This brochure features real patients who have been compensated for their participation.

LOOK CLOSER TO

SEE WHAT THALASSEMIA IS HIDING

Even if you don't receive regular transfusions, thalassemia may come with serious risks. Learn more about these risks and what you can do about them.

CONTENTS

RETHINK THALASSEMIA™

Thalassemia affects everyone differently, so we want to inspire you to take time to explore how it impacts you personally. We hope this brochure provides you with new and useful information that can help you manage your day-to-day thalassemia symptoms better and even get ahead of serious thalassemia-related health issues.

Hardik
Living with beta-thalassemia

"I think the pivotal point for my life was when I first got to hold my niece. I wanted to be there for her. So I started taking my thalassemia care more seriously. It not only made a huge difference in my health but also in my perspective—I have a more positive outlook for my future now."

Thalassemia research is advancing. Sign up to receive the latest updates about thalassemia.

UNDERSTANDING THALASSEMIA SYMPTOMS

Thalassemia is an inherited blood disorder that happens when the body doesn't make enough healthy hemoglobin—a protein in your red blood cells that transports oxygen from your lungs to the rest of your body. This causes anemia, which can lead to a cascade of even more serious health issues over time.

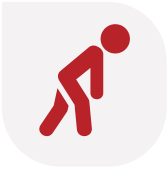
When red blood cells do not have enough energy (ATP) within, they break down sooner than normal (hemolysis) or don't mature properly (ineffective erythropoiesis). This can lead to low hemoglobin, which results in chronic anemia.

"Some symptoms like shortness of breath and bone pain are easy to see, but there are ones that are less visible. My spleen was enlarged so I had it removed, my gallbladder failed, I have osteoporosis, iron overload. Thalassemia damages your organs inside as well if not monitored and managed correctly."

Mary Jo
Living with beta-thalassemia

It's time to RETHINK THALASSEMIA™. Keep reading and learn how to get ahead of complications.

Symptoms of anemia resulting from thalassemia may vary from person to person and can include the ones below. Which ones do you have?



Fatigue

☐

Weakness

☐

Shortness of Breath

☐

Paleness

☐

Dizziness and Fainting

☐

Headaches

☐

While you may have realized that there's a connection between your thalassemia and the symptoms you experience, others may not. You may feel dismissed and misunderstood when people around you don't appreciate the true impact of daily symptoms on your life.

What other symptoms do you experience?

UNDERSTANDING THALASSEMIA COMPLICATIONS

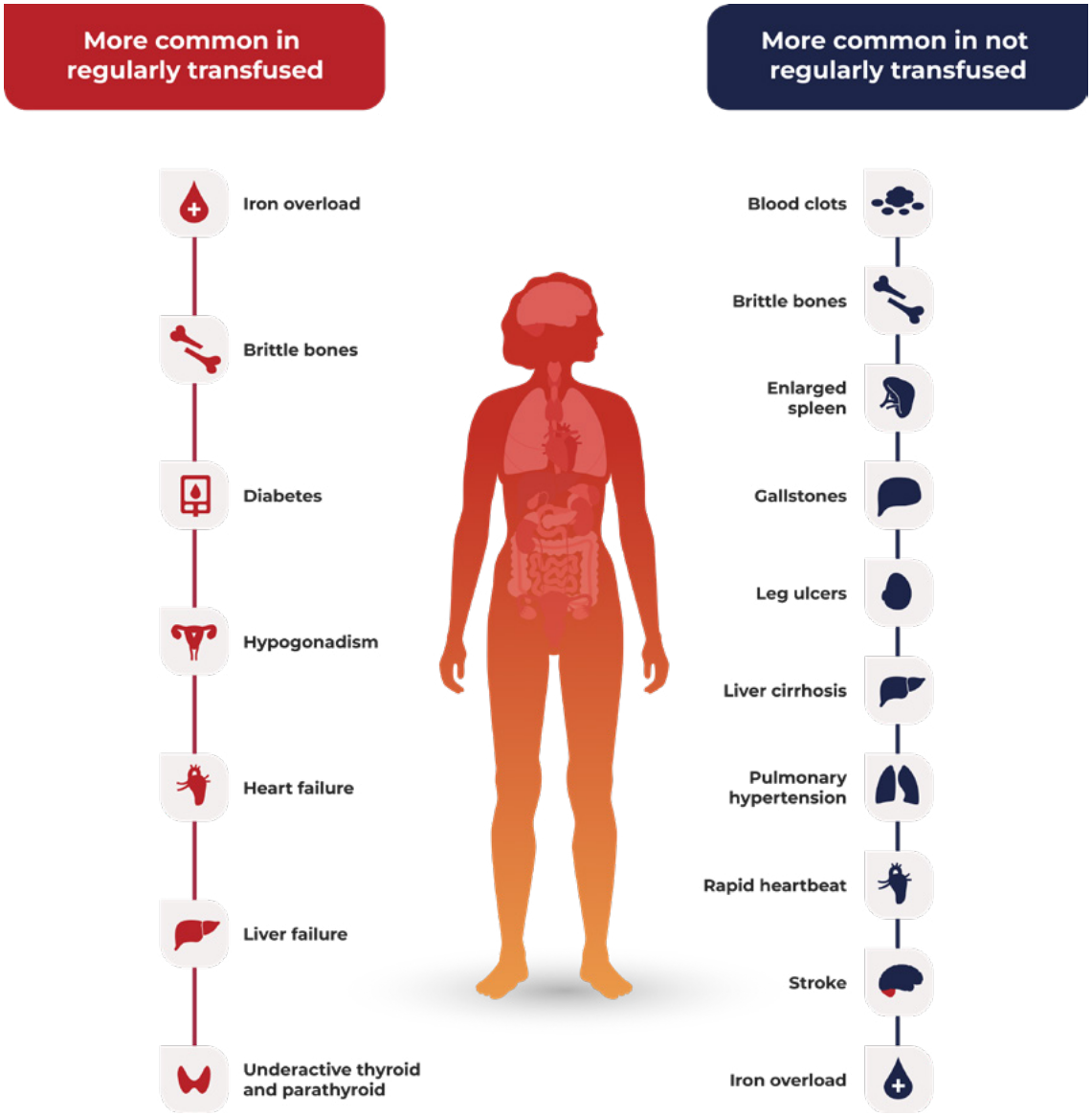
Thalassemia can get worse as time goes on, leading to very serious anemia-related complications.

