

1

00:00:00,000 --> 00:00:09,240

Here come chickens of mass destruction. The mythbusters are firing their chicken gun to

2

00:00:09,240 --> 00:00:17,940

see which does the most damage, thawed or frozen. Doing the laundry can be a killer

3

00:00:17,940 --> 00:00:28,200

chore, but can it actually kill you? Adam and Jamie are getting intimate with a giant

4

00:00:28,200 --> 00:00:33,480

octopus. Could a human give birth to one? No, really, honey, those are octopus hickeys.

5

00:00:33,480 --> 00:00:43,200

Who are the mythbusters? Is my missing an eyebrow? Adam Savage. I always enjoyed seeing Adam in pain.

6

00:00:43,200 --> 00:00:51,800

Oh! And Jamie Heineman. Jamie wants a big girl. Between them more than 30 years special effects

7

00:00:52,400 --> 00:01:15,240

experience. They don't just tell the myths, they put them to the test. Well Jamie, I got an angry chicken, a really big gun and an airplane. What are we working on?

8

00:01:15,840 --> 00:01:33,240

Well we're here testing the myth of the chicken gun. Scientists conduct impact tests by firing bird carcasses from big guns. With more than 3,000 bird strikes each year, aviation authorities spend millions trying to protect the cockpit crews.

9

00:01:33,240 --> 00:01:43,240

We know that the military uses chicken cannons to test windshields, you know, how they would do with a bird hit. What's the myth?

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00:01:43,240 --> 00:01:58,240

Well the myth says that the British borrowed this technology from NASA to test high speed trains, but they ran into a problem and the problem was that the chickens were going right through the windshields of the trains and even embedding themselves in the seats further down inside the train.

11

00:01:58,240 --> 00:02:09,240

That would be bad. Yeah. Well the British were horrified at this of course and they sent a tape back to NASA asking for help. NASA replied saying, gentlemen, thaw your chickens.

12

00:02:10,240 --> 00:02:22,240

Well so this is what we're testing here today. Not that there is a chicken gun in existence, but whether or not there's a difference between a frozen and a thawed chicken at a couple hundred miles

an hour to an airplane windshield. That's correct.

13

00:02:22,240 --> 00:02:44,240

To fire thawed or frozen chickens at high speed, the mythbusters will need a sealed tank and compressor to supply air for the massive gun. An industrial strength butterfly valve will provide an explosive release for firing the carcass down the long barrel, the target, a used fuselage and several spare windshields.

14

00:02:44,240 --> 00:02:50,240

There are loads of stories where one country pokes fun at another, particularly where America is involved.

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00:02:52,240 --> 00:02:55,240

Mythbusters folklorist Heather Joseph with them.

16

00:02:55,240 --> 00:03:07,240

There are versions of this narrative where it's the Royal Canadian Air Force for example that invents the chicken gun and it's borrowed by American airplane manufacturers who don't know how to use the gun right.

17

00:03:08,240 --> 00:03:16,240

First stop for anyone buying light aircraft spare parts in California is Ken Faith's yard in Sacramento.

18

00:03:16,240 --> 00:03:19,240

Windshields I'm thinking about might be over here, some of them.

19

00:03:19,240 --> 00:03:28,240

Acres of used light aircraft components make it a prime location for Jamie and Adam to find a fuselage and extra windshields.

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00:03:28,240 --> 00:03:36,240

I love places like this. I can spend hours here looking through the gauges and headsets and seats and you know hats.

21

00:03:36,240 --> 00:03:40,240

Look, a chicken. Looks like a bird already went through it.

22

00:03:40,240 --> 00:03:46,240

It did. What about something like this, Jamie? You know we get double the bang for our buck.

23

00:03:46,240 --> 00:03:48,240

I certainly like the looks of these better.

24

00:03:48,240 --> 00:03:53,240

Aircraft chosen. Now, how to get it home.

25

00:03:54,240 --> 00:04:02,240

Jamie and Adam have been all over Kenny's yard but there's one question they forgot to ask.

26

00:04:02,240 --> 00:04:06,240

An oversight that will come back to haunt them.

27

00:04:08,240 --> 00:04:10,240

Not bad sir, very good.

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00:04:10,240 --> 00:04:12,240

Never done that before.

29

00:04:14,240 --> 00:04:17,240

Keep going. Good.

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00:04:17,240 --> 00:04:26,240

Got a lot of stranger things in my pickup at this point so this is another one to add to my list.

31

00:04:29,240 --> 00:04:30,240

Okay, set it down.

32

00:04:30,240 --> 00:04:36,240

Back at the workshop, the plane is stored until the chicken gun is built and ready to fire.

33

00:04:36,240 --> 00:04:41,240

Well, we've got our target so the next step and the hardest step is going to be to set up the chicken gun.

