Speaker 1 (00:01)
Always ready to save lives while risking their own. Acts of bravery that remain in everyone's memory, such as the heroic response amid the rubble of the Twin Towers. Three hundred forty-three firefighters died while trying to rescue people. We think their equipment protects them from everything—from fire, chemical liquids, and toxic fumes. But even they could not imagine that another danger might come from within, from those very fire-resistant suits.

Speaker 2 (00:42)
A firefighting suit is made up of three layers. The first is the outer shell, which protects against punctures and abrasions.

Speaker 3 (00:53)
It does—

Speaker 2 (00:53)
—an excellent job. Then there is the inside of the uniform, which is in contact with the firefighter's skin.

Speaker 3 (01:01)
See?

Speaker 2 (01:02)
It is a quilted liner that serves as a thermal barrier.

Speaker 3 (01:06)
Finally—

Speaker 2 (01:07)
Do you see here in the middle? There is also a moisture barrier. This barrier prevents water and other liquids from penetrating, such as—

Speaker 3 (01:17)
Gasoline or diesel fuel.

Speaker 2 (01:21)
The moisture barrier is usually treated with PFAS chemicals, which can also contaminate the quilted liner that is in contact with the skin.

Speaker 3 (01:31)
Now, this has PFAS on it. This goes against the skin.

Speaker 2 (01:36)
As a firefighter's body temperature increases, the risk of exposure increases. Think, for example, about testicular cancer. A firefighter works a fire in a very hot environment, and with the heat, the groin area becomes particularly permeable to toxic substances.

Speaker 1 (02:02)
How many colleagues have you personally lost to cancer?

Speaker 3 (02:06)
Oh—

Speaker 2 (02:07)
I've lost—

Speaker 3 (02:10)
—I've lost count.

Speaker 2 (02:12)
This year we will probably lose more firefighters to cancer than we have lost in the line of duty over the last five years combined. There are so many factors that cause illness.

Speaker 1 (02:30)
For example, when homes burn, hydrocarbons, asbestos, formaldehyde, benzene, and PFAS are released—a group of potentially carcinogenic substances found in many products.

Speaker 3 (02:55)
Yes.

Speaker 2 (02:55)
PFAS are very widespread. They are permanent chemicals—"forever chemicals." When Teflon pans burn, for example, PFAS are released.

Speaker 3 (03:07)
Think—

Speaker 2 (03:08)
about what burns in fires today. There are many more synthetic materials than natural fibers. All of this has led to higher cancer rates among firefighters, often even among younger firefighters, with aggressive forms of cancer.

Speaker 3 (03:24)
It's something—

Speaker 2 (03:25)
—I have personally witnessed among friends and colleagues who developed cancer at a young—

Speaker 3 (03:30)
—age.

Speaker 1 (03:32)
Among these colleagues, how many had testicular cancer?

Speaker 3 (03:35)
Well, it is—

Speaker 2 (03:35)
—certainly true that several firefighters develop testicular cancer.

Speaker 3 (03:41)
It is—

Speaker 2 (03:41)
—a common cancer among firefighters.

Speaker 1 (03:51)
And among the firefighters who became ill are also the 600,000 volunteers who, in the United States, make up the majority of the fire service, ensuring permanent protection in a country where homes are built almost entirely of wood. James Quinn is the volunteer chief of this fire station. He dedicates all of his free time to the department. He is not paid. He uses the same equipment when called upon and faces the same risks. I understand that you had a health issue. Can you tell me whether you associate that health problem with this chemical contamination?

Speaker 4 (04:35)
I had colon cancer. Colon cancer that was removed when I was younger. I cannot say with certainty whether it was related to firefighting. But considering all the evidence and the correlations that are emerging, yes, it could have been. Fortunately, I'm healthy again now.

Speaker 1 (04:55)
Would you ever have imagined that the equipment meant to protect you could actually be a risk to your health?

Speaker 4 (05:05)
Well, I clearly remember when I was a young firefighter. We used to cover the fire station floor with firefighting foam and crawl through it during training exercises. Today that would be unthinkable—it could never happen. But back then, we didn't know the danger. We made it "snow" with foam in the middle of July.