There are things you can do to get ahead of these risks. With advances in medical science, understanding, and support, there's hope for managing the symptoms and monitoring the complications of thalassemia and enjoying a better quality of day-to-day living.

Some complications occur more often in people who do not need more regular transfusions. But they can happen in both types.

Healthcare providers may discuss thalassemia in a variety of ways.

- "Alpha-thalassemia" and "beta-thalassemia" refer to genetics and inheritance pattern
- "Thalassemia major," "thalassemia minor," "thalassemia trait," and "thalassemia intermedia" refer to genetics and severity of anemia
- "Transfusion-dependent thalassemia" and "non–transfusion-dependent thalassemia" refer to treatment. A person with thalassemia who does not require regular blood transfusions for survival can be referred to as "non–transfusion-dependent"



Brittle bones: Most blood cells are made in the bone marrow (the spongy material inside bones). In patients with thalassemia, it can expand due to increased demand for red blood cells, which causes your bones to widen. This can make your bones thin and brittle, increasing the chance of broken bones.

Enlarged spleen: The spleen filters the blood by removing damaged red blood cells. It also monitors the blood for infections. Your spleen may enlarge because it is working hard.

Pulmonary hypertension: A type of high blood pressure in the lungs. The breakdown of red blood cells (hemolysis) can cause it, and so can iron overload.

Blood clots and stroke: Several things that happen in thalassemia can add up to you getting a dangerous blood clot that lodges in a blood vessel, where it can cause a stroke. For patients who do not receive regular transfusions, this can be more common.

Rapid or irregular heartbeat: When iron deposits into the heart, the heart may try to work harder by beating faster. You may also have difficulty breathing, have some chest pain, and feel fatigued.

Liver disease: When iron deposits into the liver, it can lead to fibrosis (scarring of the liver) and cirrhosis (severe scarring, which can prevent proper functioning).

Iron overload: People with thalassemia who receive regular transfusions, as well as those who do not receive regular transfusions, can get too much iron in their bodies either from the disease or from frequent blood transfusions.

This means a lot of iron is moving around in the blood. When iron builds up, it collects in places like the heart, liver, and endocrine organs, and can make it hard for these organs to work properly.

Gallstones: Gallstones are one of the most prevalent complications. They are a result of hemolysis, one of the key processes driving thalassemia.

Leg ulcers: Anemia results in reduced oxygen delivery to tissues like the skin, making it easier for ulcers, or sores, to develop.

This kind of information can feel daunting, but there are steps you can take to get ahead of thalassemia complications.

“Doctors often will say I’m not sick enough… but I know there must be something I can do to feel better.”

