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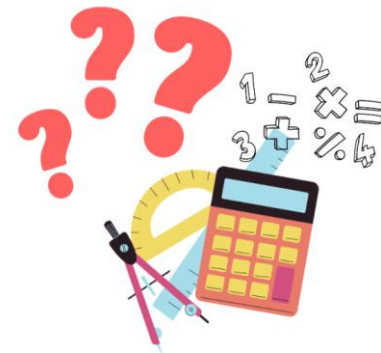


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Course Materials

Dyscalculia

Dealing with learning
difficulties in math



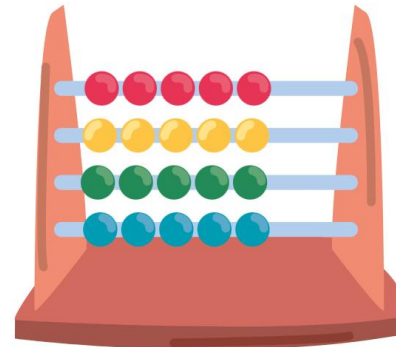


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What dyscalculia is and how to recognize it





People with dyscalculia have difficulty understanding arithmetic.
It is a learning disorder that affects the mathematical area.

People with dyscalculia have persistent problems learning and understanding mathematical concepts. And this has nothing to do with their intelligence.





This disorder can vary in severity from person to person.



In any case, it influences daily life
and success in school and work.



How to recognize dyscalculia

- Difficulty understanding numbers and math concepts
- Slow pace in solving math problems
- Problems learning math facts





Causes of dyscalculia





Genetic factors:

"Genetic" means that a person can inherit the tendency to dyscalculia from their ancestors.

Often several people in the same family have this type of learning disorder.



Studies have shown that certain genetic variations may be associated with an increased risk of dyscalculia. Family members of people with dyscalculia are therefore at higher risk of also being affected by this disorder.



Environmental factors:

Stress and a mother's exposure to a harmful environment during pregnancy can increase the risk of dyscalculia in her child.

An unhealthy environment for pregnant women or certain behaviors during pregnancy can affect the development of their baby's brain. This can cause the child to have problems later in school, for example in math.





Neurobiological causes:

"Neurobiological" refers to the function and structure of the brain.



Studies show differences in brain activity and brain structure in people with dyscalculia , especially when it comes to processing numbers.



Certain regions of the brain are responsible for processing numbers and math rules. It is believed that dyscalculia is related to a disturbed development of these regions of the brain.

In some people, the structure of the brain is slightly altered, meaning it is slightly misshapen. This may contribute to the mathematical difficulties observed in people with dyscalculia.





How to deal with dyscalculia





Dyscalculia can be identified early by having children take special math tests, speaking to experts, and observing the children.

It is very important to identify dyscalculia quickly so that children can get proper help.





Realizing early on that a child is struggling with math allows teachers, parents and professionals to do just the right thing to help the child improve and get help.

This allows the child to reach their full potential and overcome math problems before they get worse and make school or life overly difficult.



Treatment options

If a child has dyscalculia, you want to help him or her improve in math. There are several ways to do this.



How to deal with dyscalculia



Treatment options

Early support from specialized teachers:

Children with dyscalculia can benefit from teachers who specialize in math problems.



These teachers can do special exercises that are tailored specifically to the child and their problems.



Treatment options

Tools such as calculators or computer programs:

Sometimes technical aids such as calculators or math apps can help to solve and understand tasks better. These tools can be used in addition to normal math lessons to make things easier.





Treatment options

Try other learning strategies:

People with dyscalculia can also learn using other methods. For example, memorizing math rules or using pictures.





Tips for people with dyscalculia

Find groups and friends:

Talking to other people who have similar problems can help. In groups or with friends, you can feel less alone and learn how others deal with their difficulties. This can give you new ideas and support.





Tips for people with dyscalculia

Build self-confidence:

It is important that you are proud of yourself and that you accept yourself, even if math is difficult.



Think about the things you are good at and encourage yourself. Therapists can help you get rid of negative thoughts and build a strong sense of self.



Support networks

Non-profit organizations:

There are many non-profit organisations and institutions for people with dyslexia and dyscalculia. They offer information, advice, training and support for those affected and their families. Use your internet search to find such an organization in your country or language.

Dyscalculia centers:

There are various dyscalculia centers in many countries that offer specialized support and diagnosis for people with dyscalculia. These centers often also offer special support programs and therapies. Use your internet search to find a center near you.



Support networks

Online platforms and forums:

There are online platforms and forums where those affected and their families can exchange ideas. These can be a valuable source of information, support and practical tips. Use your internet search to find platforms in your language.

School support:

Schools can offer special support measures for students with dyscalculia, such as tutoring, additional practice sessions or the use of special teaching and learning materials. Ask your teachers about such programs.



Support networks

Psychologists and therapists:

Psychologists and therapists who specialize in learning disorders can offer individual advice and support for people with dyscalculia and their families. Use your internet search or ask your family doctor to find a suitable therapist near you.

Self-help groups:

There are self-help groups for people with dyscalculia and their families in which those affected can support each other, exchange experiences and find solutions together. Use your internet search to find such a group near you.



Sources:

1. <https://www.bvl-legasthenie.de/dyskalkulie.html#content>
2. <https://www.legasthenie-lvl-bw.de/dyskalkulie/definition/>



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