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00:04:42,240 --> 00:04:51,240

That means that we have to build a large tank to hold a whole lot of high pressure air and rig some kind of a valve to let go all that air all at once to fire a chicken.

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00:04:51,240 --> 00:04:53,240

It's kind of tricky. It's a lot of work.

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00:04:54,240 --> 00:04:59,240

And Jamie should know he's solved the compressed air problem once before.

37

00:04:59,240 --> 00:05:00,240

Yeah baby.

38

00:05:02,240 --> 00:05:09,240

He built this seven up vending machine with attitudes for a TV commercial with impressive results.

39

00:05:12,240 --> 00:05:21,240

One of the things that I noticed was that the firing system that we set up required a large valve that delivered a whole bunch of air all at once.

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00:05:21,240 --> 00:05:27,240

And we thought, wow, this is great. We should use this on the chicken gun because it requires exactly the same thing.

41

00:05:29,240 --> 00:05:33,240

It's a simple, elegant design. It's exactly what I like to see come out of the shop.

42

00:05:33,240 --> 00:05:35,240

It's fun yet deadly.

43

00:05:37,240 --> 00:05:40,240

What else could you possibly want to come out of an effect shop?

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00:05:42,240 --> 00:05:47,240

So the search for the perfect high pressure tank begins.

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00:05:50,240 --> 00:05:58,240

The machinery and equipment company in Brisbane, California is a vast supermarket for used tanks.

46

00:05:58,240 --> 00:06:04,240

You can flip this in any direction. That could be upside down. You can hang it from something or leave it like that.

47

00:06:04,240 --> 00:06:06,240

What do you want for this thing?

48

00:06:06,240 --> 00:06:08,240

This is \$750.

49

00:06:08,240 --> 00:06:09,240

Okay.

50

00:06:09,240 --> 00:06:10,240

Jamie?

51

00:06:10,240 --> 00:06:14,240

Jamie? It still occurs to me that it's way overkill for what we want to do.

52

00:06:14,240 --> 00:06:19,240

Jamie has made his choice, but Adam is not happy about safety.

53

00:06:19,240 --> 00:06:26,240

He feels that the tank is too sophisticated and that over modification could weaken the structure.

54

00:06:26,240 --> 00:06:28,240

It's like your intuition is that it's not like a bomb.

55

00:06:29,240 --> 00:06:30,240

Yeah.

56

00:06:30,240 --> 00:06:32,240

But if it is, we're all dead and f\*\*\*ed.

57

00:06:34,240 --> 00:06:36,240

Well, this is true.

58

00:06:36,240 --> 00:06:41,240

So airing against the side of caution, even if your intuition is right, is stupid.

59

00:06:41,240 --> 00:06:44,240

Okay. Well, think about it though before you go off like that.

60

00:06:44,240 --> 00:06:51,240

You know, when everyone who you talk to describes 250 pounds per square inch as being like a bomb,

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00:06:51,240 --> 00:06:57,240

and Jamie just says, well, I'm not that concerned about it.

62

00:06:57,240 --> 00:06:59,240

It's like, that's not good enough for me.

63

00:06:59,240 --> 00:07:03,240

Adam was just having a little bit of a hissy fit about the safety aspect of this thing.

64

00:07:03,240 --> 00:07:06,240

And, you know, I don't hold it against him at all.

65

00:07:06,240 --> 00:07:13,240

The possibility of having the tank rupture and somebody get hurt is something that we should be very concerned about.

66

00:07:13,240 --> 00:07:15,240

However, I don't think it's going to blow up.

67

00:07:16,240 --> 00:07:18,240

But Adam's not convinced.

68

00:07:18,240 --> 00:07:21,240

He's called around town and found another tank.

69

00:07:21,240 --> 00:07:25,240

What I've got, I found a guy who's got one, it's about half that size.

70

00:07:25,240 --> 00:07:28,240

I think it's just perfect for us up in Petaluma.

71

00:07:28,240 --> 00:07:29,240

Okay.

72

00:07:29,240 --> 00:07:31,240

I need some cash and I need the keys to the car, Dad.

73

00:07:31,240 --> 00:07:32,240

Okay.

74

00:07:34,240 --> 00:07:35,240

Five hard.

75

00:07:35,240 --> 00:07:36,240

All right.

76

00:07:36,240 --> 00:07:38,240

Drive carefully.

77

00:07:38,240 --> 00:07:39,240

Vegas, baby!

78

00:07:45,240 --> 00:07:50,240

Adam's ideal tank is waiting out back at Masseleon Sun.

79

00:07:50,240 --> 00:07:51,240

What's it rated for?

80

00:07:51,240 --> 00:07:53,240

It's 200 PS.

