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00:00:00,000 --> 00:00:05,000

Please, don't try anything that you're about to see us do at home. Ever.

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00:00:31,000 --> 00:00:34,000

If you've got a myth for us to test, we'd love to hear about it.

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00:00:34,000 --> 00:00:44,000

Here off the icy waters of San Francisco Bay, we have a very rare opportunity to be able to view a very elusive television host in his natural habitat, the Heinemann.

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00:00:44,000 --> 00:00:52,000

Latin name Hoosieres Televisualis, and he seems to be communicating with his viewers, asking them for ideas.

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00:00:52,000 --> 00:00:59,000

And who knew? Not only did you respond to the call, you opened the floodgates and sent us a gazillion myths.

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00:00:59,000 --> 00:01:02,000

So we selected a few of the best to test.

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00:01:02,000 --> 00:01:03,000

What's up first?

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00:01:03,000 --> 00:01:04,000

Bamboo torture.

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00:01:11,000 --> 00:01:14,000

You had enough yet? Cause I can keep singing all day long.

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00:01:14,000 --> 00:01:16,000

I can take whatever you can throw at me.

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00:01:16,000 --> 00:01:19,000

Alright then, well, how about that wise guy?

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00:01:19,000 --> 00:01:22,000

A tiny bamboo plant? What are you going to do to me with that?

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00:01:22,000 --> 00:01:25,000

I'm going to plant it and then grow it right through you.

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00:01:25,000 --> 00:01:27,000

Really? Does that work?

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00:01:27,000 --> 00:01:31,000

I don't know, but that's the myth and I've always wanted to try it.

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00:01:31,000 --> 00:01:35,000

It's a far-fetched fable straight from the fan site.

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00:01:35,000 --> 00:01:45,000

During World War II, captured POWs were supposedly stretched above and then penetrated by fast-growing bamboo shoots.

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00:01:49,000 --> 00:01:50,000

So what's your plan for this one?

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00:01:50,000 --> 00:01:52,000

It's pretty straightforward, I think.

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00:01:52,000 --> 00:01:56,000

We get some kind of a human analog, we get some fast-growing bamboo,

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00:01:56,000 --> 00:02:00,000

and we plant the bamboo under the analog and see if it grows through it.

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00:02:00,000 --> 00:02:02,000

Right, now normally I'd say we should use pig,

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00:02:02,000 --> 00:02:06,000

but given the fact that this is going to take a few days, it's going to get way too smelly.

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00:02:06,000 --> 00:02:10,000

Well, I tell you what, why don't we measure how much force it takes to penetrate pig flesh

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00:02:10,000 --> 00:02:14,000

and then we create a synthetic simulant that won't rot.

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00:02:14,000 --> 00:02:16,000

And then put the bamboo underneath that?

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00:02:16,000 --> 00:02:17,000

Exactly.

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00:02:18,000 --> 00:02:27,000

And so crouching savage, hidden Heinemann, begin their long and arduous search

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00:02:27,000 --> 00:02:34,000

for the legendary torture technique in the mystical bamboo groves of Santa Cruz.

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00:02:34,000 --> 00:02:38,000

Luckily enough, we live in California where bamboo grows beautifully.

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00:02:38,000 --> 00:02:42,000

And the purveyor of these potentially penetrating plants...

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00:02:42,000 --> 00:02:45,000

That's the thing right there, that'll get you talking.

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00:02:45,000 --> 00:02:47,000

...is Larry Gellman.

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00:02:47,000 --> 00:02:51,000

Is a bamboo shoot physically capable of pushing its way through human flesh?

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00:02:51,000 --> 00:02:56,000

Bamboo shoots in the ground have to push through the dirt around rocks, through rotten logs.

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00:02:56,000 --> 00:03:02,000

I've seen bamboo shoots push up walkway pavers, so yes, they do push very hard when they're in the ground.

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00:03:02,000 --> 00:03:06,000

Well, let's say somebody owed you money. What kind of bamboo would you use?

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00:03:06,000 --> 00:03:08,000

I think you should use spectavolis.

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00:03:08,000 --> 00:03:11,000

It's shooting right now, it's about an inch in diameter and very sharp.

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00:03:11,000 --> 00:03:12,000

Perfect.

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00:03:12,000 --> 00:03:17,000

With their potentially penetrating plants purchased, there's only one thing left to do.

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00:03:17,000 --> 00:03:21,000

Well, we've got our bamboo, it's time to go back to the shop and torture some dummies.

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00:03:25,000 --> 00:03:30,000

And now, Carrie Grant and Tori take the mystery out of chemistry.

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00:03:30,000 --> 00:03:32,000

Okay, so what's our next myth for the viewer special?

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00:03:32,000 --> 00:03:36,000

We're doing a myth about metal, and not just any metal, but my second favorite metal.

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00:03:36,000 --> 00:03:37,000

Alkaline metal.

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00:03:37,000 --> 00:03:42,000

Oh, you know what, Adam and I did some tests for that when we were doing the MacGyver episode, but why are we doing it again?

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00:03:42,000 --> 00:03:44,000

Because fans want to see more, they can't get enough.

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00:03:44,000 --> 00:03:46,000

Three, two, one.

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00:03:47,000 --> 00:03:54,000

When the team took on MacGyver, they busted the myth that a few grams of sodium and water can blast a hole in a wall.

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00:03:56,000 --> 00:03:59,000

That was an explosion, but this is not a high explosion.

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00:03:59,000 --> 00:04:03,000

But you, yes you, want more.

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00:04:03,000 --> 00:04:05,000

So what exactly did the fans want to see?

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00:04:05,000 --> 00:04:07,000

They want to see more reactive metals.

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00:04:07,000 --> 00:04:08,000

Oh, you mean like, rubidium and cesium?

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00:04:08,000 --> 00:04:15,000

Exactly, there's this internet video floating around where these guys throw cesium, rubidium into a bathtub and they liken the explosion to a hand grenade.

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00:04:15,000 --> 00:04:17,000

Fans want to know if that's actually true.

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00:04:18,000 --> 00:04:25,000

Well, that could only mean a trip to the team's dream location, the Alameda County Sheriff's Bomb Disposal Range.

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00:04:25,000 --> 00:04:27,000

What are we blowing up today?

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00:04:27,000 --> 00:04:29,000

Toilets, bathtub.

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00:04:29,000 --> 00:04:31,000

Everything's gonna pitch and sink.

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00:04:31,000 --> 00:04:39,000

And the reason the bathroom furniture is on death row is the fan furor over a video clip that looks a little bit like this.

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00:04:40,000 --> 00:04:42,000

Anybody got anything to read?

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00:04:43,000 --> 00:04:52,000

After demonstrating that the reaction between water and the alkaline metals becomes more violent as you move down the periodic table, they get to rubidium.

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00:04:53,000 --> 00:04:59,000

And with what looks to be about two grams, they claim to get a hand grenade-sized explosion.

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00:05:00,000 --> 00:05:06,000

So to find out if this is film, fakery or fact, we're going to need a control.

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00:05:06,000 --> 00:05:11,000

Now on the internet video, they said that the reaction was equal to a hand grenade explosion.

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00:05:11,000 --> 00:05:13,000

This is how to clean out the pipes.

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00:05:13,000 --> 00:05:17,000

So we need to see what that looks like in order to have something to compare with.

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00:05:17,000 --> 00:05:18,000

How great is this?

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00:05:18,000 --> 00:05:19,000

We get to start off with the bang.

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00:05:19,000 --> 00:05:21,000

We're gonna blow the crap out of that toilet.

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00:05:21,000 --> 00:05:22,000

Get it?

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00:05:22,000 --> 00:05:31,000

Sure, but Grant and not Tori will explain how the team are going to safely explode the commode.

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00:05:31,000 --> 00:05:35,000

This is a grenade, but it's not a live grenade.

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00:05:35,000 --> 00:05:42,000

In a live grenade, you'd have TNT in here, you pull the pin, the clip pops off, and this is what would set off the explosion.

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00:05:42,000 --> 00:05:48,000

But what we're gonna do today is fill this with enough C4 to have the equivalent blasting power of the TNT.

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00:05:48,000 --> 00:05:51,000

Then we're gonna set it off with a blasting cap.

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00:05:51,000 --> 00:05:56,000

That way we can control exactly when it goes off, and it will be much, much safer.

