

Auditory Processing Disorder/APD and its implications by Alyson Mountjoy

This information on Auditory Processing Disorder/APD is based on my observations and research spanning almost 18 years. It has been collated from my forums for parents and adults, the first international research project into the effects of APD on adults and my experience as co-founder of the first UK voluntary organisation supporting sufferers of APD in the UK in 2002, which was itself instrumental in getting funding for the first APD tests to be made available from 2004 as proof that there was such a need. More is being learned all the time, so this is not an exhaustive list of information, just a starting point for your own research.

What is APD?

- APD is a problem in processing what we hear, but APD does not affect hearing
- APD does not affect intelligence
- APD is one of the invisible disabilities
- APD causes a unique combination of different combinations and severity of difficulties in each sufferer
- APD is incurable, although some aspects can lessen with maturity and certain difficulties can be improved
- APD sufferers rely on their coping strategies, and they need the provision of appropriate tailored accommodations
- APD is not a learning difficulty - it causes them
- APD is a lifelong disabling condition and should therefore be considered a disability under the Equalities Act 2010.
- APD is a stand-alone condition which usually co-exists with other unrelated difficulties/disabilities – any and all are possible
- APD is thought to affect 3-5% of children worldwide and an as yet indeterminate amount of undiagnosed adults - according to the latest US research - and APD is present for life

What causes APD?

APD is thought to be neurological in nature, caused by damage to the auditory nerves leading to the brain – or to one or more areas of the brain itself. Some of the possible causes of this are:

- congenital/hereditary link – it runs in families
- middle ear infection causing glue ear
- epilepsy causing damage to the area/s affecting auditory processing
- global processing difficulty as in Autism/ASD
- head injury or brain damage caused by strokes/drug misuse/ damage/development problems in utero/foetal alcohol damage or damage to foetus by maternal drug use/lack of oxygen at birth
- some people have more than one cause – and this list is not exhaustive, more causes are coming to light all the time

How can APD specifically affect people?

- scientists do not yet know the full implications, but it isn't just a matter of having APD or not because each sufferer is uniquely affected by one or more difficulties
- you don't have to have all of them - a person can have any number
- you need 2 of qualifying severity for a full diagnosis of APD/Auditory Processing Disorder and one for a diagnosis of auditory processing difficulties - but just one can be life changing in its effect
- it can co-exist with hearing loss too, compounding the effects, as do any other co-morbid conditions/disabilities
- if the damage is caused in utero/at birth/ in childhood, that damage will usually remain into adulthood, pretty much unimproved in most cases
- APD affects sufferers in all aspects of life, throughout life, and can be very isolating – and children are vulnerable and susceptible to manipulation and bullying
- some of the most common areas of known difficulty are listed below - but there are others

SOME AREAS OF APD-RELATED DIFFICULTY

Sound and speech discrimination - difficulty in processing sound and speech

- this affects gaining meaning from what is heard
- processing might be random and intermittent – a sufferer might process the start, middle or end of a word, phrase or sentence, or none of it, varying randomly throughout the day – and this is even worse on days when tired, stressed or unwell
- misunderstanding what is taught leads to incorrect or incomplete knowledge and puts a child's education seriously at risk
- misunderstandings can arise in class and the child can be labelled disruptive if they keep asking questions, asking for clarity, asking for help, or they might even argue when the teacher has said one thing and they process another, or don't process a negative instruction and do what they were asked not to - “*don't* call out, stand up”, etc.
- understandably, this will cause them confusion and frustration if they can't even rely on their own brain
- they might also not process the sound of a bell, a fire alarm or a car coming at them, especially if they have problems with direction of sound (*more later)
- this difficulty can lead to all sorts of misunderstanding and miscommunication, especially socially where they might not process what friends are saying
- arguments, lack of friends and social isolation are common effects
- irony, humour and sarcasm can be difficult to understand – they might think other children are laughing at them if they don't process that they made a joke

TIPS - FOR SCHOOL ETC.

- face the person with APD when you speak, ensure they have heard and understood by repeating it back, and give everything in writing as pre-teaching for them to refer back to, unless you can guarantee that their notes are always accurate by checking daily
- allow somewhere quiet to complete work
- if they must work in groups have no more than a total of 4
- allow extra time to process and complete work, including all tests and exams
- don't send unfinished work home; also homework should avoided or kept to a minimum and be relevant, accessible and differentiated – they need time to process what has been learned before they can use it, especially if the notes they are working from are ones they made which are incorrect or incomplete, and they will be exhausted, so nothing more will be retained and homework will be pointless

Auditory figure-ground problem/problem distinguishing speech in background noise

- caused by an inability to separate speech when it is mixed with other sound (not to be confused with a similar effect of *Spatial Processing Disorder, another APD difficulty which can be a stand-alone diagnosis, caused when the sufferer cannot locate the direction of speech)
- sufferer struggles to focus on what they should be listening to with noise coming at them from all around
- sufferers may “switch off” if the sound becomes too much due to sensory overload - but this can also be caused by absence seizures so epilepsy should always be ruled out (although you can have both) - they also do this when processing which can be mistaken as lack of attention, or staring which others might take the wrong way
- causes distractibility although the person might be listening and paying full attention, their other senses are heightened to compensate for the APD - so not an attention issue per se
- sound sensitivity/hyperacusis makes coping with APD much harder - particularly discerning speech in noise and should be investigated by an audiologist/strategies given

TIPS - FOR SCHOOL ETC.

