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00:00:00,608 --> 00:00:07,606

This series presents information based in part on theory and conjecture.

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00:00:07,606 --> 00:00:17,603

The producer's purpose is to suggest some possible explanations, but not necessarily the only ones to the mysteries we will examine.

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00:00:30,599 --> 00:00:43,594

In August 1945, a motion picture camera crew enters the city of Hiroshima, Japan to record startling images of the first city devastated by an atomic bomb.

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00:00:43,594 --> 00:00:53,591

There were those who said that Hiroshima would remain uninhabitable, forever poisoned by radiation.

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00:00:53,591 --> 00:00:59,589

And that those who were exposed to the bomb would all be dead within three years.

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00:00:59,589 --> 00:01:03,588

What has become of the Hiroshima survivors?

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00:01:11,586 --> 00:01:23,582

On July 16, 1945, a signal flare illuminates the barren New Mexico desert as scientists anxiously await the detonation of the world's first atomic weapon.

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00:01:29,580 --> 00:01:36,578

The bomb is blown up by a rocket.

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00:01:36,578 --> 00:01:44,575

For President Truman, the inevitable dilemma, should the weapon be used against Japan?

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00:01:44,575 --> 00:01:53,572

Believing that it will bring a speedy end to World War II and the savings of millions of lives, the president issues the order.

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00:01:53,572 --> 00:01:55,572

Drop the bomb.

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00:02:00,570 --> 00:02:11,567

In the early morning of August 6, a B-29 named the Inola Gay departs the Pacific Island of Tinian and routes to Japan.

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00:02:11,567 --> 00:02:20,564

For a payload, a single five-ton bomb nicknamed Little Boy.

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00:02:20,564 --> 00:02:25,562

The mood in Hiroshima that morning was one of uneasy anticipation.

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00:02:25,562 --> 00:02:35,559

While other Japanese cities were being leveled by American bombers, Hiroshima remained unchanged and no one in Japan could understand why.

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00:02:35,559 --> 00:02:40,557

Some thought Hiroshima was being spared because it was too beautiful to bomb.

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00:02:40,557 --> 00:02:43,557

They thought the Americans were saving it to build villas there.

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00:02:43,557 --> 00:02:49,555

Others speculated that a relative of President Truman's, perhaps even his mother, was living in the city.

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00:02:49,555 --> 00:02:52,554

And that's why the city was being spared.

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00:02:52,554 --> 00:02:55,553

Yet there were those who foresaw the real reason.

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00:02:55,553 --> 00:03:00,551

Hiroshima was being reserved for a special, highly destructive weapon.

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00:03:00,551 --> 00:03:08,549

Many survivors remember seeing the B-29 over Hiroshima that morning, but painted little heat.

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00:03:09,548 --> 00:03:24,544

And few could see a small, shiny object falling from the plane.

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00:03:24,544 --> 00:03:30,542

Kaz Suishi was an American of Japanese descent living in Hiroshima at the time of the bomb.

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00:03:30,542 --> 00:03:35,540

She was two miles from the bomb's hypocenter.

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00:03:35,540 --> 00:03:38,539

It was a beautiful blue sky that morning.

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00:03:38,539 --> 00:03:43,538

I heard the sound of the plane and I looked up and saw the B-29.

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00:03:43,538 --> 00:03:49,536

I was not concerned because the B-29 used to come every single day, but it never dropped bombs.

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00:03:49,536 --> 00:03:53,534

I thought it was beautiful. It looked like a silver angel.

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00:03:53,534 --> 00:04:01,532

Then after the B-29 was gone, there was still a little dot, a tiny little dot falling to the ground.

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00:04:01,532 --> 00:04:08,530

At first I thought it was a parachute, and I thought, how brave the American must be to parachute into the city.

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00:04:10,529 --> 00:04:14,528

During the 43 seconds it took for the bomb to fall to Earth.

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00:04:14,528 --> 00:04:19,526

Most of the inhabitants of Hiroshima weren't even aware they were in any danger.