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00:05:56,000 --> 00:05:58,000

Alright, fire in the bowl.

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00:05:58,000 --> 00:06:01,000

Three, two, one.

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00:06:04,000 --> 00:06:06,000

The toilet's gone.

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00:06:06,000 --> 00:06:08,000

Yep, now you see it.

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00:06:08,000 --> 00:06:10,000

Now you don't.

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00:06:16,000 --> 00:06:19,000

We've blown it up real good.

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00:06:19,000 --> 00:06:20,000

That's nice.

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00:06:21,000 --> 00:06:23,000

All that's left is the water take.

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00:06:23,000 --> 00:06:26,000

The bowl just shattered.

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00:06:26,000 --> 00:06:30,000

We destroyed this toilet, and now I know what a real grenade looks like when it goes off.

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00:06:30,000 --> 00:06:36,000

So now we've got a great reference for what it should look like when we put our Alkaline medals in a toilet.

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00:06:36,000 --> 00:06:43,000

Coming up on the viewer special threequel, Jamie and Adam become one with the Torture Tail.

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00:06:43,000 --> 00:06:47,000

Jamie is imagining himself to be a plant.

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00:06:52,000 --> 00:07:02,000

Used in water wheels and weapons, construction and the culinary arts,

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00:07:02,000 --> 00:07:07,000

as a raw material, bamboo's versatility is virtually limitless.

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00:07:07,000 --> 00:07:11,000

In the Philippines they call this the dance of the bamboo pole.

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00:07:11,000 --> 00:07:19,000

But fans want to know if this flexible, fast growing grass could have been used as an instrument of torture.

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00:07:20,000 --> 00:07:23,000

So the whole point of this test is to come up with a human analogue.

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00:07:23,000 --> 00:07:29,000

Yep, to make a fake torso with accurate flesh like resistance to a growing bamboo shoot.

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00:07:29,000 --> 00:07:32,000

This has got to be the most gruesome thing I've ever made.

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00:07:32,000 --> 00:07:35,000

The guys need to know exactly what that resistance is.

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00:07:37,000 --> 00:07:44,000

In pushing through the meat very slowly, Jamie is imagining himself to be a plant.

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00:07:44,000 --> 00:07:45,000

What's our peak?

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00:07:45,000 --> 00:07:46,000

8 max.

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00:07:46,000 --> 00:07:52,000

Photosynthesizing, yearning for the sun, grabbing nutrients from the earth.

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00:07:52,000 --> 00:07:55,000

All these things are passing through his mind.

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00:07:56,000 --> 00:08:00,000

Several tests later and the guys have a decent sample range.

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00:08:00,000 --> 00:08:05,000

9.5 total and decide to round up for simplicity's sake.

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00:08:05,000 --> 00:08:08,000

Well, 10 pounds seems to be the magic number with this spike in penetrating flesh.

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00:08:08,000 --> 00:08:14,000

So all we got to do is find and mix materials around here that makes a flesh that doesn't rot and stink.

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00:08:14,000 --> 00:08:17,000

Oh, there's some good stuff up here, Jamie.

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00:08:17,000 --> 00:08:19,000

Because rotting and stinking upsets Jamie.

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00:08:19,000 --> 00:08:21,000

It's kind of collapsing in on it, so...

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00:08:21,000 --> 00:08:22,000

Yeah, I know.

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00:08:22,000 --> 00:08:26,000

But after spending an hour looking for a synthetic flesh analogue...

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00:08:26,000 --> 00:08:27,000

The skin's a little too tough.

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00:08:27,000 --> 00:08:32,000

Jamie has a light bulb moment and they return to square one.

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00:08:33,000 --> 00:08:34,000

Our ballistic material.

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00:08:35,000 --> 00:08:36,000

I think it's perfect.

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00:08:36,000 --> 00:08:38,000

Let me see what the needle says.

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00:08:38,000 --> 00:08:39,000

10 pounds.

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00:08:39,000 --> 00:08:40,000

Wow.

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00:08:40,000 --> 00:08:42,000

That is close enough for my money.

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00:08:42,000 --> 00:08:43,000

I love that.

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00:08:43,000 --> 00:08:45,000

And it's reusable.

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00:08:45,000 --> 00:08:49,000

So clear ballistic material is the raw material of choice.

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00:08:49,000 --> 00:08:52,000

He's on, let's get it.

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00:08:52,000 --> 00:08:56,000

Adam goes to work casting a torso to torture.

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00:08:56,000 --> 00:09:03,000

Dude, this is what a back rub looks like from the inside of your body.

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00:09:03,000 --> 00:09:04,000

Next.

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00:09:04,000 --> 00:09:06,000

Hello?

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00:09:06,000 --> 00:09:12,000

The guys whip up a rooftop greenhouse and then assemble it unsurprisingly.

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00:09:12,000 --> 00:09:14,000

Rise, my son.

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00:09:14,000 --> 00:09:15,000

On the rooftop.

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00:09:15,000 --> 00:09:16,000

Dude, touchdown.

135

00:09:16,000 --> 00:09:17,000

Oh, man.

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00:09:17,000 --> 00:09:23,000

This may look nice and sunny, and it is, but it's also a torture chamber or it will be soon.

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00:09:23,000 --> 00:09:29,000

So that's the greenhouse and bamboo in position, which leads just one component.

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00:09:31,000 --> 00:09:33,000

Oh, you're mine now.

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00:09:33,000 --> 00:09:39,000

And the torso is carefully positioned above several shoots that have yet to fully break through the soil's surface.

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00:09:40,000 --> 00:09:44,000

This version of Buster is our final stage of testing in the bamboo.

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00:09:44,000 --> 00:09:46,000

Will it grow through a person?

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00:09:46,000 --> 00:09:49,000

And after experimenting with a bunch of different flesh analogs,

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00:09:49,000 --> 00:09:50,000

ah, look at that.

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00:09:50,000 --> 00:09:51,000

Those are the two growth points.

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00:09:51,000 --> 00:09:52,000

They're beautiful.

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00:09:52,000 --> 00:09:54,000

This ballistic material is non-water-based.

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00:09:54,000 --> 00:09:55,000

It won't rot.

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00:09:55,000 --> 00:09:59,000

It's the perfect material in terms of the amount of pressure it takes to push through.

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00:09:59,000 --> 00:10:06,000

So if the bamboo grows through this chest, we can definitively state that it would grow through you as well.

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00:10:06,000 --> 00:10:07,000

Is that it?

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00:10:07,000 --> 00:10:08,000

That ought to do it.

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00:10:08,000 --> 00:10:11,000

All right, well, let's get out of here and come back in a couple days to see how it did.

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00:10:11,000 --> 00:10:17,000

The way I see it, if the bamboo shoot works its way two or three inches into the back of the dummy,

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00:10:17,000 --> 00:10:19,000

then it's an effective means of torturing.

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00:10:19,000 --> 00:10:21,000

All we've got to do is wait.

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00:10:21,000 --> 00:10:26,000

And while we wait, let's take time out to find out where this torturous tale came from.

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00:10:26,000 --> 00:10:31,000

Since this is normally the portion of the show where we give some scientific background to the myth that we're tackling,

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00:10:31,000 --> 00:10:34,000

what have we got in bamboo as a torture device?

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00:10:34,000 --> 00:10:36,000

Absolutely nothing.

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00:10:36,000 --> 00:10:39,000

Nothing? No official reports, no first-hand accounts?

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00:10:39,000 --> 00:10:40,000

Nothing.

162

00:10:40,000 --> 00:10:41,000

Nunkka.

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00:10:41,000 --> 00:10:42,000

Wow.

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00:10:42,000 --> 00:10:43,000

All right.

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00:11:06,000 --> 00:11:10,000

Then there are surprising results from the torture test.

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00:11:19,000 --> 00:11:23,000

Carrie Grant and Tori are taking on an alkali metal myth.

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00:11:24,000 --> 00:11:30,000

A video on the internet claims that if you add two grams of rubidium or cesium to water,

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00:11:30,000 --> 00:11:33,000

it'll blow up your bathroom furniture.

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00:11:33,000 --> 00:11:36,000

With a hand grenade-sized explosion.

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00:11:36,000 --> 00:11:38,000

This is how to clean out the pipes.

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00:11:38,000 --> 00:11:42,000

To find out if it's actually true, we're doing a direct comparison.