81

00:07:53,240 --> 00:07:54,240

That is good.

82

00:07:56,240 --> 00:07:57,240

I love it.

83

00:07:57,240 --> 00:07:58,240

Let's do it.

84

00:07:59,240 --> 00:08:00,240

That's it.

85

00:08:00,240 --> 00:08:07,240

Meanwhile, Jamie has found an oversized butterfly valve that will release the pressurized air.

86

00:08:07,240 --> 00:08:13,240

He also ordered 20 feet of quarter inch steel pipe for a 10 inch diameter barrel.

87

00:08:13,240 --> 00:08:14,240

Hey, Savage.

88

00:08:14,240 --> 00:08:15,240

Yo, Heiney.

89

00:08:15,240 --> 00:08:17,240

So, here she is.

90

00:08:17,240 --> 00:08:20,240

Even Jamie is impressed with Adam's purchase.

91

00:08:20,240 --> 00:08:25,240

It's an ideal tank for storing enough compressed air to propel chickens.

92

00:08:25,240 --> 00:08:27,240

I recognize that your intuition, like mine is...

93

00:08:27,240 --> 00:08:31,240

It appears Adam has a little something to get off his chest.

94

00:08:31,240 --> 00:08:33,240

I didn't mean to call you stupid this morning.

95

00:08:33,240 --> 00:08:34,240

Did you call me stupid?

96

00:08:34,240 --> 00:08:35,240

I didn't.

97

00:08:35,240 --> 00:08:38,240

I said stupid and I was talking to you, but I wasn't calling you stupid.

98

00:08:38,240 --> 00:08:40,240

Nobody ever calls me stupid.

99

00:08:40,240 --> 00:08:42,240

I've called you stupid, but not to your face.

100

00:08:42,240 --> 00:08:43,240

Not in the living room.

101

00:08:51,240 --> 00:08:56,240

Jamie's using a plasma cutter, a high energy precision tool to cut the pipe to length.

102

00:08:56,240 --> 00:08:59,240

And to make a hole in the tank for the barrel.

103

00:09:02,240 --> 00:09:08,240

For the explosive release of air, the butterfly valve will be fitted between two lengths of pipe.

104

00:09:08,240 --> 00:09:12,240

Adam's job is to fit the short end to the tank.

105

00:09:16,240 --> 00:09:21,240

I just dropped the temple of my glasses here into the tank.

106

00:09:21,240 --> 00:09:24,240

The really heavy, big tank with hole in it.

107

00:09:25,240 --> 00:09:27,240

Got some chewing gum?

108

00:09:30,240 --> 00:09:35,240

Just goes to show where there's a will, there's a way.

109

00:09:35,240 --> 00:09:39,240

There we go. One glasses temple.

110

00:09:39,240 --> 00:09:41,240

Now I can get to work.

111

00:09:46,240 --> 00:09:48,240

The big valve is the most critical aspect.

112

00:09:48,240 --> 00:09:53,240

It's the only mechanism standing between a great shot and a weak one.

113

00:09:53,240 --> 00:09:57,240

When we pressure this tank up, this can hold 250 psi.

114

00:09:57,240 --> 00:10:03,240

We'll get it to about 200 and then yank on this and chickens will be flying.

115

00:10:04,240 --> 00:10:07,240

The air compressor is connected to the tank.

116

00:10:07,240 --> 00:10:12,240

Time for a chicken free test blast at 200 pounds per square inch of pressure.

117

00:10:12,240 --> 00:10:13,240

Stand clear.

118

00:10:13,240 --> 00:10:15,240

There goes the neighborhood.

119

00:10:15,240 --> 00:10:17,240

Give us a countdown then.

120

00:10:17,240 --> 00:10:19,240

Two, three, one.

121

00:10:24,240 --> 00:10:30,240

It looks impressive, yet the white smoke is simply water vapor forming droplets

122

00:10:30,240 --> 00:10:34,240

when the previously hot compressed air meets the cool.

123

00:10:34,240 --> 00:10:37,240

It feels like a Mack truck just drove by me.

124

00:10:37,240 --> 00:10:41,240

I just wonder what a chicken breaking the speed of sound sounds like.

125

00:10:53,240 --> 00:10:56,240

If you're going to let your chickens fly free range,

126

00:10:56,240 --> 00:11:00,240

there's no better place to stock up than Tarantino's.

127

00:11:00,240 --> 00:11:06,240

Tony's family has been in poultry for years and he's heard all the chicken stories.

128

00:11:06,240 --> 00:11:10,240

Tony, do you think there'd be any difference between whether they used frozen or thawed chickens?

129

00:11:10,240 --> 00:11:13,240

I would imagine frozen would be harder.

130

00:11:13,240 --> 00:11:15,240

They could do more damage.