— Real patient living with thalassemia

The more you know about your own thalassemia, the better you can advocate for yourself.

Have a one-on-one conversation with an Agios Clinical Nurse Educator.

Also known as a "CNE," a Clinical Nurse Educator works closely with patients, families, and care teams to offer you individualized support, educational resources, and community connections.*

We know that navigating life with thalassemia can be challenging, and Agios is proud to offer CNE support as part of our commitment to the thalassemia community.

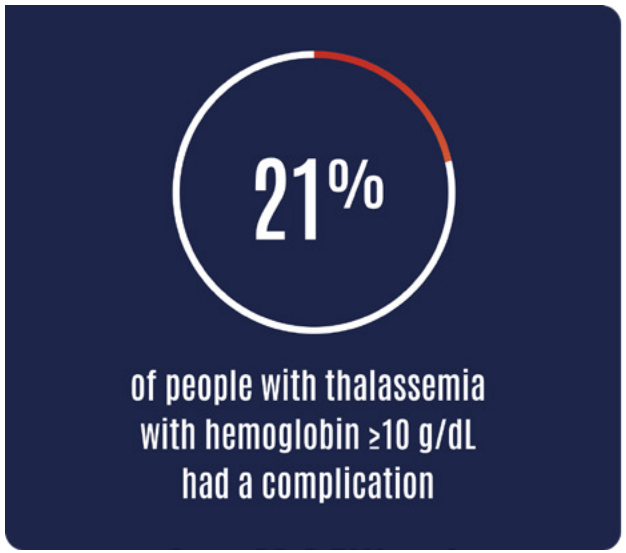
*A Clinical Nurse Educator does not provide medical advice. For medical advice or treatment-related questions, please talk to your healthcare team.

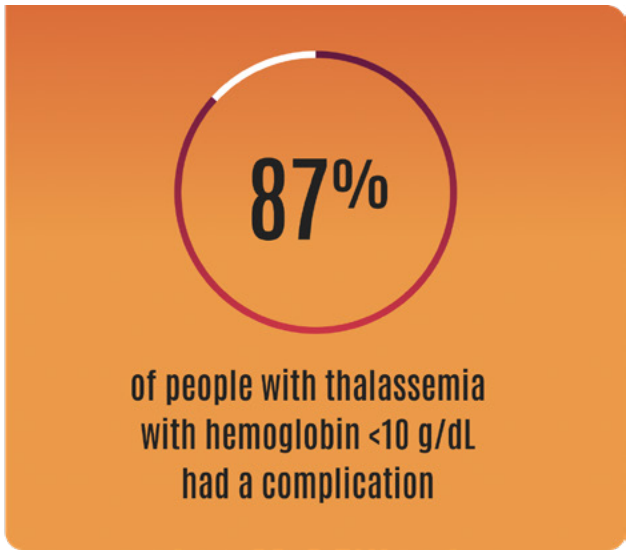
Connect with a CNE
www.rethinkthalassemia.com/sign-up

RECENT DISCOVERIES ABOUT THALASSEMIA

In people not receiving regular blood transfusions

In a study of 53 patients followed for 10 years, it was found that people with more severe anemia were more likely to have serious health issues.