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00:04:19,526 --> 00:04:24,525

And none could imagine the devastation that was to follow.

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00:04:31,522 --> 00:04:34,521

The bomb exploded.

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00:04:48,517 --> 00:04:54,515

In an instant, the city of Hiroshima, Japan, was obliterated.

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00:04:55,515 --> 00:05:00,513

Metal fused with stone. Sand turned to glass.

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00:05:02,513 --> 00:05:06,511

It was as if the sun had come in contact with the Earth.

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00:05:09,510 --> 00:05:15,509

Every structure within a two-mile radius of the bomb's hypocenter was destroyed.

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00:05:15,509 --> 00:05:20,507

Another Hiroshima survivor is Florence Yamada Garnett.

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00:05:20,507 --> 00:05:25,505

She was 13 years old at the time and lost most of her family in the explosion.

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00:05:25,505 --> 00:05:30,504

It is only recently that she has been able to talk about her experiences.

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00:05:31,503 --> 00:05:36,502

Next thing you do, you have to find a way to get to the city.

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00:05:36,502 --> 00:05:40,501

You have to find a way to get to the city.

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00:05:40,501 --> 00:05:44,499

The building was falling on top of you.

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00:05:44,499 --> 00:05:48,498

There was a pressure.

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00:05:48,498 --> 00:05:52,497

Somebody was just stepping out over you.

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00:05:52,497 --> 00:05:55,496

It was...

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00:05:55,496 --> 00:06:00,494

And then the heat. After the explosion of the bomb, you can feel the heat.

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00:06:00,494 --> 00:06:04,493

You suck in the air and you think you're dying.

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00:06:04,493 --> 00:06:07,492

I was rolled across the school.

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00:06:07,492 --> 00:06:11,491

That's about all I remember at the time.

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00:06:13,490 --> 00:06:19,488

The temperature near the center of the blast was so great, human beings literally evaporated.

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00:06:20,488 --> 00:06:26,486

Leaving behind, in some cases, nothing but their shadows etched into stone and concrete.

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00:06:26,486 --> 00:06:30,485

No one is certain how many were killed in the blast.

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00:06:30,485 --> 00:06:38,482

Conservative estimates put the figure at 70,000, with many thousands more to die in the weeks and months to follow.

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00:06:48,479 --> 00:06:52,478

The bomb was destroyed.

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00:06:52,478 --> 00:06:58,476

Within days, medical personnel attempts to treat the tens of thousands of seriously injured.

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00:06:58,476 --> 00:07:04,474

Severe burns and mutilations are so numerous, medical facilities so primitive,

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00:07:04,474 --> 00:07:09,473

that most of the severely injured have little chance at all for survival.

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00:07:09,473 --> 00:07:15,471

As one doctor puts it, erosima is a sea of dead and dying.

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00:07:15,471 --> 00:07:20,469

You could see people running out of the city, skin hanging.

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00:07:20,469 --> 00:07:25,467

Some burned to look like charred, but they were still moving.

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00:07:25,467 --> 00:07:34,465

I remember seeing people just sitting, sitting or standing, charred to death.

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00:07:34,465 --> 00:07:39,463

We call a man that was on a bicycle, that was still leaning a gun.

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00:07:39,463 --> 00:07:46,461

And another person taking the body off the bike and then taking the bike away.

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00:07:46,461 --> 00:07:51,459

I thought it was cruel at that time, but of course, it's survival for yourself.

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00:07:54,458 --> 00:07:59,457

As horrible as their experiences have been, many of the survivors are soon to learn.

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00:07:59,457 --> 00:08:02,456

More terror is to confront them.

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00:08:03,455 --> 00:08:10,453

Within days and weeks, the survivors begin to notice in themselves a strange insidious form of illness.

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00:08:10,453 --> 00:08:14,452

The survivors attribute the symptoms to A-bomb disease.