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00:11:42,000 --> 00:11:45,000

This is the hand grenade.

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00:11:45,000 --> 00:11:47,000

Bring on the alkali metals.

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00:11:47,000 --> 00:11:50,000

But first, here's the sciencey bit.

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00:11:50,000 --> 00:11:52,000

This is cesium, and this is rubidium.

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00:11:52,000 --> 00:11:56,000

And they're part of a special class of elements called alkali metals.

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00:11:56,000 --> 00:11:59,000

Now what makes them special is they have one electron.

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00:11:59,000 --> 00:12:05,000

Now normally what they want to do is react with other things and give up that electron.

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00:12:05,000 --> 00:12:11,000

Now what happens when the alkali metals react with water is they release a lot of heat,

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00:12:11,000 --> 00:12:17,000

and the other byproduct is hydrogen gas, and the heat tends to ignite the hydrogen gas.

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00:12:17,000 --> 00:12:22,000

It's a perfect storm of something that causes an explosion.

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00:12:22,000 --> 00:12:26,000

And to put these highly reactive metals in contact with water safely,

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00:12:26,000 --> 00:12:29,000

the team has a couple of safety precautions lined up.

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00:12:29,000 --> 00:12:31,000

Pretty simple, it's a little guillotine.

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00:12:31,000 --> 00:12:35,000

Weight drops down onto small glass vials which are holding the metals,

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00:12:35,000 --> 00:12:38,000

releasing it into the toilet, and we'll see what happens.

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00:12:38,000 --> 00:12:41,000

Now normally Grant's a better shot when he's using the toilet.

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00:12:41,000 --> 00:12:43,000

But what he's doing right now is he's wetting down the ground,

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00:12:43,000 --> 00:12:46,000

so in case there's any excess alkali metals that fly out of the toilet,

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00:12:46,000 --> 00:12:50,000

they'll hit the water on the ground and react so we're not leaving any of the metals behind.

191

00:12:50,000 --> 00:12:53,000

And the first metal to be flushed is rubidium.

192

00:12:53,000 --> 00:13:00,000

Rubidium fun fact, this stuff, rubidium compounds are put in fireworks to make the color purple.

193

00:13:00,000 --> 00:13:05,000

In the video they said they used two grams, and they got an explosion the size of a hand grenade.

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00:13:05,000 --> 00:13:09,000

Now we're going to use 25 grams, it's more than 10 times the amount.

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00:13:09,000 --> 00:13:12,000

So if it's true what they're saying, we're going to have a huge explosion.

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00:13:12,000 --> 00:13:14,000

We'll be the mayor of Rubidium Town, ready?

197

00:13:14,000 --> 00:13:15,000

Yep.

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00:13:15,000 --> 00:13:19,000

Three, two, one.

199

00:13:20,000 --> 00:13:22,000

Whoa!

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00:13:22,000 --> 00:13:24,000

That was quick!

201

00:13:24,000 --> 00:13:25,000

Look at that cloud.

202

00:13:25,000 --> 00:13:27,000

Well it all went according to plan.

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00:13:27,000 --> 00:13:30,000

The string was cut and the guillotine fell.

204

00:13:30,000 --> 00:13:36,000

The rubidium was released into the water and queued the chemistry.

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00:13:36,000 --> 00:13:44,000

The sudden release of hydrogen gas and heat combines to give us a satisfying toilet bowl geyser.

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00:13:44,000 --> 00:13:50,000

But, and here's the key, it was nothing like the internet video hand grenade sized explosion.

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00:13:50,000 --> 00:13:54,000

We may not have had hand grenades, but at least we still have good chemistry.

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00:13:54,000 --> 00:13:56,000

But we haven't given up yet.

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00:13:56,000 --> 00:14:00,000

Next up in an attempt to blow up the bowl is cesium.

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00:14:00,000 --> 00:14:02,000

So this is it, this is cesium.

211

00:14:02,000 --> 00:14:08,000

This is the most reactive alkali metal that we can get our hands on that's not radioactive.

212

00:14:08,000 --> 00:14:15,000

We're going to put this in the toilet bowl and see if it behaves when exposed to water like a grenade.

213

00:14:15,000 --> 00:14:16,000

Okay.

214

00:14:16,000 --> 00:14:20,000

In three, two, one.

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00:14:24,000 --> 00:14:29,000

Cool, there was a little bit more reaction, more popping, but it was just a big cloud of gas again.

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00:14:29,000 --> 00:14:33,000

More energy, more flame, but definitely no explosion.

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00:14:33,000 --> 00:14:39,000

Now, I feel like I've been lied to because what I saw on that internet video was an explosion.

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00:14:39,000 --> 00:14:41,000

What I saw here was a cloud of smoke.

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00:14:41,000 --> 00:14:47,000

Now, a cloud of smoke is not going to destroy a toilet like a hand grenade will.

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00:14:47,000 --> 00:14:49,000

So, Kerry, what does that mean?

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00:14:49,000 --> 00:14:51,000

Which means they faked it and this is busted.

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00:14:51,000 --> 00:15:03,000

The Mythbusters are no strangers to tall tales of torture.

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00:15:03,000 --> 00:15:09,000

After all, they've already confirmed that Chinese water torture can send you around the bend.

224

00:15:09,000 --> 00:15:12,000

I actually don't want to do this test right now.

225

00:15:12,000 --> 00:15:18,000

But now, at your behest, they're testing the power of botany to bring you to the brink.

226

00:15:18,000 --> 00:15:26,000

And with the ballistics material dummy suspended above the soon-to-shoot bamboo, the clock is ticking.

227

00:15:26,000 --> 00:15:30,000

I'd imagine that torture is a pretty results-driven business.

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00:15:30,000 --> 00:15:32,000

And so, we're looking for a couple of things here.

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00:15:32,000 --> 00:15:38,000

We're looking as to whether the shoot can actually grow through this flesh simulant

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00:15:38,000 --> 00:15:41,000

and also how much time it takes for it to do that.

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00:15:41,000 --> 00:15:45,000

And they're both really important because if it takes months to do it,

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00:15:45,000 --> 00:15:48,000

it's not really an effective means of torture.

233

00:15:48,000 --> 00:15:52,000

If it does it in a couple of hours or a couple of days, though,

234

00:15:52,000 --> 00:15:56,000

that starts to put it in the realm of possibility.

235

00:15:56,000 --> 00:15:58,000

And Jamie's prediction is spot-on.

236

00:15:58,000 --> 00:16:04,000

Because after just three days, our tortured torso is surely ready to talk.

237

00:16:04,000 --> 00:16:09,000

Poor dude. The experiment could not be going better.

238

00:16:09,000 --> 00:16:12,000

We have already gotten exactly what we came looking for,

239

00:16:12,000 --> 00:16:15,000

which is at the point at which bamboo meets flesh.

240

00:16:15,000 --> 00:16:18,000

Does it make a left-hand turn or does it just keep on going?

241

00:16:18,000 --> 00:16:21,000

And it's pretty clear that it just keeps on going.

242

00:16:21,000 --> 00:16:27,000

Well, you know, I said earlier that if there was any penetration at all, then that's torture.

243

00:16:27,000 --> 00:16:29,000

So, I say this myth is...

244

00:16:29,000 --> 00:16:33,000

Let's not call it just yet. I want to see how far we can take it.

245

00:16:33,000 --> 00:16:35,000

Let's let it keep on growing.

246

00:16:35,000 --> 00:16:36,000

Okay.

247

00:16:37,000 --> 00:16:40,000

But over two weeks later, the news isn't good.

248

00:16:40,000 --> 00:16:44,000

Despite several other shoots making their way into the dummy,

249

00:16:44,000 --> 00:16:49,000

Adam's wish to see complete penetration comes to naught.

250

00:16:49,000 --> 00:16:54,000

Look at that. They haven't grown an inch in two weeks. Those things are dead.

251

00:16:54,000 --> 00:16:58,000

Yeah, and look at that. The ballistic gel is melted.

252

00:16:58,000 --> 00:17:01,000

Unless it got so hot in here, that's what killed them.

253

00:17:02,000 --> 00:17:06,000

We did prove that you could torture somebody with bamboo if you were determined.

254

00:17:06,000 --> 00:17:09,000

Yeah, but we didn't see the bamboo grow all the way through the guy.

255

00:17:09,000 --> 00:17:12,000

I mean, that was supposed to be the grand finale.