131

00:11:15,240 --> 00:11:16,240

Do a little bit more damage.

132

00:11:16,240 --> 00:11:19,240

I think the fresh just might kind of splat.

133

00:11:19,240 --> 00:11:23,240

So if you were in a plane, you'd rather hit a thawed chicken than a frozen one?

134

00:11:23,240 --> 00:11:24,240

Correct, yes.

135

00:11:24,240 --> 00:11:27,240

I don't imagine there's many frozen chickens at 2,000 feet.

136

00:11:27,240 --> 00:11:30,240

No, no maybe it's cold up there.

137

00:11:30,240 --> 00:11:38,240

And freezing down here, their chickens of choice, eight rock hard four pounders.

138

00:11:38,240 --> 00:11:44,240

The key to launching chickens explosively is to ensure they fit the barrel snugly.

139

00:11:44,240 --> 00:11:48,240

Adam places them in a mold of expanding rigid foam.

140

00:11:48,240 --> 00:11:51,240

The result is a sleeve called a sabal.

141

00:11:51,240 --> 00:11:55,240

It enables projectiles to be fired from weapons of a larger caliber.

142

00:11:55,240 --> 00:12:00,240

So once the foam sets up and gets rigid, what we end up with is this perfect sort of molded cartridge

143

00:12:00,240 --> 00:12:04,240

for the chicken that equals the size of the barrel and allows us to propel it out.

144

00:12:04,240 --> 00:12:08,240

I would say that what you got here is a potential supersonic chicken.

145

00:12:09,240 --> 00:12:18,240

Just a few bolts to tighten and this very potent chicken gun is ready for its first outing.

146

00:12:21,240 --> 00:12:28,240

Bringing up the rear is Bruce Bradford, a man who knows all about gigantic guns.

147

00:12:28,240 --> 00:12:31,240

He's the designer of one called Second Amendment.

148

00:12:31,240 --> 00:12:39,240

At the annual Pumpkin Chunkin in Delaware, these huge air guns blast pumpkins nearly a mile.

149

00:12:39,240 --> 00:12:50,240

With Bruce, the 2002 and three world champion, who better to consult on the business of big barrels?

150

00:12:50,240 --> 00:12:55,240

I think it's a great looking gun. It's got all the basics. It's got a tank, it's got a valve and it's got a barrel.

151

00:12:55,240 --> 00:13:02,240

Excellent job of welding by Adam, that's for sure. And it's going to shoot a chicken at high velocity.

152

00:13:03,240 --> 00:13:07,240

The countdown to chicken blast off has begun.

153

00:13:08,240 --> 00:13:16,240

Unsure of the chicken gun's firepower, for safety reasons, they sit the plane inside their blast chamber.

154

00:13:16,240 --> 00:13:18,240

I'll lean it right there.

155

00:13:18,240 --> 00:13:25,240

To check their aim, they need a test shot. So a sheet of lexin is positioned to protect the windshield.

156

00:13:25,240 --> 00:13:31,240

So our first test is a frozen chicken. Let's see here.

157

00:13:31,240 --> 00:13:36,240

The tank is primed to 120 pounds per square inch of air pressure.

158

00:13:37,240 --> 00:13:41,240

There we go. That is one loaded chicken gun.

159

00:13:41,240 --> 00:13:42,240

I'm good.

160

00:13:42,240 --> 00:13:43,240

All right.

161

00:13:43,240 --> 00:13:46,240

We are arming the chicken cannon.

162

00:13:46,240 --> 00:13:48,240

I'm going to stand back here.

163

00:13:48,240 --> 00:13:52,240

All right. Three, two, one.

164

00:13:54,240 --> 00:13:55,240

All right.

165

00:13:55,240 --> 00:14:00,240

I tried. I don't get it right now. I'm good man.

166

00:14:00,240 --> 00:14:07,240

Out of the barrel and free of the sabote, the frozen chicken clocked 121 miles an hour.

167

00:14:07,240 --> 00:14:11,240

Wow. So much for the blast shield.

168

00:14:11,240 --> 00:14:19,240

So even if you're flooring with a rated plexiglass shield in front of your plane, you're in some serious danger.

169

00:14:19,240 --> 00:14:21,240

Where's the chicken?

170

00:14:21,240 --> 00:14:22,240

I'm not sure.

171

00:14:30,240 --> 00:14:34,240

You know, who knows what the damage to the neighbors would have been if this had gotten out.

172

00:14:36,240 --> 00:14:39,240

You know that's about one of the more destructive things that I've ever done.

173

00:14:41,240 --> 00:14:42,240

That was cool.

174

00:14:42,240 --> 00:14:46,240

Yeah, that was exceedingly cool. Let's do a thawed.

175

00:14:47,240 --> 00:14:53,240

A replacement windshield is fitted for another shot. This time, a thawed chicken.