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00:08:14,452 --> 00:08:20,450

They are actually the effects of acute atomic radiation never experienced before.

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00:08:20,450 --> 00:08:26,448

One man who understands the terror of radiation poisoning is Dr. Robert J. Lifton,

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00:08:26,448 --> 00:08:33,446

a psychiatrist who has spent several years in Hiroshima and has interviewed numerous atomic bomb survivors.

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00:08:33,446 --> 00:08:36,445

He is a very experienced person.

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00:08:36,445 --> 00:08:39,444

He is a very experienced person.

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00:08:39,444 --> 00:08:42,443

He is a very experienced person.

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00:08:42,443 --> 00:08:45,442

He is a very experienced person.

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00:08:45,442 --> 00:08:49,441

Dr. Lifton has interviewed numerous atomic bomb survivors.

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00:08:51,440 --> 00:08:57,438

Well, with most wars and with the use of conventional weapons, you kill people.

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00:08:57,438 --> 00:09:00,437

Then both sides bury their dead.

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00:09:00,437 --> 00:09:03,437

They then return to life as usual.

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00:09:03,437 --> 00:09:08,435

Oh, they grieve and there's pain, but life goes on in the old-fashioned way.

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00:09:08,435 --> 00:09:14,433

In erosima, the bomb was dropped and that was the beginning of lifelong effects.

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00:09:14,433 --> 00:09:18,432

For instance, days, weeks, months after the bomb was dropped,

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00:09:18,432 --> 00:09:23,430

and sometimes people who seemed unaffected by the bomb to have no marks on their bodies,

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00:09:23,430 --> 00:09:29,428

they would suddenly find themselves having weird symptoms, very grotesque symptoms,

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00:09:29,428 --> 00:09:33,427

bleeding from all of their bodily openings, bleeding into the skin,

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00:09:33,427 --> 00:09:38,425

severe diarrhea, bloody diarrhea, extreme weakness, high fever,

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00:09:38,425 --> 00:09:42,424

and when white blood counts could be taken, very high white blood counts.

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00:09:42,424 --> 00:09:45,423

Extreme weakness and in many cases death.

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00:09:45,423 --> 00:09:49,422

If people lived a little longer, other grotesque symptoms would follow,

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00:09:49,422 --> 00:09:51,421

such as their hair falling out.

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00:09:51,421 --> 00:09:55,420

Now these were the symptoms of acute radiation effects.

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00:09:55,420 --> 00:09:57,419

Nobody understood this at the time.

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00:09:57,419 --> 00:10:00,419

They simply sensed that there was some kind of poison in the bomb,

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00:10:00,419 --> 00:10:08,416

and the people in Erosima began to feel that this is a weapon that leaves behind poison in your bones,

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00:10:08,416 --> 00:10:11,415

and that poison may strike you down at any time.

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00:10:12,415 --> 00:10:17,413

The first thing we would do is get up in the morning and look at your forearm,

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00:10:17,413 --> 00:10:21,412

and if you didn't have any purple spots, that means you wouldn't live for a couple of days.

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00:10:21,412 --> 00:10:25,411

With me, like I said, I went through the radiation sickness of a

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00:10:25,411 --> 00:10:31,409

vomiting, nausea, dehydration, complete loss of hair.

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00:10:31,409 --> 00:10:36,407

But I was one of the lucky ones to survive.

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00:10:36,407 --> 00:10:39,406

This was the first thing you would do in the morning is look at your arm,

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00:10:39,406 --> 00:10:42,405

comb your hair, and it starts falling out.

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00:10:42,405 --> 00:10:45,404

You feel your time is coming very soon.

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00:10:45,404 --> 00:10:47,404

There was no panic about it.

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00:10:47,404 --> 00:10:51,402

It was just an everyday reality at the time.

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00:10:51,402 --> 00:10:59,400

However, the people who were not exposed to the bomb directly were very hesitant in going back into the city.