Speaker 1 (05:28)
That foam is now discouraged because the International Agency for Research on Cancer has confirmed a link between certain cancers and this firefighting product, which also contains PFAS.

Speaker 4 (05:43)
Fortunately, thanks to technology and various scientific studies, we have begun using new types of firefighting foam. We switched to "green" foam, which is less toxic and still works well.

Speaker 3 (06:02)
I was still working—

Speaker 2 (06:03)
—with the New York Fire Department when we removed it from all our vehicles. We got rid of that PFAS-containing foam.

Speaker 1 (06:12)
Among the firefighters who became ill, many have decided to sue PFAS manufacturers such as 3M and DuPont to seek compensation.

Speaker 4 (06:24)
I decided not to sue because there are simply too many factors involved, too many chemicals we encounter in our work. And compensation doesn't really interest me. What I do want is to

make sure the firefighters on my team protect themselves as much as possible by taking precautions and cleaning their equipment.

Speaker 1 (06:47)
When did you begin adopting all these precautions?

Speaker 4 (06:51)
It was—

Speaker 1 (06:51)
—a—

Speaker 4 (06:52)
—gradual process. At first we simply sprayed ourselves with water, then little by little we improved the system. Today we undergo a complete medical checkup every year, including cancer screenings. Look—every piece of equipment has been assigned a color: red, white, or blue. Every three months, all the firefighters in our station must clean their personal equipment.

Speaker 1 (07:21)
Learning how to protect themselves from toxic substances has also become the new mission of Captain Frank Leeb since his retirement. As a member of an association, he teaches firefighters across the country how to protect themselves from the hidden dangers of their profession, including their equipment. You personally helped draft this handbook for your colleagues to reduce cancer risk as much as possible.

Speaker 3 (07:52)
It is—

Speaker 2 (07:53)
—a handbook we distributed five or six years ago after the first scientific studies were published.

Speaker 3 (08:00)
Only—

Speaker 2 (08:01)
—recently have new-generation turnout gear become available that apparently does not contain PFAS.

Speaker 1 (08:13)
Individual U.S. states are acting on their own to replace PFAS-containing turnout gear with expensive new-generation uniforms. It will take years and, above all, tens of millions of dollars to purchase them.

Speaker 3 (08:30)
There is—

Speaker 1 (08:31)
—a long—

Speaker 2 (08:31)
—way to go before every firefighter in the country can use safe equipment. There are more than one million firefighters in the United States. We are talking about an enormous number of firefighting suits that need to be replaced.

Speaker 1 (08:47)
The new PFAS-free suits would cost about €3,000 each. Should money really be saved at the expense of those who risk their lives to save others, even as volunteers? It is important to remember the commitment of firefighters. Honoring their memory is the mission of Dave and his wife Anne Marie, who work for the National Foundation that supports the families of American firefighters who died in the line of duty. Dave was among the firefighters who responded to the Twin Towers in 2001.

Speaker 3 (09:37)
He was—

Speaker 2 (09:38)
—a rescue specialist. He essentially used a camera mounted on a very long telescoping arm. With that camera, we were able to inspect and search through spaces in the rubble.

Speaker 1 (09:53)
How many colleagues do you personally know who became ill?

Speaker 3 (09:56)
Many.

Speaker 5 (10:07)
We are adding 174 names to the firefighters' memorial dedicated to victims of the September 11 attack. They died years later from cancers linked to exposure to toxic substances during the recovery operations after the attack.

Speaker 3 (10:24)
What were they—

Speaker 5 (10:26)
—exposed to?

Speaker 3 (10:26)
Well—

Speaker 5 (10:27)
—it depended on the protection they had. My husband also went down to the site after the towers collapsed. They worked for days in the rubble, exposed to various substances: jet fuel, molten glass, steel, and dust.

Speaker 1 (10:46)
You know—

Speaker 4 (10:48)
—in the end, when we chose this profession, we knew the risks. But when we rush to an emergency, we do not think about danger. We are there to protect people and their property.

Speaker 1 (11:01)
Firefighters are deeply loved.

Speaker 4 (11:07)
I think that gives us extra motivation. We save lives. That's why everyone loves firefighters. Everyone else runs away from danger, while we charge straight into it. It takes a little bit of madness.