176

00:14:53,240 --> 00:14:58,240

The big question, will it cause as much damage as a frozen one?

177

00:14:59,240 --> 00:15:02,240

Three, two, one.

178

00:15:03,240 --> 00:15:04,240

Whoa!

179

00:15:08,240 --> 00:15:13,240

Under the same pressure, the thawed chicken was marginally slower than the frozen one,

180

00:15:13,240 --> 00:15:18,240

but still reached a destructive 99.5 miles an hour.

181

00:15:20,240 --> 00:15:26,240

For the next shot, the tank pressure will be reduced by more than half, down to 50 psi.

182

00:15:26,240 --> 00:15:31,240

They're hoping to see a difference between frozen and thawed at a slower speed.

183

00:15:31,240 --> 00:15:35,240

And three, two, one.

184

00:15:38,240 --> 00:15:44,240

Another frozen bird is blasted. This one at 128 miles an hour.

185

00:15:44,240 --> 00:15:50,240

Jamie, there was no difference in speed between 120 psi and 50 psi.

186

00:15:51,240 --> 00:15:56,240

It may just be that initial blast. Like it's probably within the first eighth of the valve opening.

187

00:15:56,240 --> 00:15:58,240

It's gone or something, you know.

188

00:15:58,240 --> 00:16:06,240

The rapid air release is crucial. Bruce's winning blast flew a 10-pound pumpkin almost 4,000 feet.

189

00:16:06,240 --> 00:16:10,240

Sometimes we can shoot just as far as shooting 75 pounds as we put 200 pounds in.

190

00:16:10,240 --> 00:16:11,240

Really?

191

00:16:11,240 --> 00:16:12,240

Yep.

192

00:16:12,240 --> 00:16:15,240

Just the timing and the way the valve opens.

193

00:16:15,240 --> 00:16:16,240

Wow.

194

00:16:17,240 --> 00:16:22,240

Once more into the breach for the thawed bird at the 50 psi mark.

195

00:16:22,240 --> 00:16:23,240

Three, two, one.

196

00:16:25,240 --> 00:16:30,240

It's clock speed, a shattering 132 miles an hour.

197

00:16:30,240 --> 00:16:36,240

You know, if anything, the thawed chicken leaves a bigger hole.

198

00:16:36,240 --> 00:16:37,240

Which would kind of make sense.

199

00:16:37,240 --> 00:16:43,240

It would. Its impact spreads out as it hits, but it's still the same amount of mass going through the same amount of space.

200

00:16:44,240 --> 00:16:47,240

Right now, they're all going right through the windshield.

201

00:16:47,240 --> 00:16:51,240

So, assuming that there is a new difference and we want to find out whether there is,

202

00:16:51,240 --> 00:16:56,240

we're going to have to lower the speed down to find out exactly where that butter zone is.

203

00:16:58,240 --> 00:17:04,240

They cut the pressure again to just 25 psi for the frozen valve.

204

00:17:05,240 --> 00:17:06,240

And then thawed.

205

00:17:07,240 --> 00:17:13,240

The MythBusters awesome outcome. All their flying poultry, highly destructive.

206

00:17:14,240 --> 00:17:15,240

I'm totally shocked.

207

00:17:15,240 --> 00:17:17,240

Does that mean that the myth is busted?

208

00:17:17,240 --> 00:17:20,240

I think that would mean that the myth is definitely busted.

209

00:17:21,240 --> 00:17:22,240

But wait, there's a hitch.

210

00:17:24,240 --> 00:17:29,240

Those light aircraft windshields they bought are not rated for bird strikes.

211

00:17:31,240 --> 00:17:34,240

Well, Jimmy, that's the biggest screw up we've ever done.

212

00:17:34,240 --> 00:17:38,240

I mean, we're supposed to test the difference between frozen and thawed chickens and the Piper Cherokee.

213

00:17:38,240 --> 00:17:41,240

Its windscreen is not even rated to be smacked into by anything.

214

00:17:42,240 --> 00:17:47,240

Yeah, it was like trying to check the difference between a 22 and a 357 by shooting it at a cardboard box.

215

00:17:47,240 --> 00:17:53,240

I mean, it looked really destructive. It looked great, but it didn't really tell us anything.

216

00:17:53,240 --> 00:17:54,240

Yeah.

217

00:17:54,240 --> 00:17:57,240

For the moment, the MythBusters are stymied.

218

00:17:57,240 --> 00:18:02,240

But already they're formulating a new plan to measure the chicken's force of impact.

219

00:18:02,240 --> 00:18:05,240

We'll tell you about it a little later in the show.

220

00:18:05,240 --> 00:18:08,240

It automatically deboned the chicken, didn't it?

