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## Cystic Fibrosis

Also called: CF

Cystic fibrosis (CF) is an inherited disease of the mucus and sweat glands. It affects mostly your lungs, pancreas, liver, intestines, sinuses, and sex organs. CF causes your mucus to be thick and sticky. The mucus clogs the lungs, causing breathing problems and making it easy for bacteria to grow. This can lead to repeated lung infections and lung damage.

The symptoms and severity of CF can vary. Some people have serious problems from birth. Others have a milder version of the disease that doesn't show up until they are teens or young adults. Sometimes you will have few symptoms, but later you may have more symptoms.

CF is diagnosed through various tests, such as gene, blood, and sweat tests. There is no cure for CF, but treatments have improved greatly in recent years. In the past, most deaths from CF were in children and teenagers. Today, with improved treatments, some people who have CF are living into their forties, fifties, or older. Treatments may include chest physical therapy, nutritional and respiratory therapies [<https://medlineplus.gov/pulmonaryrehabilitation.html>] , medicines, and exercise.

*NIH: National Heart, Lung, and Blood Institute*

### Start Here

- About Cystic Fibrosis [<https://www.cff.org/intro-cf/about-cystic-fibrosis>] (Cystic Fibrosis Foundation)
- Cystic Fibrosis (CF) [<https://www.lung.org/lung-health-diseases/lung-disease-lookup/cystic-fibrosis>] (American Lung Association)
- What Is Cystic Fibrosis? [<https://www.nhlbi.nih.gov/health/cystic-fibrosis>]  (National Heart, Lung, and Blood Institute)  
Also in Spanish [<https://www.nhlbi.nih.gov/es/salud/fibrosis-quistica>]

### Diagnosis and Tests

- Chymotrypsin in Stool [<https://medlineplus.gov/lab-tests/chymotrypsin-in-stool/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/quimotripsina-en-heces/>]
- Cystic Fibrosis (CF) Respiratory Screen: Sputum [<https://kidshealth.org/en/parents/cf-screen.html>] (Nemours Foundation)  
Also in Spanish [<https://kidshealth.org/es/parents/cf-screen.html>]
- Cystic Fibrosis: Prenatal Screening and Diagnosis [<https://www.acog.org/womens-health/faqs/cystic-fibrosis-prenatal-screening-and-diagnosis>] (American College of Obstetricians and Gynecologists)
- Newborn Screening for CF [<https://www.cff.org/intro-cf/newborn-screening-cf>]  (Cystic Fibrosis Foundation)
- Stool Elastase [<https://medlineplus.gov/lab-tests/stool-elastase/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/elastasa-fecal/>]
- Sweat Test for Cystic Fibrosis [<https://medlineplus.gov/lab-tests/sweat-test-for-cystic-fibrosis/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-sudor/>]
- Testing for CF [<https://www.cff.org/intro-cf/testing-cf>] (Cystic Fibrosis Foundation)

# Prevention and Risk Factors

- Cystic Fibrosis and Pregnancy [<https://www.marchofdimes.org/find-support/topics/pregnancy/cystic-fibrosis-and-pregnancy>] (March of Dimes Foundation)  
Also in Spanish [<https://nacersano.marchofdimes.org/embarazo/prueba-de-portador-de-fibrosis-quistica.aspx>]

# Treatments and Therapies

- Drug Development Pipeline [<https://apps.cff.org/trials/pipeline/>] (Cystic Fibrosis Foundation)
- Managing CF (Cystic Fibrosis) [<https://www.cff.org/managing-cf>] (Cystic Fibrosis Foundation)

# Living With

- Airway Clearance Techniques (ACTs) [<https://www.cff.org/managing-cf/airway-clearance-techniques-acts>]  (Cystic Fibrosis Foundation)
- Chest Physical Therapy [<https://www.cff.org/managing-cf/chest-physical-therapy>] (Cystic Fibrosis Foundation)
- Consider Tube Feeding [<https://www.cff.org/managing-cf/consider-tube-feeding>] (Cystic Fibrosis Foundation)
- Dietary Tips for Kids With Cystic Fibrosis [<https://kidshealth.org/en/parents/cystic-fibrosis-dietary-tips.html>] (Nemours Foundation)  
Also in Spanish [<https://kidshealth.org/es/parents/cystic-fibrosis-dietary-tips.html>]
- Fitness [<https://www.cff.org/managing-cf/fitness>] (Cystic Fibrosis Foundation)
- Pulmonary Rehabilitation: MedlinePlus Health Topic [<https://medlineplus.gov/pulmonaryrehabilitation.html>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pulmonaryrehabilitation.html>]
- School Transitions for People With CF and Their Families [<https://www.cff.org/managing-cf/school-transitions-people-cf-and-their-families>]  (Cystic Fibrosis Foundation)