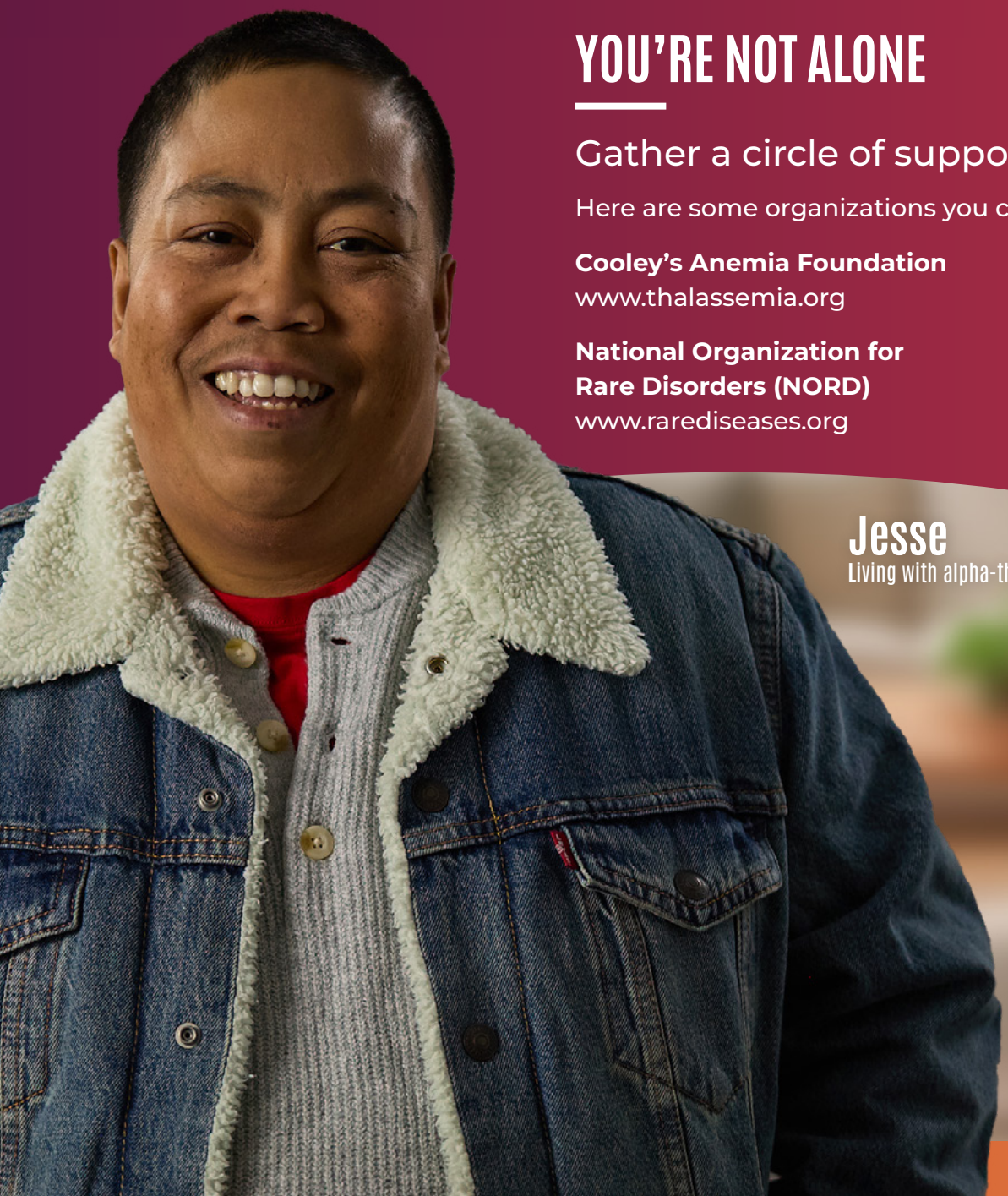


In this study, all patients had beta-thalassemia intermedia (non–transfusion-dependent thalassemia). Complications evaluated in the study included liver disease, abnormal formation of blood cells outside bone marrow, diabetes, brittle bones, little to no production of sex hormones, blood clots, pulmonary hypertension, and low levels of thyroid or parathyroid hormone.

New data is emerging showing patients with alpha-thalassemia may experience similar complications to those seen in patients with beta-thalassemia.

Read and share with your doctor!

Morbidity-free survival and hemoglobin level in non–transfusion-dependent beta-thalassemia: a 10-year cohort study.
Khaled M. Musallam, Maria Domenica Cappellini, Shahina Daar, and Ali T. Taher



YOU'RE NOT ALONE

Gather a circle of support among family, friends, and groups

Here are some organizations you can explore:

Cooley's Anemia Foundation
www.thalassemia.org

National Organization for Rare Disorders (NORD)
www.rarediseases.org

Thalassaemia International Federation
www.thalassaemia.org.cy

Jesse
Living with alpha-thalassemia

Have a conversation with your doctor about what you've learned!

It could be helpful to get familiar with the latest guidelines for the type of thalassemia you have, and discuss them with your doctor.

Download the latest guidelines

BE PROACTIVE

Know your numbers!

Studies have shown if you have beta-thalassemia, an increase of 1 g/dL in hemoglobin may be associated with a reduced risk of future serious complications, such as a stroke, organ damage, and blood clots.*

People with higher serum ferritin levels may have a higher risk of thalassemia complications. In a 10-year study of patients with non-transfusion-dependent beta-thalassemia:

- 800 ng/mL and up: highest risk
- Above 300 to under 800 ng/mL: less risk
- 300 ng/mL or below: no complications

*This is not medical advice. Please consult with your doctor.

Read and share with your doctor!