221

00:18:12,240 --> 00:18:14,240

Now, here's a twisted tale.

222

00:18:14,240 --> 00:18:17,240

It involves a strange proposition in the park.

223

00:18:17,240 --> 00:18:19,240

Does the dain have to pee?

224

00:18:19,240 --> 00:18:22,240

And the MythBusters airing their dirty laundry.

225

00:18:22,240 --> 00:18:25,240

Does he go up and in and then we lift him up?

226

00:18:25,240 --> 00:18:26,240

No.

227

00:18:26,240 --> 00:18:30,240

While building the appliance right of Frankenstein.

228

00:18:30,240 --> 00:18:32,240

What about to blow the lid right off this pump?

229

00:18:32,240 --> 00:18:37,240

You are about to get a load of the myth that defies the imagination.

230

00:18:37,240 --> 00:18:39,240

The Killer Laundry.

231

00:18:44,240 --> 00:18:49,240

In 1998, a Charlottesville man attempting to do a large amount of laundry

232

00:18:49,240 --> 00:18:53,240

stuffed his washing machine with 50 pounds of clothes.

233

00:18:53,240 --> 00:18:56,240

So he wants to get all of his laundry into the machine at once.

234

00:18:56,240 --> 00:19:00,240

So he takes this 50 pounds of laundry and he's jumping up and down on top of the machine

235

00:19:00,240 --> 00:19:04,240

to get it in there when his foot accidentally kicks the on button.

236

00:19:04,240 --> 00:19:06,240

He sort of fell into the machine.

237

00:19:06,240 --> 00:19:09,240

His legs got stuck by the laundry and he banged into the shelf.

238

00:19:09,240 --> 00:19:12,240

He hit some bleach. Bleach fell blind to him.

239

00:19:12,240 --> 00:19:14,240

Apparently he might even have swallowed some.

240

00:19:14,240 --> 00:19:17,240

At this point, his dog runs in to see what the commotion is about.

241

00:19:17,240 --> 00:19:20,240

And as he spins around, this time he hits the shelf again

242

00:19:20,240 --> 00:19:22,240

and some baking soda pours out.

243

00:19:22,240 --> 00:19:25,240

This startles the dog who then urinates on the baking soda.

244

00:19:25,240 --> 00:19:30,240

Causing a small explosion. At which point the laundry machine went into its spin cycle

245

00:19:30,240 --> 00:19:34,240

turning him about 70 miles an hour where he smacked his head into his shelf and died immediately.

246

00:19:34,240 --> 00:19:36,240

Well that sounds ridiculous.

247

00:19:37,240 --> 00:19:42,240

Now, we do need some dog pee. But let's not rush into that.

248

00:19:42,240 --> 00:19:45,240

Start simple. Buy a washing machine.

249

00:19:45,240 --> 00:19:48,240

What's the largest one that you would have in stock?

250

00:19:48,240 --> 00:19:49,240

The large one.

251

00:19:49,240 --> 00:19:51,240

Is that heavy duty?

252

00:19:51,240 --> 00:19:53,240

Is it for capacity?

253

00:19:53,240 --> 00:19:56,240

Do you think that this could hold 50 pounds of clothes?

254

00:19:56,240 --> 00:19:57,240

Oh yeah.

255

00:19:57,240 --> 00:19:58,240

Really?

256

00:19:58,240 --> 00:19:59,240

Yeah, I think.

257

00:19:59,240 --> 00:20:00,240

Alright.

258

00:20:00,240 --> 00:20:02,240

So what do you think, Adam?

259

00:20:02,240 --> 00:20:04,240

My vote would be this one.

260

00:20:04,240 --> 00:20:06,240

Yeah, for the volume.

261

00:20:06,240 --> 00:20:07,240

Okay.

262

00:20:09,240 --> 00:20:16,240

We of course went for super capacity plus from a major maker of washing machines

263

00:20:16,240 --> 00:20:19,240

and hopefully it'll be as powerful as about anything that's out there.

264

00:20:19,240 --> 00:20:23,240

And already one part of this myth is looking a little busted.

265

00:20:23,240 --> 00:20:28,240

The very first precept of the myth which is that he's standing in a washing machine that's running

266

00:20:28,240 --> 00:20:34,240

is probably impossible. All the washing machines they have in here have cut off switches when the lid is open.

267

00:20:34,240 --> 00:20:37,240

But this visit has proved one thing.

268

00:20:37,240 --> 00:20:41,240

Adam Savage can never leave a junk shop empty-handed.

269

00:20:43,240 --> 00:20:48,240

I'm thinking of like, you know, maybe having it a way that my kids can get the toys out of their closet.

270

00:20:48,240 --> 00:20:55,240

Next on our laundry list, 50 pounds of clothes.