256

00:17:12,000 --> 00:17:16,000

You know, we've got one more dummy. Let's check it up there and see what happens.

257

00:17:16,000 --> 00:17:17,000

Okay.

258

00:17:17,000 --> 00:17:23,000

So, a second Ballistics Material torso, this time with attractive wig and facial features,

259

00:17:23,000 --> 00:17:27,000

is taken to the roof, where the team has set up a second growing area,

260

00:17:27,000 --> 00:17:29,000

one that's open to the elements.

261

00:17:29,000 --> 00:17:33,000

Well, our dude is set up, and this is our last chance to see bamboo grow through a person.

262

00:17:33,000 --> 00:17:36,000

It's our last mannequin. It's our last viable bamboo shoot,

263

00:17:36,000 --> 00:17:39,000

and it's pretty much the end of the growing season.

264

00:17:39,000 --> 00:17:42,000

So, if it's going to happen, it's got to happen here.

265

00:17:44,000 --> 00:17:47,000

And what do you know? Adam's desperation is well rewarded.

266

00:17:47,000 --> 00:17:53,000

Fast forward a couple of weeks, and this time the results are nothing short of astounding.

267

00:17:56,000 --> 00:17:58,000

That's what I'd call a through and through.

268

00:18:00,000 --> 00:18:03,000

We wanted to know if the bamboo would grow all the way through you.

269

00:18:03,000 --> 00:18:07,000

It turns out not only will it, but it actually thrives.

270

00:18:07,000 --> 00:18:11,000

This is 12 feet of bamboo, and it's going right through this guy's chest.

271

00:18:11,000 --> 00:18:13,000

It doesn't get any more definitive than that.

272

00:18:13,000 --> 00:18:17,000

I feel like someone's almost playing an April Fool's joke. That's so perfect.

273

00:18:17,000 --> 00:18:20,000

Obviously, bamboo can grow right through you, like it did over here.

274

00:18:20,000 --> 00:18:27,000

But for this to be a reasonable method of torture, if you can consider torture reasonable in any sense,

275

00:18:27,000 --> 00:18:29,000

it needs to do it fairly quickly.

276

00:18:29,000 --> 00:18:35,000

And our time lapse shows that this penetrated that body in a matter of a couple of days or so.

277

00:18:35,000 --> 00:18:38,000

It's possible, as gruesome as it is.

278

00:18:38,000 --> 00:18:39,000

That is awesome.

279

00:18:39,000 --> 00:18:41,000

Plausible and awesome.

280

00:18:42,000 --> 00:18:43,000

Plausible.

281

00:19:29,000 --> 00:19:31,000

Brandy, you take a couple of snorts of that, Brandy.

282

00:19:31,000 --> 00:19:35,000

It warms you up just enough to keep you alive until the rescue team arrives.

283

00:19:35,000 --> 00:19:38,000

Or this is like an aperitif before I eat the dog.

284

00:19:38,000 --> 00:19:40,000

You can't say that.

285

00:19:52,000 --> 00:19:57,000

I've actually heard that alcohol has the opposite effect, and it cools you down, not warms you up.

286

00:19:57,000 --> 00:20:01,000

That's strange, because I swear it has a warming effect when I drink it.

287

00:20:01,000 --> 00:20:03,000

Should be pretty straightforward to try.

288

00:20:03,000 --> 00:20:09,000

I think so. I think all we need to do is find ourselves a nice big freezer, a way of monitoring our

body temperature,

289

00:20:09,000 --> 00:20:12,000

drink a few shots of the hard stuff and see what kind of change occurs.

290

00:20:12,000 --> 00:20:13,000

Works for me.

291

00:20:13,000 --> 00:20:15,000

My ears are starting to sting.

292

00:20:15,000 --> 00:20:19,000

But before the guys get to test this frosty fable in the freezer,

293

00:20:19,000 --> 00:20:23,000

I'm going into the delirium of thinking about what I'll do once I'm warm.

294

00:20:24,000 --> 00:20:28,000

Adam's ensuring accurate info by ingesting a thermometer.

295

00:20:28,000 --> 00:20:34,000

Since this whole test is about whether or not there's any change in our body temperature from the drinking of the alcohol,

296

00:20:34,000 --> 00:20:38,000

we need to know exactly what our body temperature is.

297

00:20:38,000 --> 00:20:41,000

And this isn't a thermometer under the tongue or one in the ear, one on the skin.

298

00:20:41,000 --> 00:20:44,000

We need our core body temperature measured.

299

00:20:44,000 --> 00:20:47,000

We've done this on the show before, back when I got painted with gold paint,

300

00:20:47,000 --> 00:20:49,000

and I had a rectal thermometer.

301

00:20:49,000 --> 00:20:51,000

Oh, Sanjay.

302

00:20:51,000 --> 00:20:54,000

Sanjay, we respect me tomorrow.

303

00:20:58,000 --> 00:21:05,000

Neither of us want to do that this time, so we're bringing in a brand new piece of technology called a core body temperature capsule.

304

00:21:05,000 --> 00:21:06,000

Here we go.

305

00:21:10,000 --> 00:21:13,000

It's basically a passive radio.

306

00:21:13,000 --> 00:21:18,000

It goes into our stomach, keeps track of our core body temperature, and we check in on it.

307

00:21:18,000 --> 00:21:22,000

With this, we hold this up to our bodies and boop, it tells us what our core body temperature is.

308

00:21:22,000 --> 00:21:26,000

And a couple days later, we pass it. They're disposable.

309

00:21:26,000 --> 00:21:29,000

I ate a radio for science.

310

00:21:29,000 --> 00:21:33,000

But that super accurate body temperature thermometer is not all they'll be using.

311

00:21:33,000 --> 00:21:37,000

The guys are going for data overload.

312

00:21:37,000 --> 00:21:41,000

We're going to be doing some standardized tests at regular intervals throughout the day.

313

00:21:41,000 --> 00:21:44,000

The first one is the core body temperature.

314

00:21:44,000 --> 00:21:46,000

Go ahead and swallow that puppy.

315

00:21:49,000 --> 00:21:53,000

The second one is we're going to check in on how we actually feel.

316

00:21:53,000 --> 00:21:58,000

On a coldness scale, one being the coldest and ten being not cold at all.

317

00:21:58,000 --> 00:21:59,000

Where do you stand?

318

00:21:59,000 --> 00:22:00,000

Eight.

319

00:22:00,000 --> 00:22:02,000

Eight? You're just a little bit cold.

320

00:22:02,000 --> 00:22:10,000

The third one is we're going to be using a thermal imaging camera to check our heat signatures on the exterior of our bodies.

321

00:22:10,000 --> 00:22:12,000

Wow, you look funny.

322

00:22:12,000 --> 00:22:14,000

I can see you breathing.

323

00:22:14,000 --> 00:22:17,000

Basic temperature of your left hand, 94.1.

324

00:22:17,000 --> 00:22:23,000

And so, armed with their battery of data gathering equipment and a warm weather baseline.

325

00:22:23,000 --> 00:22:26,000

Tip of the nose, 96 degrees.

326

00:22:26,000 --> 00:22:29,000

The boys are ready for the big freeze.

327

00:22:29,000 --> 00:22:31,000

Alright, that's the baseline. Let's get cold.

328

00:22:32,000 --> 00:22:44,000

Cary Grant and Tori have already busted the myth that a few grams of cesium or rubidium can cause a hand grenade-sized explosion.

329

00:22:44,000 --> 00:22:46,000

The internet is lying again.

330

00:22:46,000 --> 00:22:50,000

So now it's time for the patented mythbusters ramping up.

331

00:22:50,000 --> 00:22:52,000

We're flushing the toilet.

332

00:22:52,000 --> 00:23:02,000

And to blow up the bathtub, we're stretching the budget and moving into the realm of ridiculous by using a massive two and a half kilograms of sodium.

333

00:23:02,000 --> 00:23:03,000

You ready to do this, Grant?

334

00:23:03,000 --> 00:23:04,000

I'm ready to do it.

335

00:23:04,000 --> 00:23:13,000

And to accommodate the two and a half kilograms of sodium, Cary has adapted her guillotine.

336

00:23:13,000 --> 00:23:19,000

She's added a sledgehammer, which means there's only one thing left to do.

337

00:23:19,000 --> 00:23:24,000

Find out for the fans if super-sizing the sodium will blast the bathtub.

