



Long COVID in children and adolescents

Helpful information for medical and healthcare professionals



Federal Ministry
of Health

BMG
Initiative **LONG**
COVID

What is Long COVID?

Long-term health effects after a Corona virus SARS-CoV-2 infection are called as **Long COVID**¹. According to the WHO definition, children and adolescents have Long COVID when:

- there was a definite or suspected infection of Corona virus and
- symptoms arise within 3 months after infection and last for at least 2 months.

Children and adolescents can also suffer from Long COVID if they had no or only mild symptoms after an infection. In many cases, the symptoms improve on their own within the first few months. But in some affected children and adolescents, there are also persistent symptoms, which impair the daily life and participation.



The **causes** of Long COVID are complex and not yet fully understood. Researchers assume that **various patho-mechanisms** are involved in the development. These include prolonged inflammatory reactions, faulty regulations of the immune system and autonomous nervous system, microcirculatory disturbances and an impaired mitochondrial energy metabolism.

¹ is used as an umbrella term for Long COVID and Post COVID in this brochure. Both the terms differ among other things, in the underlying time criteria.

Who is especially at a risk?

Although the exact frequency is not yet known, children and adolescents being affected appears to be rarer than adults.

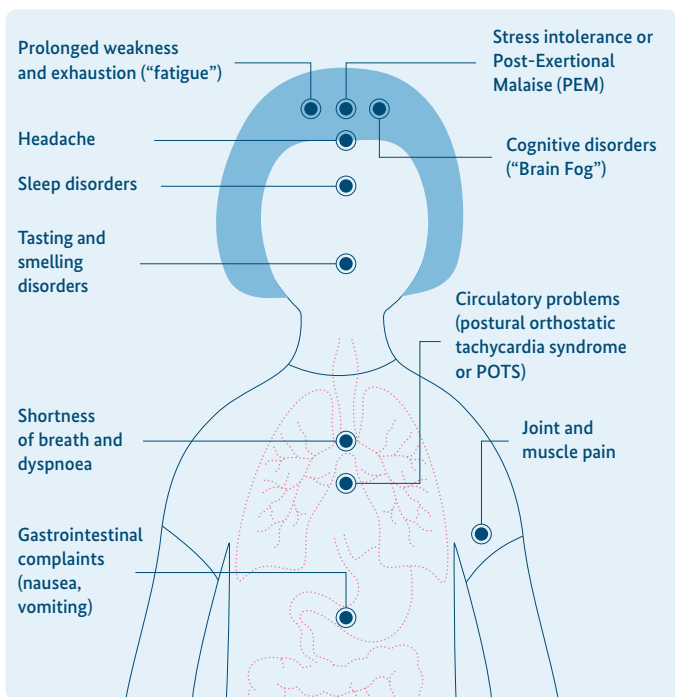
Long COVID occurs more easily in this age group in:

- females
- adolescent age
- children and adolescents with certain pre-existing conditions
- an initially severe course of COVID-19
- children and adolescents with repeated SARS-CoV-2 infections

Which symptoms can occur?

A number of symptoms are possible in Long COVID. These can impair the daily life of children and adolescents to varying degrees.

Frequent symptoms in children and adolescents



Fatigue is among the most frequent symptoms in Long COVID. It is accompanied by a so-called **stress intolerance** in a majority of the long haulers. The symptoms can already aggravate after light mental or physical exertion (“Post exertional malaise”, abbreviated PEM).

If there is severe fatigue with stress intolerance and other symptoms such as cognitive disorders, sleep disturbances, aches, circulatory problems, other flu-like symptoms for longer than 3 months, the presence of **ME/CFS** (myalgic encephalitis/chronic fatigue syndrome) should be clarified.

ME/CFS is a severe chronic multi-system illness, the cause of which is often associated with a viral illness. It can be accompanied by considerable physical and cognitive restrictions. Severely affected children and adolescents are generally in need of care.

How is Long COVID diagnosed?

The **initial clarification** should generally be done in the paediatric or family doctor’s clinic. It is necessary to look for typical symptoms in the case history. These include fatigue, stress intolerance or post exertional malaise (PEM), aches, cognitive disorders, depressive symptoms, and anxiety disorders. Other causes for the symptoms should be ruled out by a physical examination and basic lab diagnostics.

