

Young Inventor Helps Fight Skin Cancer

by Caitlyn Meagher



Heman Bekele has spoken to world leaders about his invention.

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People of all ages can come up with great ideas. At just 14 years old, Heman Bekele thought of an invention: What if there were a soap that could help cure some types of skin cancer?

Heman Bekele came up with this idea by thinking about real-world problems. He had lived in Ethiopia until he was four, and he remembered seeing people work long hours under the hot sun. Without proper sun protection, people can get melanoma. Melanoma is a serious type of skin cancer. More than 2 million people are **diagnosed** with skin cancer each year. Although most melanoma can be treated, the average price of **treatment** is very expensive. It can be around \$40,000! And the disease can be very dangerous if it is not treated early.

Bekele wanted to help fix these problems. He imagined a soap that could help fight cancer cells. This soap would be much more **affordable** than other skin cancer **treatments**. That way, people who need it could access it more easily. To put his idea to the test, Bekele started experimenting in his own kitchen. First, he focused on making a good soap using natural plant oils. Then, he connected with researchers at two universities. The researchers helped him figure out how to add cancer-fighting medicines to the soap.

After months of testing, he created the Skin Cancer Treating Soap. This soap has special particles that help deliver cancer-fighting medicine. These particles help the medicine stay on the skin even after washing. The medicine activates important immune cells in the body that fight off cancer cells. Bekele's invention is still being tested, but one day it might help **prevent** different kinds of skin cancer. And it costs less than \$10 to make! That would mean more people around the world could get access to life-saving care.

In 2023, Bekele submitted his idea for Skin Cancer Treating Soap to a big science competition. He presented his idea to the judges and won! Bekele is using some of his prize money to continue researching. Next, he wants to test the soap on human patients. Once he knows it works, he wants to bring the soap to communities that need it most. He continues to work for a healthier world.

Vocabulary

diagnose

transitive verb

definition: to determine the identity of (a disease) by examination.

He was shocked when the doctor diagnosed cancer.

forms: diagnosed, diagnoses, diagnosing

prevent

verb

definition: When you prevent a thing, you do something that stops that thing from happening. People try to prevent things like fires, accidents, and other bad things that might happen.

My teacher said we could prevent getting each other sick by washing our hands.

The dog was so strong that it was hard to prevent him from getting loose.

Jamal's dad drove slowly in the snow to prevent the car from sliding.

Spanish: impedir, prevenir

forms: prevented, preventing, prevents

treatment

noun

definition: A treatment for a disease or injury is way of helping a person get better when they have it. Sometimes a treatment is medicine. Sometimes it is something to do that helps--like drinking a lot of liquids and staying in bed when you're sick with the flu. Doctors study treatments so that they can help their patients fight disease or recover from their injuries.

Spanish: tratamiento

affordable

adjective

definition: When something is affordable, you can buy it if you want to because it doesn't cost too much money.

My mom really likes that store. She says it's because all the clothes are affordable.

A used car is more affordable than a new car, but sometimes it needs a lot of repairs after you buy it.

1. Before you start reading...

Here are the vocabulary words that will be in this reading. Let's see how well you already know them.

Check the box that shows how well you know each word. It's ok if you don't know them yet (this is not graded)!

	Don't know it	Have heard of it but not sure of its meaning	Know something about its meaning	Know it well
affordable				
diagnose				
prevent				
treatment				

2. Word Builder

Words are made of smaller parts that are called syllables. Some words have one syllable, but many have two or more. Draw lines to show how the syllables build each vocabulary word.

pre	treat	af	ment
			able
		vent	ford
			ag
		di	nose

1. _____ 2. _____ 3. _____

4. _____

3. After reading and exploring the words through some activities...

Do you know these words better? Check the box that shows how well you know each word. It's ok if you don't know them yet (this is not graded)!

	Don't know it	Have heard of it but not sure of its meaning	Know something about its meaning	Know it well
affordable				
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treatment				

Name: _____ Date: _____

1. What is melanoma?

- A. a type of medicated soap
- B. a natural plant oil used in soap
- C. a serious type of skin cancer
- D. an important immune cell

2. One problem Heman Bekele thought about was people getting melanoma from working in the hot sun without proper protection. What is his solution to this problem?

- A. a soap that contains skin cancer-fighting medicines
- B. a lotion that people could make in their kitchens
- C. a new type of sun protection to prevent sunburn
- D. raising money to help people afford treatment

3. Read the following sentences.

"To put his idea to the test, Bekele started experimenting in his own kitchen. First, he focused on making a good soap using natural plant oils. Then, he connected with researchers at two universities. The researchers helped him figure out how to add cancer-fighting medicines to the soap.

After months of testing, he created the Skin Cancer Treating Soap."

What conclusion can you draw based on this evidence?

- A. Researchers liked Bekele's idea and believed it was worth spending time on.
- B. Natural plant oils did not mix well with cancer-fighting medicines.
- C. University researchers did not think this soap would work.
- D. It was faster and easier to make soap at home than in a laboratory.

4. According to the text, why is it difficult for many people to get treatment for melanoma?

- A. Some hospitals do not offer treatment.
- B. Some people don't have access to sunscreen.
- C. The medicine does not last very long.
- D. The treatment is too expensive to afford.

5. What is the main idea of this passage?

- A. More than 2 million people are diagnosed with skin cancer each year and treatment can often cost around \$40,000.
- B. Heman Bekele is a young inventor who invented a soap that could help fight skin cancer cells so more people might have access to life-saving care.
- C. In 2023, Heman Bekele's Skin Cancer Treating Soap won a big science competition and he received prize money for his invention.
- D. Some people have to work long hours under the hot sun and without proper sun protection people can get melanoma.

6. Read the following sentences.

"These particles help the medicine stay on the skin even after washing. The medicine **activates** important immune cells in the body that fight off cancer cells. Bekele's invention is still being tested, but one day it might help prevent different kinds of skin cancer."

As used in these sentences, what does the word "**activates**" mean?

- A. weakens or wears out
- B. finds a problem or difficulty
- C. causes something to start working
- D. removes or takes something off

7. Choose the answer that best completes the sentence.

Heman Bekele wants his soap to help make it easier to access skin cancer treatment, _____ for communities that need it the most.

- A. especially
- B. however
- C. instead
- D. meanwhile

8. Bekele won a big science competition for his Skin Cancer Treating Soap. What does he plan to do next?

9. Bekele wants more people to be able to access skin cancer treatment more easily. How did he design his treatment to be easier to access?

10. What impact might Bekele's invention have in Ethiopia and around the world?