338

00:23:24,000 --> 00:23:26,000

Alright, this is sodium.

339

00:23:26,000 --> 00:23:29,000

In three, two, one.

340

00:23:37,000 --> 00:23:38,000

Wait, wait, wait!

341

00:23:38,000 --> 00:23:39,000

Oh my gosh! The gas!

342

00:23:39,000 --> 00:23:40,000

The gas!

343

00:23:44,000 --> 00:23:47,000

While the team holds its breath, let's check out the replay.

344

00:23:49,000 --> 00:23:56,000

That was crazy.

345

00:23:56,000 --> 00:23:59,000

We dropped the sodium into the water and we got a huge explosion.

346

00:23:59,000 --> 00:24:01,000

It actually cracked the bathtub.

347

00:24:01,000 --> 00:24:04,000

The best part about it is two of the blocks didn't even react with the water.

348

00:24:04,000 --> 00:24:06,000

They were thrown out.

349

00:24:06,000 --> 00:24:09,000

That was incredible.

350

00:24:10,000 --> 00:24:12,000

Yep, spectacular.

351

00:24:12,000 --> 00:24:14,000

But it only caused a crack.

352

00:24:14,000 --> 00:24:16,000

The tub didn't disintegrate.

353

00:24:16,000 --> 00:24:18,000

So, how about taking it up a notch?

354

00:24:18,000 --> 00:24:20,000

Like Christmas.

355

00:24:20,000 --> 00:24:21,000

That was amazing.

356

00:24:21,000 --> 00:24:25,000

But up next is potassium, which is even more reactive.

357

00:24:25,000 --> 00:24:27,000

And, yep, same amount.

358

00:24:27,000 --> 00:24:31,000

Uh-huh, two and a half kilograms of potassium.

359

00:24:31,000 --> 00:24:32,000

Take it away.

360

00:24:32,000 --> 00:24:36,000

School lab chemistry like you've never seen it before.

361

00:24:36,000 --> 00:24:38,000

Okay, we're good. Let's go.

362

00:24:38,000 --> 00:24:43,000

But will it provide the big boom we and you have been waiting for?

363

00:24:43,000 --> 00:24:46,000

Two, one.

364

00:24:47,000 --> 00:24:49,000

Wow!

365

00:24:49,000 --> 00:24:53,000

That was like fireworks.

366

00:24:55,000 --> 00:24:56,000

Wow!

367

00:24:56,000 --> 00:24:59,000

Wow, that was the 4th of July in there.

368

00:24:59,000 --> 00:25:02,000

But you know what? It didn't explode.

369

00:25:02,000 --> 00:25:04,000

Like, it was like a bunch of little pops.

370

00:25:04,000 --> 00:25:06,000

It wasn't one big boom.

371

00:25:09,000 --> 00:25:12,000

Yes, once again, it's an exciting chemical reaction.

372

00:25:12,000 --> 00:25:15,000

But it's still not high explosives.

373

00:25:18,000 --> 00:25:24,000

So, in conclusion, you can use ridiculous amounts of sodium and potassium.

374

00:25:24,000 --> 00:25:28,000

You can use the more reactive elements in the alkali metal family.

375

00:25:28,000 --> 00:25:31,000

But you won't get a hand-grenade-sized explosion

376

00:25:31,000 --> 00:25:36,000

and blow up a bathtub unless you use C4, like this.

377

00:25:36,000 --> 00:25:38,000

High in the hole!

378

00:25:38,000 --> 00:25:42,000

Alright JD, in three, two, one.

379

00:25:47,000 --> 00:25:50,000

Did you see how high it shot that water?

380

00:25:50,000 --> 00:25:54,000

Yes, the shockwave emanating from a C4 detonation

381

00:25:54,000 --> 00:25:57,000

is approximately 8,000 meters per second,

382

00:25:57,000 --> 00:26:01,000

which is in a different league to alkali metals and water.

383

00:26:03,000 --> 00:26:07,000

Proving that that internet video is nothing but

384

00:26:07,000 --> 00:26:09,000

science fiction.

385

00:26:09,000 --> 00:26:11,000

Coming up...

386

00:26:13,000 --> 00:26:17,000

Our explosive virtuosos find out especially for you...

387

00:26:20,000 --> 00:26:23,000

If a burning piano will explode.

388

00:26:23,000 --> 00:26:27,000

Let it all fire! Let it all fire!

389

00:26:34,000 --> 00:26:39,000

Adam and Jamie are about to chill out to find out if a shot of Brandy...

390

00:26:39,000 --> 00:26:41,000

Good boy...

391

00:26:41,000 --> 00:26:44,000

Will actually stave off hypothermia.

392

00:26:44,000 --> 00:26:46,000

Or is it simply a furry fable?

393

00:26:46,000 --> 00:26:49,000

Since we always want to be authentic on MythBusters,

394

00:26:49,000 --> 00:26:53,000

Bob here, a St. Bernard, is going to be delivering the Brandy to us.

395

00:26:53,000 --> 00:26:55,000

Isn't that right, Bob?

396

00:26:55,000 --> 00:26:58,000

We are at the very perfect place to test this myth

397

00:26:58,000 --> 00:27:00,000

at a company called Deans Services,

398

00:27:00,000 --> 00:27:05,000

and they've got 125,000 square feet of freezer-cold rooms

399

00:27:05,000 --> 00:27:07,000

at zero degrees Fahrenheit,

400

00:27:07,000 --> 00:27:09,000

which is the temperature we're going to be working at.

401

00:27:09,000 --> 00:27:11,000

Oh, what's your core body temperature?

402

00:27:11,000 --> 00:27:14,000

Let's get a baseline before we get into the cold.

403

00:27:14,000 --> 00:27:16,000

98.29.

404

00:27:16,000 --> 00:27:18,000

98.29.

405

00:27:18,000 --> 00:27:20,000

98.24. Are you ready?

406

00:27:20,000 --> 00:27:22,000

Ready as I'll ever be.

407

00:27:22,000 --> 00:27:26,000

Remember, Adam and Jamie, with their core body temperature capsules

408

00:27:26,000 --> 00:27:28,000

already in their stomachs...

409

00:27:28,000 --> 00:27:30,000

It's cold! I know!

410

00:27:30,000 --> 00:27:32,000

...are literally walking thermometers.

411

00:27:32,000 --> 00:27:35,000

But they'll also be monitoring their mood,

412

00:27:35,000 --> 00:27:38,000

as well as the surface temperature of their extremities.

413

00:27:38,000 --> 00:27:41,000

It's weird having a job where our only task today

414

00:27:41,000 --> 00:27:43,000

is to get cold and then drunk.

415

00:27:43,000 --> 00:27:47,000

Yep, stage one of the test is to simulate a situation

416

00:27:47,000 --> 00:27:49,000

in which the guys will need rescuing

417

00:27:49,000 --> 00:27:52,000

by a Brandy-carrying Saint Bernard.

418

00:27:52,000 --> 00:27:54,000

I'm starting to get uncomfortable.

419

00:27:54,000 --> 00:27:57,000

And that means getting very cold very fast.

420

00:27:57,000 --> 00:27:59,000

Right now, I don't feel so bad,

421

00:27:59,000 --> 00:28:02,000

but it's changing rapidly.

422

00:28:02,000 --> 00:28:05,000

Stage two, once they've completely chilled out,

423

00:28:05,000 --> 00:28:07,000

calm down.

424

00:28:07,000 --> 00:28:09,000

Get the brandy out of my mouth!

425

00:28:09,000 --> 00:28:11,000

The drinking commences.

426

00:28:11,000 --> 00:28:14,000

But just ten minutes into the test,

427

00:28:14,000 --> 00:28:17,000

and the guys get the first piece of relevant information.

428

00:28:17,000 --> 00:28:19,000

And it's not what you'd expect.

429

00:28:19,000 --> 00:28:21,000

My temperature's been steadily going up.

430

00:28:21,000 --> 00:28:23,000

It's now at 98.56.

431

00:28:23,000 --> 00:28:24,000

What does yours say?

432

00:28:24,000 --> 00:28:27,000

Yeah, I'm going up, too. I'm at 98.9.

