

When I grow up,
I want
to be a chef!



**Sarah has Primary
Immunodeficiency (PI).**

Test. Diagnose. Treat.

Now I HAVE A CHANCE!

The Immune System

It's our only defense...but it doesn't work for everyone.

Each and every day, your body fights off infections, germs, bacteria and viruses. These invaders, called pathogens, are destroyed by the body's number one defense, the immune system.

Some people are born with immune systems that don't work as well as others. This could be due to Primary Immunodeficiency (PI), which might cause a person to be sick more often than others.

What Is Primary Immunodeficiency

Primary Immunodeficiencies (PI) are a group of more than 200 disorders of the immune system with varying degrees of severity. They occur when one or more essential parts of the immune system do not work correctly.

People with PI cannot get rid of pathogens or protect themselves from these pathogens as well as they should, causing frequent infections and other problems that are hard to cure. Infections may appear to be common illnesses such as sinus and ear infections, pneumonia, fever, common colds and bronchitis.

Why Getting Help Is Important

Today patients with PI are able to gain and maintain control of their lives with treatment and intervention:

- ★ They are able to participate in work, school, family and social activities.
- ★ They have fewer and less severe infections.
- ★ They feel good about their treatment programs and, most importantly, themselves.

Failure to diagnose PI can lead to an increased number and severity of infections, frequent interruptions in work, school, family and social activities, and a lifetime of serious illness, including permanent organ damage. There are many treatment options that can help patients diagnosed with PI lead healthier lives.

WHEN I GROW UP
I WANT TO BE
A FIREMAN!



10 Warning Signs of Primary Immunodeficiency

1

Four or more new ear infections
within 1 year.

2

Two or more serious sinus infections
within 1 year.

3

Two or more months on antibiotics
with little effect.

4

Two or more pneumonias within 1 year.

5

Failure of an infant to gain weight
or grow normally.

6

Recurrent, deep skin or organ abscesses.

7

Persistent thrush in mouth or
fungal infection on skin.

8

Need for intravenous antibiotics
to clear infections.

9

Two or more deep-seated infections
including septicemia.

10

A family history of PI.

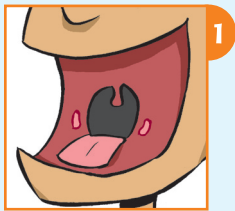
WHEN I GROW UP
I WANT TO BE
A ROCK STAR!



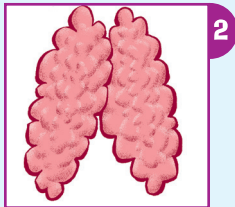
Your Body's Best Defense

Every day, your body fights off infections, germs, bacteria and parasites. It is destroying these invaders, called pathogens, with the help of its number one defense: the immune system.

The immune system's job is to keep your body healthy. This requires many different parts of the body to work together against pathogens. Here are the main components of your immune system:



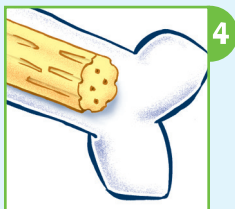
Tonsils – Located in the back of your throat, the tonsils protect the entrance to your respiratory and digestive systems by destroying bacteria with the help of white blood cells.



Thymus Gland – Located underneath the middle of your breastbone and above your heart, the thymus gland stores white blood cells until they are mature, and then provides them with specific jobs.

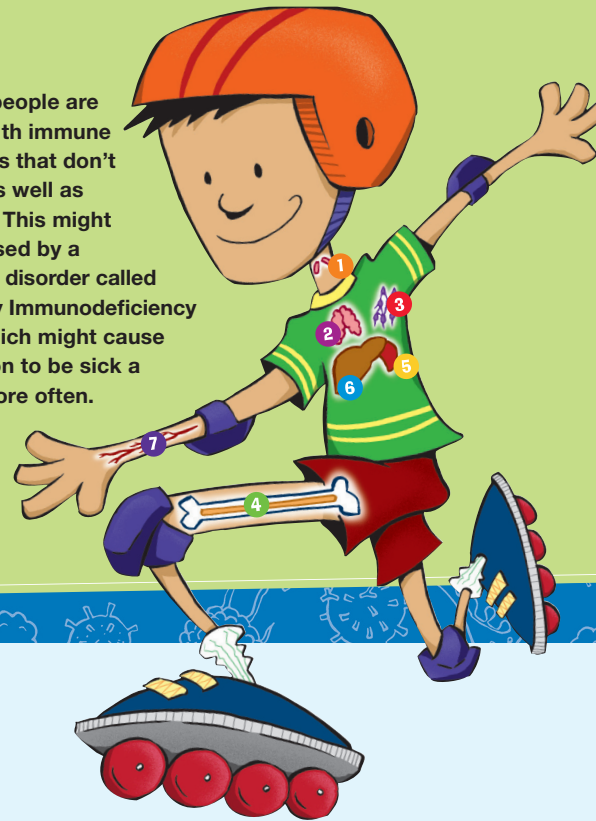


Lymph Nodes – Small, bean-shaped nodules on the lymphatic vessels, lymph nodes are located primarily in your armpits and groin regions. They filter pathogens out of the lymphatic system.

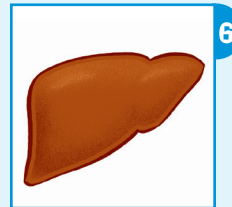


Bone Marrow – Located inside your body's bones, it produces red and white blood cells. *Red blood cells* carry oxygen to other cells and body parts, and remove carbon dioxide. *White blood cells* look for and destroy pathogens. The different types of white blood cells are phagocytes, B-cells and T-cells.

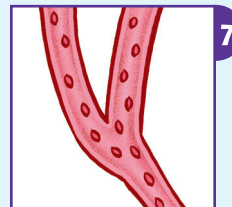
Some people are born with immune systems that don't work as well as others. This might be caused by a genetic disorder called Primary Immunodeficiency (PI), which might cause a person to be sick a little more often.



Spleen – The largest lymphoid organ in the lymphatic system, the spleen is located to the left of your stomach. The spleen removes pathogens from the blood as it passes through.



Liver – Your body's largest internal organ, the liver contains white blood cells. These cells destroy bacteria in the blood as it passes through the liver. It also processes nutrients found in the blood and produces bile used in digestion.



Blood – Red and white cells travel throughout your body's blood vessels. While white blood cells defend against pathogens, your red blood cells nourish your body.

About JMF

Vicki and Fred Modell established the Jeffrey Modell Foundation, a 501(c)3 nonprofit organization, in 1987, in memory of their son Jeffrey, who died at the age of fifteen from complications of Primary Immunodeficiency — a genetic condition that is chronic, serious, and often fatal. JMF is a global patient organization devoted to early and precise diagnosis, meaningful treatments, and ultimately, cures — through clinical and basic research, physician education, patient support, advocacy, public awareness and newborn screening.

About JMCN

The Jeffrey Modell Centers Network is comprised of Jeffrey Modell Diagnostic and Research Centers and a Referral Network of hundreds of Expert Immunologists worldwide.



Jeffrey Modell
Foundation

Curing PI. Worldwide.

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