Continuative diagnostics, for example, in a specialist’s clinic or special outpatient clinic is a sensible step among others if:

- there are abnormal results in the basic diagnostics,
- the symptoms last longer than 2 months,
- the symptoms are serious or deteriorate with time, or
- the daily life and participation are severely impaired (e.g., many absences from school).

Further information if there is a suspicion of Long COVID can be found from the consensus paper „Standard basic care of children and adolescents with Long COVID“ of the DGKJ Konvent Gesellschaften.

What are the therapeutic approaches?

There is no causal therapy of Long COVID as yet. A **symptom-oriented treatment**, where physical and psychological aspects should be considered equally is paramount. The treatment should maintain the quality of life, which promotes coping with daily life and counters chronic infection. Depending on what are the symptoms, various treatment approaches will be useful. These include:

- Physiotherapy (e.g., remedial gymnastics, breathing therapy)
- Speech therapy
- Ergotherapy
- Nutrition therapy
- Psychotherapy/basic psychosomatic care
- Prescription of aids
- Rehab programmes



Medical therapeutic approaches also serve to relieve symptoms. Experiences with other post-infection syndromes can provide direction.

In case of correlative stress, the healthcare professional can also draw attention to further assistance, for example, psycho-social support programmes. In principle, a close cooperation with various institutions such as public authorities, educational institutions, health insurance companies, and pension insurance authorities should be sought.

Apart from that, **conducting an open and empathetic discussion** is helpful for the affected children, adolescents, and their families. The respective therapies should be coordinated together with the families.

If there is **stress intolerance**, exceeding the personal stress limits must be absolutely avoided since it can lead to permanent deterioration.

What is pacing?

Pacing is a strategy to deal with fatigue or stress intolerance/ PEM: It is frequently recommended for COVID long haulers and has already been used for a long time for ME/CFS. Pacing is learning to carefully listen to your own body and organising your own strengths properly. This includes, for example, recognising and adhering to your own stress limits. [The Information site of the Deutsche Gesellschaft für ME/CFS e. V.](#) offers further information.



Where can doctors and other healthcare professionals find more technical information?

Detailed information on the diagnostics and treatment can be found in various guidelines and consensus papers. These include:

- the consensus paper “Standard basic care of children and adolescents with Long COVID” of the DGKJ Konvent Gesellschaften
- chapter “Paediatric aspects” of the S1-Guideline Long/Post-COVID
- the “Interdisciplinary, Collaborative D-A-CH Consensus Statement for Diagnostics and Treatment of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome”

An S2k-Guideline “Diagnostics and therapy for Long COVID in children and adolescents” is likely to be published in 2025. Furthermore, there are various advanced professional trainings. You can find information on the website of Post-COVID Network of the Charité.

Further information can be found at www.bmg-longcovid.de/en. The Federal Ministry of Health (BMG) provides reliable information, scientific insights, and assistance related to Long COVID in children and adolescents here as a part of the “BMG Initiative Long COVID”.



Find out more:

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Technically reviewed health information



Information from the Federal Ministry of Health
www.bmg-longcovid.de/en



Information from the Robert Koch Institute (RKI) on Long COVID



Information from the Federal Centre for Health Education [BZgA] on infection protection:
www.infektionsschutz.de

Imprint

Publisher: Federal Ministry of Health

Department of Public Relations, Publications, 11055 Berlin

Editorial: “Was hab ich?” gemeinnützige GmbH [non-profit Ltd.], 01067 Dresden

Composition: die wegmeister gmbh, 70376 Stuttgart

Photo credits: Sebastian Vollmert / BMG, Tatjana Balzer / Adobe Stock, Tetiana Soares / Adobe Stock, Kien / Adobe Stock

As of: November 2024

You can download this flyer for free.

Publication shipping of the federal government:

P.O. Box 48 10 09, 18132 Rostock

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Service fax: 030 18102722721

E-Mail: publikationen@bundesregierung.de

Ordering via the gesture telephone: [gebaerdentelefon@sip.bundesregierung.de](tel:030182722721)

Online orders: www.bundesregierung.de/publikationen

Order number: BMG-G-12203

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