

ACC AND AUTISM

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Functions of the Corpus Callosum:

- Myelinates (matures) into teen years
- Interhemispheric transfer, facilitation, integration, & inhibition (Jeeves, et al, 2001)
- Allows right hemisphere to share emotional & social interpretation of information to the left hemisphere (Brown & Paul, 2000)
- Facilitates hemispheric specialization (on which language relies; Devinsky & Laff, 2003)
- Helps coordinate motor movement, especially during learning stage, but not after skill is learned (Devinsky & Laff, 2003)
- Involved in optimal attention (Devinsky & Laff, 2003)
- Allows "fine-tuning" of some cognitive & motor processes (Lassonde & Jeeves, '94)

2-5 year old children with ACC are reported to have:

- Symptoms of Inattention
- Symptoms of being Withdrawn
- Less symptoms of anxiety or depression
...as compared to their age peers

6-11 year old children with ACC are reported to have:

- Significant symptoms on the following scales: withdrawn, somatic complaints, anxious, social problems, thought problems, attention problems, rule-breaking behavior, & aggressive behavior ...relative to their age peers
- Problems on the following scales: thought problems, social problems, attention problems, somatic complaints relative to the clinical population

Top 10 Autistic Tendencies reported by Parents, regarding the child w/ACC:

1. Difficulty initiating & sustaining conversation
2. Difficulty developing peer relationships
3. Difficulty showing social & emotional reciprocity
4. Difficulty using nonverbal communication
5. Does not seek to share enjoyment or interests with others
6. Difficulty using make-believe or imitative play
7. Uses repetitive language
8. Has preoccupation with specific interest
9. Difficulty adequately communicating ideas
10. Engages in repetitive motor movements

Children with ACC (compared to children with Autism) are reported to have...

- More somatic complaints
- More social problems

- More thought problems
- Less repetitive or restricted behaviors
...relative to children with Autism

④ 23% of children with ACC could receive a diagnosis of autism

Implications from this study:

- Behavioral problems may become more pronounced with increasing social & academic demands
- With age, the disparity between corpus callosum functioning increases
- While there is an overlap in symptomatology between Autism and ACC, they are *not* the same
- ACC seems to be an explanation for the Autism
- Autism diagnosis & interventions may be useful