433

00:28:27,000 --> 00:28:29,000

I haven't read up on this,

434

00:28:29,000 --> 00:28:32,000

but the fact that my internal body temperature is rising

435

00:28:32,000 --> 00:28:35,000

while I'm feeling like I'm getting colder

436

00:28:35,000 --> 00:28:38,000

says to me something like my vascular system

437

00:28:38,000 --> 00:28:41,000

has clamped down on my extremities

438

00:28:41,000 --> 00:28:43,000

and keeping the heat inside.

439

00:28:43,000 --> 00:28:46,000

Check out the big brain on Jamie!

440

00:28:46,000 --> 00:28:49,000

Because he's nailed one of the key responses

441

00:28:49,000 --> 00:28:52,000

of all endothermic animals to the cold.

442

00:28:52,000 --> 00:28:54,000

The superficial blood vessels

443

00:28:54,000 --> 00:28:57,000

constrict preventing heat loss through the skin

444

00:28:57,000 --> 00:29:01,000

and directing blood to critical internal organs.

445

00:29:01,000 --> 00:29:04,000

With such amazing evolutionary adaptations,

446

00:29:04,000 --> 00:29:07,000

it could take a while before the guys need rescuing.

447

00:29:07,000 --> 00:29:09,000

So to hurry things along,

448

00:29:09,000 --> 00:29:11,000

they decide on some drastic action.

449

00:29:11,000 --> 00:29:14,000

I don't think we're getting cold enough fast enough.

450

00:29:14,000 --> 00:29:17,000

I think we should take off our hats and unzip our coats.

451

00:29:17,000 --> 00:29:19,000

Really, I have to take my hat off?

452

00:29:19,000 --> 00:29:20,000

Yes, you do.

453

00:29:20,000 --> 00:29:24,000

And with significant heat loss taking place through the head...

454

00:29:24,000 --> 00:29:26,000

This sucks, man.

455

00:29:26,000 --> 00:29:30,000

It's just what you don't want to do when caught out in the cold.

456

00:29:30,000 --> 00:29:34,000

And I feel like I just dunked my head in a bucket of ice water.

457

00:29:34,000 --> 00:29:37,000

I was happy before that.

458

00:29:37,000 --> 00:29:40,000

As they approach the hour mark, my hands are starting to hurt.

459

00:29:40,000 --> 00:29:43,000

The guys finally reach the point where they need rescuing.

460

00:29:43,000 --> 00:29:46,000

They've reached the limits of their endurance,

461

00:29:46,000 --> 00:29:50,000

at least for a voluntary, safely monitored situation like this.

462

00:29:50,000 --> 00:29:55,000

So it's time for the crucial round of pre-brandy data collection.

463

00:29:55,000 --> 00:29:56,000

98.49.

464

00:29:56,000 --> 00:30:00,000

Their ingested thermometers are showing stable internal temperatures.

465

00:30:00,000 --> 00:30:03,000

Subjective temperature is about 30 degrees.

466

00:30:03,000 --> 00:30:05,000

Subjective testing.

467

00:30:05,000 --> 00:30:08,000

Coldness scale, 1 to 10.

468

00:30:08,000 --> 00:30:11,000

I'm saying I'm at least about a 2.

469

00:30:11,000 --> 00:30:14,000

Yeah, I agree with that assessment.

470

00:30:14,000 --> 00:30:18,000

And the thermal camera, as well as providing Adam with entertainment...

471

00:30:18,000 --> 00:30:19,000

Wow, man.

472

00:30:19,000 --> 00:30:23,000

I gotta tell you, with your hat off, you look like a Bond villain in this shot.

473

00:30:23,000 --> 00:30:26,000

...seems to confirm Jamie's earlier theory.

474

00:30:26,000 --> 00:30:29,000

Despite their stable core body temperature,

475

00:30:29,000 --> 00:30:33,000

their extremities have plummeted by over 20 degrees.

476

00:30:33,000 --> 00:30:35,000

My fingers hurt.

477

00:30:35,000 --> 00:30:38,000

Okay, your face is 65 degrees.

478

00:30:38,000 --> 00:30:41,000

With the numbers noted, there's just one thing left to do.

479

00:30:41,000 --> 00:30:43,000

My ears are starting to sting.

480

00:30:43,000 --> 00:30:45,000

Help me, Bob, I'm freezing.

481

00:30:45,000 --> 00:30:47,000

Bring on the Randy.

482

00:30:47,000 --> 00:30:52,000

At this point, I'm in the rare position of hoping that the myth is true.

483

00:31:00,000 --> 00:31:03,000

We've got a really weird myth for the viewer special.

484

00:31:03,000 --> 00:31:06,000

Have you ever heard that a piano can explode in a fire?

485

00:31:06,000 --> 00:31:11,000

No, I have not, but it does make sense because the strings are under a lot of tension.

486

00:31:11,000 --> 00:31:13,000

Who cares if it makes sense? We might get to see a piano explode.

487

00:31:13,000 --> 00:31:18,000

Hang on, I think before we do that, we need to find out how much tension the strings are under.

488

00:31:18,000 --> 00:31:20,000

Actually, I know the perfect people for that.

489

00:31:21,000 --> 00:31:23,000

And that perfect piano place...

490

00:31:23,000 --> 00:31:25,000

Ready to get your tune on...

491

00:31:26,000 --> 00:31:29,000

is owned by John Callahan, the piano man.

492

00:31:32,000 --> 00:31:38,000

So, the myth that we're working on is that if you put a piano in a fire, it will explode.

493

00:31:38,000 --> 00:31:41,000

Wow, I've actually heard people talk about that before.

494

00:31:41,000 --> 00:31:44,000

Having never burned a piano myself, I don't know if that's true,

495

00:31:44,000 --> 00:31:46,000

but I'm not sure exactly what's going to happen.

496

00:31:46,000 --> 00:31:52,000

To me, it sounds relatively plausible because, you know, I understand there's a lot of tension on the strings.

497

00:31:52,000 --> 00:31:54,000

Well, there sure is a lot of tension on the strings.

498

00:31:54,000 --> 00:31:59,000

In a piano, the steel wire is stretched across the cast iron plate,

499

00:31:59,000 --> 00:32:03,000

and there's about 200 pounds of tension on each wire average.

500

00:32:03,000 --> 00:32:07,000

We have about 230 wires in the piano,

501

00:32:07,000 --> 00:32:11,000

so there's a total of over 20 tons of force trying to collapse the piano.

502

00:32:11,000 --> 00:32:14,000

Now that sounds promising.

503

00:32:14,000 --> 00:32:20,000

The strings stretched across the cast iron plate hold 40,000 pounds of pressure,

504

00:32:20,000 --> 00:32:25,000

and if the flames cause them to fail, hey presto, exploding piano.

505

00:32:25,000 --> 00:32:29,000

It's always a good day when you started at the bomb range.

506

00:32:29,000 --> 00:32:33,000

Callahan's have kindly given the team a baby grand to ignite.

507

00:32:33,000 --> 00:32:35,000

Now all they have to do...

508

00:32:36,000 --> 00:32:38,000

is get it off the truck.

509

00:32:38,000 --> 00:32:39,000

When the piano sucks.

510

00:32:39,000 --> 00:32:41,000

And into position.

511

00:32:41,000 --> 00:32:43,000

I'm just going to do a little tension music.

512

00:32:46,000 --> 00:32:48,000

Is the piano going to fall at the fork lift?

513

00:32:49,000 --> 00:32:52,000

While Carrie does some, you know, actual work,

514

00:32:52,000 --> 00:32:56,000

Tori and Grant serenade her the only way they know how.

515

00:32:56,000 --> 00:32:57,000

Badly.

516

00:32:57,000 --> 00:33:01,000

Here's the organ grinder.

517

00:33:01,000 --> 00:33:05,000

Grinding organ's all the night.

518

00:33:05,000 --> 00:33:09,000

With the piano standing at its own legs, there's just one thing left to do.

519

00:33:09,000 --> 00:33:11,000

Tune it.

520

00:33:11,000 --> 00:33:13,000

Alright John, I know the tuning of piano at a bomb range

521

00:33:13,000 --> 00:33:16,000

is probably a pretty strange working condition for you,

522

00:33:16,000 --> 00:33:19,000

but we need to give this myth the best possible chance of working.

523

00:33:19,000 --> 00:33:23,000

So we need to get each one of these strings at the proper tension.

524

00:33:23,000 --> 00:33:24,000

I'll do my best.