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00:10:59,400 --> 00:11:03,399

By that time, we had heard there was a different type of a bomb,

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00:11:03,399 --> 00:11:08,397

that if you were exposed to the bomb, you may not live.

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00:11:08,397 --> 00:11:14,395

Within weeks, the survivors of Hiroshima begin the lengthy and burdensome task of rebuilding.

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00:11:14,395 --> 00:11:19,394

Unknown to them, the effects of the bomb would haunt them for years to come,

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00:11:19,394 --> 00:11:23,392

in ways they could not imagine.

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00:11:23,392 --> 00:11:28,391

In Search of, we'll continue in a moment, here on the History Channel.

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00:11:29,390 --> 00:11:41,387

When an atomic bomb explodes, it produces heat, light, and blast effects.

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00:11:41,387 --> 00:11:46,385

In addition, there is the emission of invisible rays of atomic matter,

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00:11:46,385 --> 00:11:50,384

that bombard everything within the blast area.

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00:11:50,384 --> 00:12:00,381

These invisible rays, referred to as radiation, have the capability of penetrating the human body.

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00:12:00,381 --> 00:12:07,378

In small doses, certain types of radiation, like that used frequently in medical diagnosis,

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00:12:07,378 --> 00:12:09,378

is believed to be harmless.

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00:12:09,378 --> 00:12:16,376

But in massive amounts, like that experienced at Hiroshima, the results can be deadly.

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00:12:16,376 --> 00:12:22,374

When penetrating the human body, radiation strikes deep within the cells our bodies are made of.

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00:12:22,374 --> 00:12:28,372

When a damaged cell reproduces itself, instead of dividing to produce a new healthy cell,

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00:12:28,372 --> 00:12:32,371

it manufactures an identically damaged cell.

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00:12:32,371 --> 00:12:39,368

This type of growth, which frequently takes years to surface, leads to the disease we call cancer.

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00:12:39,368 --> 00:12:44,367

Scientists had been aware of the harmful effects of radiation for some time,

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00:12:44,367 --> 00:12:48,365

and wanted to determine how much of it had been received in Hiroshima.

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00:12:48,365 --> 00:12:53,364

Human bone fragments, one of the materials that best retains radiation,

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00:12:53,364 --> 00:12:58,362

were collected at various locations in the city for analysis later.

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00:13:00,362 --> 00:13:06,360

The early findings revealed that a large amount of highly toxic beta and gamma radiation

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00:13:06,360 --> 00:13:11,358

had been dispersed throughout the city at the time of the explosion.

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00:13:11,358 --> 00:13:16,357

What effect this would have on the Hiroshima survivors was still unknown.

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00:13:16,357 --> 00:13:22,355

All that was certain was that many of the survivors, even those who seemed unscathed by the bomb,

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00:13:22,355 --> 00:13:29,353

were carrying within their bodies the potential for great harm that would not reveal itself for years to come.

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00:13:29,353 --> 00:13:38,350

Dr. Stuart Finch has recently concluded a 34-year investigation into the delayed effects of radiation exposure.

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00:13:38,350 --> 00:13:45,347

The other findings early were the occurrence of increased cataracts in the lenses of the eyes,

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00:13:45,347 --> 00:13:55,344

and then the increased occurrence of leukemia, which in the heavily exposed population reached a peak rate of about 40 times the normal rate.

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00:13:55,344 --> 00:14:02,342

Concomitantly, there's been an increased rise in cancer rates in Hiroshima,

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00:14:02,342 --> 00:14:09,340

particularly cancer of the stomach, cancer of the thyroid, cancer of the lung, breast cancer,

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00:14:09,340 --> 00:14:15,338

and most recently the occurrence of multiple myeloma, which is a form of bone cancer.

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00:14:15,338 --> 00:14:22,336

I think it is safe to say that there has been a definite relationship established

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00:14:22,336 --> 00:14:29,334

between the occurrence of exposure in these survivors and the occurrence of cancer.