- ensure that you get the learner's attention and look at them when you speak so they can read lips and facial cues, etc. to aid understanding
- ask if they need something reworded or rephrased - this will differ person to person
- do not make a child with APD listen and write - they should never take dictation because notes will usually be incorrect or be

incomplete and their learning is based in their notes e.g. for subject understanding and revision for tests and exams; always give written instructions to reinforce oral ones as standard - pre-teaching is a necessity

- homework should be written in a homework/home-school diary for them and checked by parents so ensure they know what to do
- ensure classrooms have carpet and plenty of displays, table and chair foot covers etc. to help subdue excess sound because open-plan classrooms make noise levels worse and speech harder to discern – plus use of an FM system should be implemented where recommended by an audiologist

Poor auditory memory – remembering what we hear

Problems in this area causes severe difficulty in education, especially where teaching and tests are auditory based; long-term and working memory might also be affected in a child with APD; needs intervention

TIPS - FOR SCHOOL ETC.

- provide all verbal information/instruction in writing for the learner to refer back to – include images where possible as visual reinforcement
- provide multi-sensory teaching, and teach methods to aid memory, providing cues which don't involve verbal delivery
- exercises to strengthen auditory memory can help improve this area - “I went to the shop and I bought” etc. - but don't expect full remediation

Processing accents/ unclear speech

- problems processing strong or unfamiliar accents
- problems with listening to inarticulate speech
- problems with fast talkers
- problems with people who will not look at them when they speak.
- problems with telephones
- problems with certain pitches of voice - some cannot easily process female voices or others may have trouble with male voices over female

TIPS - FOR SCHOOL ETC.

- face the sufferer and speak at a normal speed, but clearly
- ask if they need something reworded or rephrased - this will differ person to person
- try to accommodate with a preference of teacher (female or male preference/no strong accent) to aid comprehension of speech
- use of an FM system should be implemented where recommended by an audiologist
- allow a familiar reader in tests in place of recorded material, or allow extra time to replay it as often as they need
- do not make a person with APD use the phone if they have a problem, use texts or email – a particular problem in the workplace

Slow/delayed/intermittent processing

- processing can be intermittent and variable at different times of the day – and especially poor when ill, tired or stressed; this is not an excuse, it is beyond their control and cannot be improved
- intermittent processing – may hear part of the sentence / all / none
- slow processing means a sufferer will need more time to process information
- delayed processing minutes later, or hours or even days later
- some have video-like replay to make sense of it

TIPS - FOR SCHOOL ETC.

- the learner is disadvantaged by time restraints - busy classroom and also in tests avoid timed tests
- allow extra time for processing in class and in all tests and exams
- make allowances for good and bad days; sufferers often process better in the mornings when not as tired – in the afternoons they might process very little
- delayed processing often takes place at night when the brain is rested - they need plenty of sleep and rest without noise in the evening and at weekends; homework detracts from this process and leaves them unrefreshed the next day and affects them taking in new information – compounding all difficulties

Poor phonemic awareness - affecting reading/spelling/speech

- one of the major causes of dyslexia where poor phonemic awareness is present
- cannot recognise sounds / phonemes
- unable to relate phonemes/sounds to the written format/graphemes
- poor phonemic awareness and inability to learn new words by sound can affect speech acquisition, reading and spelling
- problems learning new vocabulary
- word retrieval problems
- pronunciation problems
- processing oral comprehension
- reading, spelling and/or speech **may not** be affected **but** some may have **all** these problems

N.B. literacy can also be affected by word retrieval difficulties common in those with APD, and delayed processing plus any memory problems

TIPS - FOR SCHOOL ETC.

- reading/spelling using phonics will usually not work or help much if APD is at the root of the problem – use whole-word, visual/other multi-sensory means to teach reading/spelling
- avoid spelling tests, or if you think they are essential, limit it to 5 words at a time

Poor auditory sequencing – affecting reading/spelling/maths etc.