525

00:33:25,000 --> 00:33:30,000

As John brings the piano to a perfect pitch, the guys pitch in to build the bonfire.

526

00:33:31,000 --> 00:33:34,000

So to all the piano aficionados out there, just want to let you know,

527

00:33:34,000 --> 00:33:36,000

we love pianos.

528

00:33:36,000 --> 00:33:38,000

We're not enjoying this in the least.

529

00:33:39,000 --> 00:33:42,000

I guess all there is left to do then is throw some kerosene on the wood.

530

00:33:42,000 --> 00:33:43,000

Alright, let's light it.

531

00:33:43,000 --> 00:33:45,000

Light it on fire.

532

00:33:45,000 --> 00:33:47,000

Find out if we have a bomb fire.

533

00:33:47,000 --> 00:33:50,000

Well, if there's truth to this myth, this thing could explode,

534

00:33:50,000 --> 00:33:52,000

so we better get out of here, because this could be very dangerous.

535

00:33:52,000 --> 00:33:54,000

And I'm totally okay with that.

536

00:33:55,000 --> 00:33:57,000

So it's this baby Grant's finale.

537

00:33:58,000 --> 00:34:00,000

But will the meltdown be a let down?

538

00:34:00,000 --> 00:34:02,000

Run, it's gonna explode!

539

00:34:02,000 --> 00:34:05,000

Or will it be a musical mushroom cloud?

540

00:34:05,000 --> 00:34:06,000

Wow!

541

00:34:07,000 --> 00:34:08,000

That was a nice fire.

542

00:34:09,000 --> 00:34:11,000

Next on Mythbusters,

543

00:34:11,000 --> 00:34:14,000

it's Adam and Jamie's Frozen finale.

544

00:34:14,000 --> 00:34:18,000

I'm going into the delirium of thinking about what I'll do once I'm warm.

545

00:34:18,000 --> 00:34:19,000

And...

546

00:34:19,000 --> 00:34:23,000

Well, the Mythbusters must the myth of the exploding piano.

547

00:34:23,000 --> 00:34:26,000

Find out after these messages.

548

00:34:31,000 --> 00:34:34,000

Adam and Jamie are chilling out, literally.

549

00:34:34,000 --> 00:34:36,000

My ears are starting to stink.

550

00:34:36,000 --> 00:34:37,000

Yeah.

551

00:34:37,000 --> 00:34:42,000

And at the limit of their cold weather endurance, they need rescuing.

552

00:34:42,000 --> 00:34:44,000

Get the brandy off!

553

00:34:44,000 --> 00:34:47,000

But is the mythical shot of Brandy the right way to go?

554

00:34:47,000 --> 00:34:48,000

There we go.

555

00:34:48,000 --> 00:34:49,000

Seriously.

556

00:34:54,000 --> 00:34:56,000

That's good brandy.

557

00:34:56,000 --> 00:35:00,000

The immediate signs, at least on a subjective level, seem to back up the myth.

558

00:35:00,000 --> 00:35:02,000

Yeah, the brandy sort of helped a little bit.

559

00:35:02,000 --> 00:35:09,000

There's definitely a feeling, a distinct feeling, of a warm glow happening down here.

560

00:35:09,000 --> 00:35:12,000

But really, it's still painfully cold.

561

00:35:12,000 --> 00:35:17,000

But honestly, if you gave me the choice, I'd pour it on my hands and set it on fire at this point.

562

00:35:17,000 --> 00:35:24,000

A few minutes after downing these supposedly life-saving shots, the guys rustle up another set of data.

563

00:35:24,000 --> 00:35:27,000

And although their body temperature remains stable...

564

00:35:27,000 --> 00:35:29,000

99.15.

565

00:35:29,000 --> 00:35:30,000

Mine's 98.6.

566

00:35:30,000 --> 00:35:34,000

The numbers for skin temperature are very interesting.

567

00:35:34,000 --> 00:35:37,000

Face is 74 degrees.

568

00:35:37,000 --> 00:35:41,000

Which is an increase of 9 degrees from their pre-brandy temperatures.

569

00:35:41,000 --> 00:35:44,000

Alright, Jamie, your face.

570

00:35:44,000 --> 00:35:46,000

78 degrees.

571

00:35:46,000 --> 00:35:49,000

But again, the science backs up the numbers.

572

00:35:49,000 --> 00:35:56,000

Alcohol does in fact dilate your blood vessels, leading to flushed cheeks and more blood flow to your skin.

573

00:35:56,000 --> 00:35:57,000

There we go.

574

00:35:57,000 --> 00:36:01,000

And to find out if this effect is really helping fight off the cold...

575

00:36:01,000 --> 00:36:02,000

Cheers!

576

00:36:02,000 --> 00:36:05,000

Another shot is called for and Dooley drunk.

577

00:36:08,000 --> 00:36:10,000

I got a hair.

578

00:36:10,000 --> 00:36:15,000

And once again, the immediate signs are that the alcohol has a positive, subjective effect.

579

00:36:15,000 --> 00:36:22,000

I'm picturing big steaming pans of warm food and dunking my hands into them.

580

00:36:23,000 --> 00:36:28,000

I'm going into the delirium of thinking about what I'll do once I'm warm.

581

00:36:28,000 --> 00:36:35,000

But assuming this is a life or death situation, maybe improving your mood isn't a priority.

582

00:36:35,000 --> 00:36:39,000

I can already tell that my mental faculties are impaired.

583

00:36:39,000 --> 00:36:41,000

What we're supposed to do?

584

00:36:41,000 --> 00:36:42,000

Left hand.

585

00:36:42,000 --> 00:36:44,000

Oh, I'm getting them wrong, aren't I?

586

00:36:44,000 --> 00:36:46,000

I don't think...

587

00:36:46,000 --> 00:36:51,000

Just from a subjective point of view, I'd want to further impair them with alcohol.

588

00:36:51,000 --> 00:36:55,000

Although, you know, caring less about the cold certainly has its merits.

589

00:36:55,000 --> 00:37:00,000

Yeah, you might do better by trying to light a small fire or something like that.

590

00:37:00,000 --> 00:37:02,000

Get shelter.

591

00:37:02,000 --> 00:37:06,000

And with that pearl of wisdom, it's time to gather the last set of data.

592

00:37:06,000 --> 00:37:09,000

Okay, face. 72 degrees.

593

00:37:09,000 --> 00:37:16,000

Again, the thermal camera shows the guy's skin temperature to be higher than or equal to pre-brandy numbers.

594

00:37:16,000 --> 00:37:20,000

Dude, I just can't get over how funny looking you look on a thermal camera.

595

00:37:20,000 --> 00:37:24,000

But critically, the same can't be said for their core body temperature.

596

00:37:24,000 --> 00:37:27,000

97.37.

597

00:37:27,000 --> 00:37:31,000

Which is a sudden and worrying drop of a whole degree.

598

00:37:31,000 --> 00:37:33,000

Can we go now?

599

00:37:33,000 --> 00:37:37,000

It turns out that St. Bernard's carrying brandy is a myth.

600

00:37:37,000 --> 00:37:42,000

Now, if these guys actually saved anybody's lives, it'd be due to their body warmth.

601

00:37:42,000 --> 00:37:47,000

Because like Bob here, they're big brutes, they're really furry, and he's actually keeping me quite warm.

602

00:37:47,000 --> 00:37:53,000

Yep, a shaggy dog cuddle is the solution to this shaggy dog story.

603

00:37:53,000 --> 00:38:01,000

In summary, alcohol dilates your vascular system, which sends blood to your extremities where it loses its warmth.

604

00:38:01,000 --> 00:38:05,000

And as a result, your core body temperature quickly cools.

605

00:38:05,000 --> 00:38:08,000

You don't mind if I have a little nip, huh?

606

00:38:10,000 --> 00:38:16,000

I gotta tell you, right after that second brandy, I was thinking, I understand what this myth is all about, because I was feeling pretty fine.

607

00:38:16,000 --> 00:38:19,000

It's probably because you just didn't care about the cold so much anymore.

608

00:38:19,000 --> 00:38:26,000

Well, no, alcohol also has a diluting effect. My blood was thinning and moving more towards my extremities, making me feel more comfortable.

609

00:38:26,000 --> 00:38:30,000

But right after that, your core body temperature started to drop like a stone.

610

00:38:30,000 --> 00:38:35,000

Right, which is precisely the opposite of what you want to happen in a freezing cold situation.

