

Common characteristics of ACC

ACC is diagnosed by brain structure, not by behavior. The behavioral patterns in ACC differ somewhat depending on the presence or absence of additional medical conditions (for example, cerebral palsy, asthma, allergies, mental retardation). While this may lead some people to think that each person with ACC is completely unique, in fact, researchers are finding commonalities associated with ACC.

Common characteristics in individuals with ACC with limited additional neurological problems:

- Delays in achieving motor, language, and/or cognitive milestones.
- Poor motor coordination.
- Sensitivity to particular tactile sensations such as food textures and touch.
- High tolerance to pain.
- Difficulty with multidimensional tasks such as using language in social situations, complex reasoning, creativity, and problem solving.
- Challenges in social interactions including lack of awareness of the thoughts and feelings of others, misunderstanding social cues such as facial expressions and tone of voice, limited sophistication of humor, and difficulty imagining potential consequences of behavior.
- Limited insight into one's own behavior, social problems, and cognitive challenges.

Cognitive and social challenges may become more apparent with age, particularly from early adolescence into adulthood.

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The National Organization of Disorders of the Corpus Callosum (NODCC) is a nonprofit corporation established in 2002 for individuals with ACC and other disorders of the corpus callosum, their families, and professionals.

NODCC Mission:

To enhance the quality of life of individuals with agenesis of the corpus callosum and other disorders of the corpus callosum by gathering and disseminating information regarding these conditions.

NODCC collaborates with The ACC Network and several neuropsychological and medical research programs.

NODCC is supported in part by annual membership contributions.

Individuals with disorders of the corpus callosum, their families, and professionals also may contact The ACC Network to facilitate networking and participation in research.

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Disorders of the Corpus Callosum

Facts about Agenesis of the Corpus Callosum and other Diagnoses

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NODCC & THE ACC NETWORK

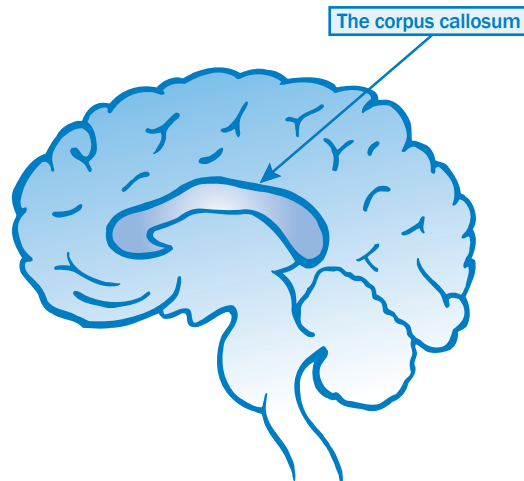
What is the corpus callosum?

"Corpus" means a body or structure.

"Callosum" means a bridge.

The corpus callosum is a bridge (or neural connection) between the right and left sides (hemispheres) of the brain.

The corpus callosum contains more than 200 million connections (axons).



Cross-section view of the brain

Disorders of the corpus callosum

Complete agenesis of the corpus callosum
(C-ACC) Absence of the corpus callosum

Partial agenesis of the corpus callosum
(P-ACC) Partial absence of the corpus callosum

Hypoplasia of the corpus callosum
Thin or underdeveloped corpus callosum

Dysgenesis of the corpus callosum
Malformation of the corpus callosum

What causes disorders of the corpus callosum?

There is no single cause. Disruptions to the development of the corpus callosum occur during the 5th to 16th week of pregnancy. Many different factors can interfere with this development:

- **Prenatal infections or viruses**
(for example: rubella)
- **Chromosomal (genetic) abnormalities**
(for example: trisomy 8 and 18, Andermann syndrome, and Aicardi syndrome)
- **Toxic-metabolic conditions**
(for example: Fetal Alcohol syndrome)
- **Blockage of growth of the corpus callosum**
(for example: cysts)

How are disorders of the corpus callosum diagnosed?

The brain must be viewed using one or more of the following:

- **Pre/postnatal sonogram**
(ultrasound)
- **Computerized Axial Tomography**
(CT- scan or CAT scan)
- **Magnetic Resonance Imaging**
(MRI)

What is the incidence of agenesis of the corpus callosum (ACC)?

Estimates of the frequency of ACC vary greatly. Some suggest that as many as 7 in 1000 children may have ACC; although others believe it may be as rare as 5 in a million. One study suggests that 2 out of 100 of those with developmental disabilities may have this condition. The rate of diagnosis of disorders of the corpus callosum is likely to increase with greater access to the technology used to identify these structural abnormalities.

Are ACC and other disorders of the corpus callosum considered diseases?

Disorders of the corpus callosum are not illnesses or diseases, but abnormalities of brain structure. Many people with these conditions are healthy. However, other individuals with disorders of the corpus callosum do require medical intervention due to seizures and/or other medical problems they have in addition to the disorder of the corpus callosum.

Can disorders of the corpus callosum be treated?

Overall, disorders of the corpus callosum are conditions one must "learn to live with" rather than "hope to recover from." However, many therapies and supports may help individuals with ACC and other disorders of the corpus callosum lead more successful lives.

Professionals who can help:

- Behavioral psychologists
- Early intervention specialists
- Geneticists
- Neurologists
- Neuropsychologists
- Occupational therapists
- Ophthalmologists
- Pediatricians
- Physical therapists
- Special educators
- Speech-language pathologists