is a list of various resources in Ottawa and area. A listing does not imply endorsement of a resource, nor does the absence of a listing imply that we do not endorse a resource. As it is difficult keeping lists of this nature up to date, feel free to give us any comments or suggestions for this resource list.

- Learning Disabilities Association of Ontario, 365 Bloor St. East, Suite 1004, Toronto, Ontario M4W 3L4, Tel: 416-929-4311 Fax: 416-929-3905. Web: www.ldao.on.ca
- Learning Disabilities Association of Ottawa-Carleton, 160 Percy Street, Room #2, Ottawa, ON, K1R 6E5. Various activities to promote awareness and advocacy for those affected by learning disabilities. Tel: (613) 567-5864. Web: <http://ldao-c.ncf.ca>
- Attention Deficit Disorder (ADD) Foundation of Ontario. No longer active, but they continue to maintain a useful website: <http://www.addofoundation.org/info.htm>
- Attention Deficit Hyperactivity Disorder (ADHD) Network of Ontario -- organization of professionals to improve the care of individuals with ADHD. Web: www.adhdnetwork.ca



- Children and Adults with Attention Deficit Disorders (CHADD) Canada, National Office, 1376 Bank St, Ottawa, K1H 7Y3, Tel: (613) 731-1209, fax 604-272-6651. Web: <http://chaddcanada.org>
- Services for a fee
 - Psychologists in private practice who have expertise in ADHD or learning conditions can work with youth and families on their specific goals, taking into account the ADHD. Ways to find a psychologist include:
 - Asking friends, family or your doctor for names of any recommended psychologists
 - Looking in the Yellow Pages (note that of the many competent psychologists in Ottawa, not all of them are necessarily members of the Ottawa Academy of Psychology)
 - Contact the Ontario Psychological Association Confidential Referral Service at 1-800-268-0069 or (416) 961-0069. Web: www.psych.on.ca
 - Contact the Ottawa Academy of Psychology referral service, P.O. Box 4251 Station B, Ottawa, (613) 235-2529 or through www.ottawa-psychologists.org/find.htm
 - Canadian Register of Health Service Providers in Psychology (CRHSPP), www.crhspp.ca
 - ADHD in Perspective, 384 Bank St, Suite 310, Ottawa, Ontario, K2P 1Y4. Tel: (613) 233-2343. Offers range of programs to help individuals for ADHD, including: 1) workshop for adults; 2) workshop for women with ADHD; 3) workshop for employers; 4) spousal support workshop for spouses of individuals with ADHD; 5) lifestyle coaching such as 'Parenting children with ADHD', and 'Discovering ADHD for youth'.
 - Martial arts: not only are they physically healthy, but they can help youth learn self-discipline, impulse control, as well as help with self-esteem, confidence.