611

00:38:35,000 --> 00:38:41,000

So in the short term, it might make you feel good, but ultimately, it's the last thing you want to do.

612

00:38:41,000 --> 00:38:43,000

Absolutely. This one's busted.

613

00:38:43,000 --> 00:38:47,000

Busted. Saved the brandy for when you're curled up in front of the fireplace back in the lodge.

614

00:38:51,000 --> 00:38:56,000

Carrie Grant and Tori love a good explosive bonfire.

615

00:38:57,000 --> 00:39:03,000

In fact, any fiery fable ignites their inner pyromania.

616

00:39:03,000 --> 00:39:04,000

Ah, f***!

617

00:39:04,000 --> 00:39:06,000

And Adam's feet.

618

00:39:06,000 --> 00:39:11,000

So when viewers suggested that burning a baby grand might make it explode...

619

00:39:11,000 --> 00:39:15,000

...of the kerosene...

620

00:39:16,000 --> 00:39:18,000

They couldn't wait to fire up...

621

00:39:18,000 --> 00:39:19,000

Run!

622

00:39:19,000 --> 00:39:21,000

...and find out if it was true.

623

00:39:21,000 --> 00:39:23,000

Oh my God, that fire's awesome!

624

00:39:23,000 --> 00:39:26,000

Fire department gave me a pyrometer so I can check how hot it is.

625

00:39:26,000 --> 00:39:28,000

Wait, I gotta put my arm around here.

626

00:39:28,000 --> 00:39:29,000

Okay, careful.

627

00:39:29,000 --> 00:39:35,000

With the pyrometer maxed out, their instrument inferno is burning at more than a thousand degrees...

628

00:39:35,000 --> 00:39:40,000

...which makes short work of the wooden frame, lid, and legs.

629

00:39:40,000 --> 00:39:42,000

Sure doesn't hear boing boing boing.

630

00:39:42,000 --> 00:39:44,000

I want a heat.

631

00:39:45,000 --> 00:39:49,000

Remember, if there's any truth to this myth...

632

00:39:49,000 --> 00:39:55,000

...the 20 tons of tension in the strings has to be suddenly and explosively released.

633

00:39:55,000 --> 00:39:57,000

Seeing a little caving in...

634

00:39:57,000 --> 00:40:00,000

Maybe it'll collapse on itself.

635

00:40:00,000 --> 00:40:01,000

That's the theory.

636

00:40:01,000 --> 00:40:05,000

But as the baby grand slowly but surely burns down to the ground...

637

00:40:05,000 --> 00:40:09,000

...the myth of the exploding piano goes up in smoke.

638

00:40:09,000 --> 00:40:11,000

Well, no explosion.

639

00:40:11,000 --> 00:40:15,000

In fact, all we see that's left of the piano is a smoking hole...

640

00:40:15,000 --> 00:40:19,000

...with a skeleton of the cast iron piece.

641

00:40:19,000 --> 00:40:22,000

You can still see some of the strings, which is not what I expected.

642

00:40:22,000 --> 00:40:26,000

I thought in all the heat, strings which are very thin compared to the cast iron...

643

00:40:26,000 --> 00:40:29,000

...wouldn't be going boing boing boing boing boing.

644

00:40:29,000 --> 00:40:31,000

But we didn't hear anything.

645

00:40:31,000 --> 00:40:33,000

There's no way this thing will ever explode.

646

00:40:33,000 --> 00:40:36,000

And I'm so confident that that's why I'm this close to the piano.

647

00:40:36,000 --> 00:40:39,000

No matter how much tension is put on these wires...

648

00:40:39,000 --> 00:40:41,000

...they're never going to explode and pop.

649

00:40:41,000 --> 00:40:45,000

Because as the wires heat up, the metal is just going to expand.

650

00:40:45,000 --> 00:40:46,000

It's just going to stretch.

651

00:40:46,000 --> 00:40:48,000

So you're never going to get this boing boing...

652

00:40:48,000 --> 00:40:51,000

...snapping wires and you're not going to get the exploding piano.

653

00:40:51,000 --> 00:40:53,000

It's just not physically possible.

654

00:40:53,000 --> 00:40:54,000

And that's the key.

655

00:40:54,000 --> 00:40:56,000

Yes, the tension will be released...

656

00:40:56,000 --> 00:41:00,000

...but it happens slowly as the metal strings expand in the fire.

657

00:41:00,000 --> 00:41:01,000

And so...

658

00:41:01,000 --> 00:41:03,000

This is definitively busted.

659

00:41:03,000 --> 00:41:04,000

Busted.

660

00:41:04,000 --> 00:41:05,000

Busted.

661

00:41:05,000 --> 00:41:07,000

But hold on. Aren't they forgetting something?

662

00:41:07,000 --> 00:41:12,000

The myth that a piano will explode in a fire is completely busted.

663

00:41:12,000 --> 00:41:14,000

But now we want to replicate the results.

664

00:41:14,000 --> 00:41:16,000

So we're going to blow a piano up anyway.

665

00:41:16,000 --> 00:41:18,000

So JD, the Rayleigh piano in the fire...

666

00:41:18,000 --> 00:41:19,000

...kind of sucked.

667

00:41:19,000 --> 00:41:20,000

Didn't explode.

668

00:41:20,000 --> 00:41:23,000

But we do have a backup piano that we can explode.

669

00:41:23,000 --> 00:41:25,000

What do you have for us?

670

00:41:25,000 --> 00:41:28,000

What I think you need is the Mythbusters Concerto in C4.

671

00:41:28,000 --> 00:41:30,000

Ha ha ha ha ha!

672

00:41:30,000 --> 00:41:32,000

Alright JD, this one's for you.

673

00:41:32,000 --> 00:41:33,000

Go JD.

674

00:41:33,000 --> 00:41:34,000

Go JD.

675

00:41:34,000 --> 00:41:35,000

Go JD.

676

00:41:35,000 --> 00:41:37,000

Feel this piano with some TNT.

677

00:41:37,000 --> 00:41:38,000

Go JD.

678

00:41:38,000 --> 00:41:39,000

Go JD.

679

00:41:39,000 --> 00:41:41,000

Everybody now, come on!

680

00:41:41,000 --> 00:41:42,000

Go JD.

681

00:41:42,000 --> 00:41:43,000

Go JD.

682

00:41:43,000 --> 00:41:46,000

Feel this piano with some TNT.

683

00:41:46,000 --> 00:41:48,000

It's a catchy tune.

684

00:41:48,000 --> 00:41:54,000

And JD hums along as he tunes the piano for the Mythbusters Concerto in C4.

685

00:41:54,000 --> 00:41:55,000

Alright, you guys ready?

686

00:41:55,000 --> 00:41:56,000

I'm ready.

687

00:41:56,000 --> 00:41:57,000

Are you ready?

688

00:41:57,000 --> 00:41:58,000

Ready.

689

00:41:58,000 --> 00:41:59,000

This is it.

690

00:41:59,000 --> 00:42:01,000

In three, two, one...

691

00:42:01,000 --> 00:42:03,000

Woo!

692

00:42:03,000 --> 00:42:05,000

Ha ha ha!

693

00:42:05,000 --> 00:42:08,000

Now that's what I call an exploding piano!

694

00:42:08,000 --> 00:42:09,000

Nice!

695

00:42:18,000 --> 00:42:21,000

Man, one second it was there, next second it was gone.

696

00:42:23,000 --> 00:42:25,000

Look at it's all open place.

697

00:42:25,000 --> 00:42:28,000

And because it's the viewer's special, especially for you...

698

00:42:28,000 --> 00:42:33,000

Here's the high speed encore of the Mythbusters Concerto in C4.

699

00:42:46,000 --> 00:42:48,000

Rest in pieces!

700

00:42:48,000 --> 00:42:50,000

Who would direct that piano?

701

00:42:50,000 --> 00:42:53,000

This is my 80's rock band.

702

00:42:53,000 --> 00:42:54,000

They all had these.

703

00:42:54,000 --> 00:42:56,000

And did this move.

704

00:42:57,000 --> 00:42:59,000

Now that was cool, but the Myth is still busted.

705

00:42:59,000 --> 00:43:01,000

If your piano is on fire, it's not going to explode.

706

00:43:01,000 --> 00:43:04,000

If it's filled with C4, well, that's another story.