271

00:20:55,240 --> 00:20:59,240

Adam's favorite thrift store has what we need.

272

00:20:59,240 --> 00:21:03,240

Men's, women's, children's, you know, lingerie.

273

00:21:03,240 --> 00:21:06,240

You can get a lot of lingerie for 50 pounds.

274

00:21:06,240 --> 00:21:09,240

We actually use a lot of lingerie on this show.

275

00:21:09,240 --> 00:21:11,240

We have actually.

276

00:21:14,240 --> 00:21:17,240

Okay, let's see how much we got there.

277

00:21:17,240 --> 00:21:19,240

You got the scale?

278

00:21:20,240 --> 00:21:22,240

There we go. I say we're good. 50 pounds.

279

00:21:22,240 --> 00:21:25,240

50 pounds of lingerie is a lot bigger than I thought it was.

280

00:21:25,240 --> 00:21:29,240

I mean, it's like two full, hard to lift garbage bags of clothes.

281

00:21:29,240 --> 00:21:32,240

I know we're not going to get all of that in the washing machine.

282

00:21:32,240 --> 00:21:34,240

You know, maybe about half of it at most.

283

00:21:34,240 --> 00:21:36,240

And that wouldn't wash it very well.

284

00:21:39,240 --> 00:21:43,240

The guys construct a mini laundry in the workshop.

285

00:21:43,240 --> 00:21:49,240

Just like in the myth, bleach and baking soda are placed on the shelf.

286

00:21:49,240 --> 00:21:51,240

As far as I can tell, it's working.

287

00:21:51,240 --> 00:21:54,240

The machine runs like a dream.

288

00:21:55,240 --> 00:22:01,240

But they need to disable the cutoff switch so it can spin with the lid open.

289

00:22:01,240 --> 00:22:02,240

Go ahead.

290

00:22:02,240 --> 00:22:04,240

So is this the moment of truth?

291

00:22:05,240 --> 00:22:07,240

See, it doesn't even want to spin me around.

292

00:22:07,240 --> 00:22:09,240

Like, I can go like this.

293

00:22:09,240 --> 00:22:11,240

I can stop it.

294

00:22:11,240 --> 00:22:12,240

Alright.

295

00:22:12,240 --> 00:22:14,240

Okay, myth busted. Are we're done?

296

00:22:15,240 --> 00:22:16,240

No.

297

00:22:16,240 --> 00:22:20,240

I think the next thing is to get 50 pounds of clothes and see if we can even get this thing to run with that.

298

00:22:20,240 --> 00:22:22,240

Okay, let's load it up.

299

00:22:28,240 --> 00:22:29,240

Oh, yeah.

300

00:22:29,240 --> 00:22:30,240

Bring it on.

301

00:22:30,240 --> 00:22:32,240

It's not in the machine.

302

00:22:32,240 --> 00:22:37,240

Well, I guess this is why the guy started standing on it.

303

00:22:37,240 --> 00:22:41,240

But, I mean, we still have 10 pounds left.

304

00:22:41,240 --> 00:22:44,240

And I can't even make my feet into it.

305

00:22:44,240 --> 00:22:50,240

I mean, he's supposed to have sunk all the way to the bottom.

306

00:22:51,240 --> 00:22:52,240

Alright.

307

00:22:52,240 --> 00:22:55,240

Let's see if the machine will wash it.

308

00:22:56,240 --> 00:22:57,240

It wants to spin.

309

00:22:57,240 --> 00:22:59,240

It really does.

310

00:23:00,240 --> 00:23:01,240

It's not even spinning.

311

00:23:01,240 --> 00:23:02,240

It's not agitating.

312

00:23:02,240 --> 00:23:03,240

It's not doing anything.

313

00:23:03,240 --> 00:23:08,240

So, the only option open to us now is to pull all this out, start pulling the guts out,

314

00:23:08,240 --> 00:23:12,240

and just make this thing spin hell or high water, no matter what the hell is it.

315

00:23:13,240 --> 00:23:17,240

It's the moment Jamie and Adam have secretly been waiting for.

316

00:23:18,240 --> 00:23:21,240

We're talking about taking stuff apart.

317

00:23:22,240 --> 00:23:23,240

What is that?

318

00:23:23,240 --> 00:23:24,240

That can't be that necessary.

319

00:23:24,240 --> 00:23:25,240

I don't recognize it.

320

00:23:28,240 --> 00:23:30,240

This is the clutch, man.

321

00:23:30,240 --> 00:23:32,240

I think you're probably right.

322

00:23:32,240 --> 00:23:34,240

I don't see any belts right off the end.

323

00:23:34,240 --> 00:23:37,240

Why don't we run it through a light cycle right now?

324

00:23:37,240 --> 00:23:38,240

Okay.