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00:14:30,333 --> 00:14:34,332

The effects of radiation can remain hidden for generations.

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00:14:34,332 --> 00:14:43,329

When sex cells are radiated, the victims may remain in perfect health, but pass on genetic damage to their offspring.

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00:14:43,329 --> 00:14:50,327

When hundreds of exposed women who were pregnant at the time of the explosion gave birth to defective children,

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00:14:50,327 --> 00:14:54,326

it created widespread fears of permanent genetic damage.

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00:14:54,326 --> 00:15:03,323

But the damage suffered by children in the womb was the result of direct exposure to radiation, not genetic inheritance.

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00:15:03,323 --> 00:15:10,321

Nonetheless, fears of genetic damage continued for years until Hiroshima had been rebuilt,

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00:15:10,321 --> 00:15:15,319

and thousands of healthy children were born to Hiroshima survivors.

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00:15:15,319 --> 00:15:26,316

Today, most authorities conclude that the genetic threat from radiation in Hiroshima is much smaller than previously believed.

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00:15:26,316 --> 00:15:33,313

One man who thinks differently is Dr. Gerald Hirsch of the Wadsworth Medical Center in Los Angeles.

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00:15:33,313 --> 00:15:41,311

The most recent studies indicate little or few long-term genetic effects for radiation.

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00:15:41,311 --> 00:15:49,308

One recent study indicated that only one child out of 12,000 children of radiation-exposed Japanese had a mutation.

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00:15:49,308 --> 00:15:55,306

However, several years ago we developed a test that we thought would pick up a majority of mutations.

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00:15:55,306 --> 00:16:02,304

The test uses just an ounce of blood and involves the purification of the oxygen-carrying protein of red cells.

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00:16:02,304 --> 00:16:08,302

Many of the radiation-exposed people had an abnormal value in this test.

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00:16:09,302 --> 00:16:18,299

These data indicate that the mutation rate for radiation may be much higher than we previously thought, perhaps as much as a thousand times higher.

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00:16:18,299 --> 00:16:29,296

If Dr. Hirsch's findings are correct, it would mean that seemingly healthy children could be carrying genetic damage that might not reveal itself for generations.

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00:16:30,295 --> 00:16:40,292

We're not sure, though, how many of the mutations measured by this test will have bad effects in future generations.

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00:16:40,292 --> 00:16:53,288

A single bomb devastated a city and left its survivors with lifelong suffering. How deep are the scars of Hiroshima?

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00:16:54,288 --> 00:16:58,287

Nuclear weapons are radically different from ordinary bombs.

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00:16:58,287 --> 00:17:06,284

If you compare, for instance, the destruction of Tokyo to that of Hiroshima and Nagasaki, well, Tokyo was completely destroyed.

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00:17:06,284 --> 00:17:12,282

More people were killed in Tokyo than were killed in Hiroshima or Nagasaki.

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00:17:12,282 --> 00:17:19,280

But it took thousands of bombs over hours of saturation bombing to do that to Tokyo.

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00:17:19,280 --> 00:17:26,278

In Hiroshima, a single bomb dropped from a single plane destroyed an entire city.

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00:17:26,278 --> 00:17:35,275

Now, that created, in survivors, in Hiroshima, the sense of a sudden and absolute shift from normal existence to an overwhelming encounter with death.

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00:17:35,275 --> 00:17:45,272

They suddenly found themselves in the midst of a sea of dead and dying, and they walked about in a daze, like people in a dream, as they described it.

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00:17:45,272 --> 00:17:49,270

Not really knowing whether they were dead or alive.

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00:17:49,270 --> 00:17:57,268

Now, one imagines that in the midst of disaster, people are panic-stricken, running around, screaming.

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00:17:57,268 --> 00:18:08,264

That's not the way it was in Hiroshima. Rather, they walked around quietly as in a silent movie, very muted, very still.

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00:18:08,264 --> 00:18:13,263

And when you see the films of those early days, that's the kind of faces that you see.