Variations in hemoglobin level and morbidity burden in non–transfusion-dependent beta-thalassemia. Khaled M. Musallam, Maria Domenica Cappellini, and Ali T. Taher

Serum ferritin level and morbidity risk in transfusion-independent patients with beta-thalassemia intermedia: the ORIENT study. Khaled M. Musallam, Maria Domenica Cappellini, Shahina Daar, Mehran Karimi, Amal El-Beshlawy, Giovanna Graziadei, Matthew Magestro, Jerome Wulff, Guilhem Pietri, and Ali T. Taher

BE VOCAL

Work with your doctor to share and monitor your symptoms

Be confident, arm yourself with knowledge, and feel empowered to ask questions.

BE OPEN

Being open about your health concerns is a bold and rewarding move

At Agios, we are committed to raising awareness and advocating for better care, as well. Together, by speaking up, we can start to make a difference—for ourselves and our community.

Interested in sharing your story? Reach out to **mythalassemiastory@agios.com**.

"I see myself as unstoppable... I have become my own self-advocate."

— Real patient living with thalassemia

FINDING A DOCTOR YOU TRUST

Here are some things to consider when choosing a hematologist

Hematologists are specialists in blood disorders (or even thalassemia, specifically). They monitor your blood health and transfusions and prescribe treatments such as chelation therapy to manage iron overload.

Finding a hematologist you trust and being monitored regularly can help you feel confident that the complex needs of your thalassemia are being met.

It's important to find a hematologist to help manage your thalassemia, and a care team to help manage your overall health and well-being.

"I think it's important to have a supportive medical team that is comprehensive and understands the condition and that you do the regular testing needed."

— Jesse, living with alpha-thalassemia

For more details about finding the right hematologist, visit www.rethinkthalassemia.com

OTHERS YOU MAY WANT ON YOUR CARE TEAM

Primary care physician (PCP):
Oversees your general health and can coordinate care between different specialists.

Nutritionist:
Can recommend a thalassemia diet plan that addresses your specific health needs.

Cardiologist:
Can monitor and manage your heart health since patients with thalassemia are at risk for heart-related issues, including iron overload affecting the heart.

Endocrinologist:
Can manage issues like diabetes and thyroid problems.

Psychiatrist/psychologist:
Can offer emotional support and suggest coping strategies.

Nurse specialist:
Can provide day-to-day care and education, helping you manage your condition and treatment regimen.

ASKING QUESTIONS IS A FORM OF SELF-ADVOCACY

Here are some questions and observations that could be helpful when talking to your healthcare provider

- Here's how often my symptoms make me miss out on activities (share what those symptoms are and how frequently they impact your plans)
- These are activities I'm no longer or rarely able to do based on my symptoms (share what those symptoms are)
- How often should my hemoglobin and ferritin levels be checked?
- What is the plan for regular screenings and tests?
- Are there specific signs of complications I should watch for?
- How should I manage symptoms or complications between appointments?
- Are there any new treatments or clinical trials available that might be suitable for me?
- Should I be taking any supplements or medications regularly?
- What are the long-term outlook and potential complications of my specific case of thalassemia?

Mary Jo
Living with beta-thalassemia

"I would encourage others living with thalassemia to rethink it and to become your own advocate with your doctors."

— Mary Jo, living with beta-thalassemia

THE BEST TIME TO RETHINK YOUR THALASSEMIA MANAGEMENT GOALS IS RIGHT NOW

What is most important to you? What do you value most in your life? Consider enlisting your healthcare team to help you achieve it!

You might have heard of SMART goals. This acronym stands for Specific, Measurable, Achievable, Realistic, and Timed. It started in business circles and is useful in personal life, as well.

You can share a SMART goal with your healthcare team and ask them to help you create an action plan to achieve it. The action plan will specify how you will reach your goal.

People with optimally managed thalassemia can now do more of the activities they enjoy.

For example, each of these are SMART goals: complete a continuing education course at the local college this year; go biking with my spouse once a week, starting next month; travel to a friend's wedding in June.

Add your own SMART goal here to discuss with your healthcare provider:

RETHINK THALASSEMIA™

UNDERSTAND YOUR THALASSEMIA

- How symptoms affect your daily life
- Potential complications
- Recent research developments

GATHER A TEAM YOU TRUST

- Healthcare providers
- Family and friends
- Patient support groups

ADVOCATE FOR YOURSELF

- Share new information you learn
- Ask questions of your doctor
- Speak up about how you feel

We are glad you've chosen us to join you on your journey with thalassemia. We're here to support you at every step. Together, we can face the challenges and acknowledge the achievements along the way.

agios