# Related Issues

- A Teacher's Guide to Cystic Fibrosis [<https://www.cff.org/intro-cf/teachers-guide-cystic-fibrosis>] (Cystic Fibrosis Foundation)
- Accommodations for College [<https://www.cff.org/support/accommodations-college>] (Cystic Fibrosis Foundation)
- Aspergillus and Allergic Bronchopulmonary Aspergillosis [<https://www.cff.org/managing-cf/aspergillus-and-allergic-bronchopulmonary-aspergillosis>]  (Cystic Fibrosis Foundation)
- COVID-19 Questions and Answers [<https://www.cff.org/managing-cf/covid-19-questions-and-answers>] (Cystic Fibrosis Foundation)
- Cystic Fibrosis-Related Diabetes [<https://www.cff.org/managing-cf/cystic-fibrosis-related-diabetes>] (Cystic Fibrosis Foundation)
- Infections and Cystic Fibrosis [<https://www.cff.org/managing-cf/infections>] (Cystic Fibrosis Foundation)
- Marvels of Mucus and Phlegm: The Slime That Keeps You Healthy [<https://newsinhealth.nih.gov/2020/08/marvels-mucus-phlegm>]  (National Institutes of Health)  
Also in Spanish [<https://salud.nih.gov/recursos-de-salud/nih-noticias-de-salud/las-maravillas-de-la-mucosidad-y-la-flema>]
- Methicillin-Resistant Staphylococcus aureus (MRSA) [<https://www.cff.org/managing-cf/methicillin-resistant-staphylococcus-aureus-mrsa>] (Cystic Fibrosis Foundation)
- What Is Bronchiectasis? [<https://www.nhlbi.nih.gov/health/bronchiectasis>]  (National Heart, Lung, and Blood Institute)  
Also in Spanish [<https://www.nhlbi.nih.gov/es/salud/bronquiectasias>]

# Genetics

- Cystic fibrosis: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/cystic-fibrosis>]  (National Library of Medicine)

# Statistics and Research

- A Cystic Fibrosis Cure For All? Gene Editing Shows Promise [<https://www.nhlbi.nih.gov/news/2024/cystic-fibrosis-cure-all-gene-editing-shows-promise>]  (National Heart, Lung, and Blood Institute)
- Cystic Fibrosis Research [<https://www.nhlbi.nih.gov/research/cystic-fibrosis>]  (National Heart, Lung, and Blood Institute)  
Also in Spanish [<https://www.nhlbi.nih.gov/es/salud/cystic-fibrosis>]

## Clinical Trials

- ClinicalTrials.gov: Cystic Fibrosis [<https://clinicaltrials.gov/search?cond=%22Cystic+Fibrosis%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

## Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Randomized Cross-Over Analysis of the Influence of Nitrogen Multiple Breath Washout... [<https://www.ncbi.nlm.nih.gov/pubmed/40637384>]
- Article: The 2025 European Cystic Fibrosis Society position statement on physical activity... [<https://www.ncbi.nlm.nih.gov/pubmed/40633976>]
- Article: Phage therapy with nebulized cocktail BX004-A for chronic Pseudomonas aeruginosa infections... [<https://www.ncbi.nlm.nih.gov/pubmed/40593506>]
- Cystic Fibrosis -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Cystic+Fibrosis%22%5Bmajr%3Aexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22%5Bdat%5D+AND+%28patient+education+handout%5Bpt%5D+OR+guideline%5Bpt%5D+OR+clinical+trial%5Bpt%5D%29++NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

## Find an Expert

- Cystic Fibrosis Foundation [<https://www.cff.org/>]
- National Heart, Lung, and Blood Institute [<https://www.nhlbi.nih.gov/>] 
- National Institute of Diabetes and Digestive and Kidney Diseases [<https://www.niddk.nih.gov>] 