- another common indicator of APD
- auditory sequencing affects sound blending/reading/spelling.
- auditory sequencing affects multi-step instructions – a stage might be misunderstood or missed
- mathematics affected as it is a sequential subject
- missing out steps or not fully understanding – the learner might not even realise that they have misunderstood/missed a stage unless it is in writing
- visual and kinaesthetic forms of instruction are essential

TIPS

- give one instruction at a time or put a list in writing
- make sure each instruction or stage of learning is completely understood before building on it and that nothing has been missed out or misunderstood

OTHER CONSIDERATIONS

Co-morbid conditions and dual exceptionalities

- APD can co-exist with any and all learning difficulties/ conditions
- co-morbidity of other conditions needs full investigation
- Anything else is possible – be vigilant for signs
- Dual Exceptionalities – learning disabled and gifted – children with APD can be gifted visual-spatial learners, which means that there are twice the issues and more support is needed, not less – don't assume they can cope just because of their level of intellect; they still have a disability which needs addressing too

Early intervention and support

- recognition, diagnosis and support is essential - as early as possible
- APD needs to be easily recognised by all teachers, SENCOs, and other professionals – more training is needed
- early diagnosis is essential as it leads to validation that they are not lazy or stupid – before the damage is done
- need provision of suitable classroom accommodations
- need to encourage of the child's strengths
- need assessment and referral without unnecessary delay
- address all missed or misdiagnosed co-morbid conditions
- essential to ensure learning, self-confidence and happiness

APD is for life and sufferers need to learn about it, cope with it and get around it, and they need others such as education professionals and employers to recognise it, assist with referral and accommodate it!

Life-long difficulties, home aspect, esteem, education provision etc.

- there are severe implications for home, education, social life and later in the workplace and uniquely-tailored reasonable accommodations are needed
- parents, siblings and other family might not understand
- hereditary link - more than one member of the family may have APD leading to further problems in communication
- family members may be undiagnosed or in denial and less able to cope with it or with a child who has it
- negative effect on a child's self-esteem and confidence, anxiety frustration depression are common - children with APD may hold it all together at school and have a melt-down when they get home and feel safe to do so – so mental health support is vital
- APD should not lead to behavioural issues if diagnosed early and fully supported at school – schools need to make sure they put this in place and tailor it to the child
- an EHC Plan is recommended to ensure support where this support is not forthcoming or sufficient
- support networks are essential for parents and adults with APD (see my website at the end for details)
- children need continued support from the start in pre-school, primary, secondary and post-16 education and on into the workplace, in gaining benefits and choosing the right career to minimise workplace stress and difficulties – using their strengths and compensatory gifts

Self - advocacy

- teach self-advocacy from an early age – people cannot help if they don't know there's a problem
- help the child to understand exactly how they are affected as an individual and how to explain it

Coping Strategies

- children need to develop their own unique coping strategies
- APD often automatically use their strengths as coping strategies
- what makes them different also makes them special
- many have heightened sensitivity, empathy, intuition and creativity
- innovators, original thinkers which society should encourage
- many naturally develop lip-reading skills and read body language, nuances in facial cues, expressions etc.
- more visual and kinaesthetic strengths like the hearing impaired
- they have creative ways of getting around their difficulties
- uniqueness in coping/ learning styles should be encouraged – for some, auditory-sequential teaching adds undue pressure

DIAGNOSIS

If an education or medical professional suspects APD, they should inform the child's parents - they are the **only** ones who are able to seek diagnosis. APD is a medical condition not a learning disability. The child needs to be 7 or over before they can be referred and must have no hearing loss or glue ear. A hearing test is needed at the time of referral.

Parents will need supporting evidence via reports from a SALT or Educational Psychologist for any language-based issues and other diagnosed conditions, as well as any suspicion of APD. Please provide these reports and APD suspicions to parents for them to seek referral via their GP, audiologist or paediatrician. Only a specialist audiologist is qualified to diagnose APD.

The UK centre of excellence is the APD testing centre at Great Ormond Street Hospital London/GOSH. Please check the current GOSH criteria for full details – they are different for referrals from N. Ireland, Scotland and Wales.

Parents should ideally be referred to GOSH until centres of the same standard exist UK-wide. If this is not possible, parents should seek diagnosis locally if available and make sure that full testing is done and report specifying percentile test scores and individual deficits is given.

If APD is suspected, please refer!

- **People with APD do succeed if fully and adequately supported**
- **Please recognise, refer and accommodate in all cases**
- **If in doubt, please air your suspicions, refer for testing, and let the specialists decide**
- **Diagnosis has been available since 2004 and APD has a profound effect on more than 3-5% of the world population**
- **Every teacher might have at least one child with APD in their class**
- **Teachers and other professionals have a duty of care to recognise and support people with APD**
- **Failure to support a child with APD has resulted in cases of educational negligence being pursued - and won**
- **THEY NEED YOUR HELP - PLEASE DON'T LET THEM DOWN**

For further information please contact
apd.support.uk@aol.co.uk

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