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00:18:13,263 --> 00:18:18,261

That's also psych-economic. Their minds are shut down, they're muted.

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00:18:18,261 --> 00:18:26,259

It's a defense against ordinary or normal degrees of feeling, because one simply couldn't permit oneself.

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00:18:26,259 --> 00:18:36,256

Ordinary forms of feeling and suffering, ordinary psychological pain, to those influences and still remain sane.

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00:18:37,255 --> 00:18:43,253

The psychological pain suffered in Hiroshima still exists today.

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00:18:43,253 --> 00:18:53,250

I guess it was about ten years ago when I had a fire in the house. There was a time when, at that time, I couldn't separate Hiroshima and present.

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00:18:53,250 --> 00:19:01,248

And that was, as weird as it sounds, it was very true. I became very hysterical, which I wasn't hysterical during the Hiroshima fire.

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00:19:01,248 --> 00:19:11,245

I could not separate Hiroshima and present. I had to stay off of work for about a month.

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00:19:11,245 --> 00:19:26,240

And the doctors did not know what to do with me. I didn't realize that it was a common, would you call it, enroses or whatever it was that happened.

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00:19:26,240 --> 00:19:29,239

We're finding out more of those things now.

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00:19:30,239 --> 00:19:37,236

Hundreds of Hiroshima survivors now live in the United States, in areas like Little Tokyo in Los Angeles.

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00:19:37,236 --> 00:19:45,234

Most do not want to be identified. They feel a sense of shame and embarrassment in being a survivor.

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00:19:48,233 --> 00:19:58,230

It has been through the efforts of people like Paul Tsunishi of the Japanese-American League that the plight of the Hiroshima survivor is now emerging into the open.

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00:20:00,229 --> 00:20:07,227

Various Japanese groups have organized radiation seminars held in major American cities.

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00:20:07,227 --> 00:20:11,226

We are bringing a program, a public forum, to you today.

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00:20:11,226 --> 00:20:21,222

At this one held recently in Los Angeles, the public learns that the effects of Hiroshima are still being felt, more than 35 years after the bomb.

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00:20:21,222 --> 00:20:26,221

I am a victim and a survivor of the atomic bomb.

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00:20:26,221 --> 00:20:34,218

The specific problems are medical insurance. Their inability to get insurance or if they have insurance they don't want the carriers to know it.

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00:20:34,218 --> 00:20:41,216

And they're not sure what will happen if it becomes known that they are survivors of radiation from before.

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00:20:41,216 --> 00:20:48,214

Additionally, there's a question of getting and maintaining jobs because they might be ostracized because of that.

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00:20:48,214 --> 00:20:54,212

And there's a social stigma of being ostracized from the larger group.

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00:20:55,212 --> 00:21:00,210

For Kaz Tsubishi, the seminar reawakens tragic memories.

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00:21:03,209 --> 00:21:10,207

The photograph images of a devastated Hiroshima will never be forgotten by those who see them.

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00:21:24,203 --> 00:21:31,200

In a matter of seconds, a city was destroyed, yet its legacy may last forever.

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00:21:31,200 --> 00:21:36,199

Perhaps making all of us Hiroshima survivors.

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00:21:36,199 --> 00:21:43,197

If a bomb were dropped today, there would be no outside world, nobody there to help.

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00:21:43,197 --> 00:21:46,196

There would be no recovery.

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00:21:47,195 --> 00:22:00,191

Coming up next, the FBI behavioral unit creates the profile of a brutal killer and agents track him down on FBI The Untold Stories.

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00:22:00,191 --> 00:22:07,189

Then history's crimes and trials chronicles the life and criminal career of bootlegger and extortionist Al Capone.

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00:22:07,189 --> 00:22:14,187

And later tonight, history's mysteries journeys to the Southwest to investigate the strange

disappearance of the Anasazi people.

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00:22:14,187 --> 00:22:19,185

At 8 here on the History Channel, where the past comes alive.