## Children

- Cystic Fibrosis (For Parents) [<https://kidshealth.org/en/parents/cf.html>] (Nemours Foundation)  
Also in Spanish [<https://kidshealth.org/es/parents/cf.html>]

## Teenagers

- Dietary Tips for Teens with Cystic Fibrosis [<https://kidshealth.org/en/teens/cystic-fibrosis-dietary-tips.html>] (Nemours Foundation)  
Also in Spanish [<https://kidshealth.org/es/teens/cystic-fibrosis-dietary-tips.html>]

## Patient Handouts

- Cystic fibrosis [<https://medlineplus.gov/ency/article/000107.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000107.htm>]
- Cystic fibrosis - nutrition [<https://medlineplus.gov/ency/article/002437.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/002437.htm>]
- How to breathe when you are short of breath [<https://medlineplus.gov/ency/patientinstructions/000053.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000053.htm>]
- Neonatal cystic fibrosis screening test [<https://medlineplus.gov/ency/article/003409.htm>] (Medical Encyclopedia)

Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003409.htm>]

- Postural drainage [<https://medlineplus.gov/ency/patientinstructions/000051.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000051.htm>]
- Sweat electrolytes test [<https://medlineplus.gov/ency/article/003630.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003630.htm>]



## MEDICAL ENCYCLOPEDIA

[Cystic fibrosis](https://medlineplus.gov/ency/article/000107.htm) [<https://medlineplus.gov/ency/article/000107.htm>]

[Cystic fibrosis - nutrition](https://medlineplus.gov/ency/article/002437.htm) [<https://medlineplus.gov/ency/article/002437.htm>]

[Fecal fat](https://medlineplus.gov/ency/article/003588.htm) [<https://medlineplus.gov/ency/article/003588.htm>]

[How to breathe when you are short of breath](https://medlineplus.gov/ency/patientinstructions/000053.htm) [<https://medlineplus.gov/ency/patientinstructions/000053.htm>]

[Neonatal cystic fibrosis screening test](https://medlineplus.gov/ency/article/003409.htm) [<https://medlineplus.gov/ency/article/003409.htm>]

[Oxygen safety](https://medlineplus.gov/ency/patientinstructions/000049.htm) [<https://medlineplus.gov/ency/patientinstructions/000049.htm>]

[Postural drainage](https://medlineplus.gov/ency/patientinstructions/000051.htm) [<https://medlineplus.gov/ency/patientinstructions/000051.htm>]

[Secretin stimulation test](https://medlineplus.gov/ency/article/003892.htm) [<https://medlineplus.gov/ency/article/003892.htm>]

[Sweat electrolytes test](https://medlineplus.gov/ency/article/003630.htm) [<https://medlineplus.gov/ency/article/003630.htm>]

[Traveling with breathing problems](https://medlineplus.gov/ency/patientinstructions/000066.htm) [<https://medlineplus.gov/ency/patientinstructions/000066.htm>]

[Trypsin and chymotrypsin in stool](https://medlineplus.gov/ency/article/003594.htm) [<https://medlineplus.gov/ency/article/003594.htm>]

[Trypsinogen test](https://medlineplus.gov/ency/article/003560.htm) [<https://medlineplus.gov/ency/article/003560.htm>]

[Using oxygen at home](https://medlineplus.gov/ency/patientinstructions/000048.htm) [<https://medlineplus.gov/ency/patientinstructions/000048.htm>]

[Using oxygen at home - what to ask your doctor](https://medlineplus.gov/ency/patientinstructions/000251.htm) [<https://medlineplus.gov/ency/patientinstructions/000251.htm>]

## Related Health Topics

[Lung Transplantation](https://medlineplus.gov/lungtransplantation.html) [<https://medlineplus.gov/lungtransplantation.html>]

[Oxygen Therapy](https://medlineplus.gov/oxygentherapy.html) [<https://medlineplus.gov/oxygentherapy.html>]

[Pulmonary Rehabilitation](https://medlineplus.gov/pulmonaryrehabilitation.html) [<https://medlineplus.gov/pulmonaryrehabilitation.html>]

The primary NIH organization for research on *Cystic Fibrosis* is the National Heart, Lung, and Blood Institute  
[<http://www.nhlbi.nih.gov/>]

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