325

00:23:38,240 --> 00:23:39,240

And observe it.

326

00:23:39,240 --> 00:23:40,240

It should be pretty cool.

327

00:23:40,240 --> 00:23:43,240

How many of you have ever seen a washing machine naked?

328

00:23:43,240 --> 00:23:49,240

To prevent accidents, like the one in the myth, the machine has an emergency clutch.

329

00:23:49,240 --> 00:23:52,240

It stops the wash cycle before the motor burns out.

330

00:23:52,240 --> 00:23:59,240

To make this machine spin buster, the crash test dummy, the clutch will have to be bypassed.

331

00:23:59,240 --> 00:24:00,240

Yeah.

332

00:24:01,240 --> 00:24:07,240

Well, we have done what we can to modify this machine to get rid of a clutch and get rid of,

333

00:24:07,240 --> 00:24:10,240

actually, every safety feature it possesses.

334

00:24:10,240 --> 00:24:16,240

Now we'll find out if it is in fact strong enough to do any damage once those have all been overridden.

335

00:24:16,240 --> 00:24:21,240

The washing machine for the hell is about to be unleashed upon the world.

336

00:24:23,240 --> 00:24:28,240

Before Buster and his dirty clothes go back in, a test run.

337

00:24:28,240 --> 00:24:29,240

It's spinning.

338

00:24:30,240 --> 00:24:32,240

It's going real fast.

339

00:24:33,240 --> 00:24:39,240

But despite 630 revolutions per minute, they can stop it with their bare hands.

340

00:24:46,240 --> 00:24:49,240

That was the thing that was going to break when we removed the clutch.

341

00:24:49,240 --> 00:24:51,240

That was probably that little plastic.

342

00:24:51,240 --> 00:24:52,240

That's that little piece of plastic.

343

00:24:52,240 --> 00:24:54,240

So the motor has, like, almost no torque at all.

344

00:24:54,240 --> 00:25:01,240

This so-called washing machine from hell turns out to be, well, just another washing machine.

345

00:25:01,240 --> 00:25:06,240

This is an example of one of the most powerful consumer-level motors you can get in a washing machine.

346

00:25:06,240 --> 00:25:11,240

This myth is totally busted for the third or fourth time today. I can't even remember which.

347

00:25:11,240 --> 00:25:20,240

The myth is busted. However, as is our way here on MythBusters, we are going to show what would happen if it did have enough power.

348

00:25:20,240 --> 00:25:26,240

So this once-humble, super-capacity washing machine will mutate even further.

349

00:25:27,240 --> 00:25:32,240

It's goodbye baby regular motor, Hello Big Daddy.

350

00:25:33,240 --> 00:25:41,240

They're upgrading to a motor from an electric car. A motor Jamie just happened to have lying around.

351

00:25:41,240 --> 00:25:43,240

These motors are 10 horsepower as well.

352

00:25:43,240 --> 00:25:46,240

They will literally pick this thing up and throw it.

353

00:25:46,240 --> 00:25:51,240

They will toss the dummy across the room or something like that. These propelled a full-sized electric car.

354

00:25:51,240 --> 00:25:54,240

So they're not something to be toyed with.

355

00:25:54,240 --> 00:25:56,240

Attaching the motor will be tricky.

356

00:26:01,240 --> 00:26:04,240

But Jamie has come up with a brilliant solution.

357

00:26:11,240 --> 00:26:15,240

Now the spin cycle is powered like a motorcycle.

358

00:26:15,240 --> 00:26:20,240

The car motor is connected to the main drive shaft by a motorcycle chain.

359

00:26:20,240 --> 00:26:22,240

There we go. Good.

360

00:26:22,240 --> 00:26:26,240

We have a very solid plan for making this thing go like hell.

361

00:26:26,240 --> 00:26:31,240

Jamie wheels in a special guest, the robot he built for a 7-up commercial.

362

00:26:31,240 --> 00:26:36,240

By plugging the washing machine into the robot's power source and speed controller,

363

00:26:36,240 --> 00:26:39,240

he'll be able to easily direct the washer's spin speed.

364

00:26:39,240 --> 00:26:48,240

What that gives us is a tremendous amount of power that we can control from relatively slow to as fast as it'll handle before it flies apart.

365

00:26:48,240 --> 00:26:51,240

This will fly apart at some point.

366

00:26:52,240 --> 00:26:59,240

The machine is not built for this kind of power and we'll probably find another weak link and another and another

367

00:26:59,240 --> 00:27:06,240

until we end up having no washing machine left and all some big massive motor and a drum that we've made from scratch

368

00:27:06,240 --> 00:27:08,240

just so we can swing the dummy around.

369

00:27:08,240 --> 00:27:14,240

Right now this thing doesn't really resemble a washing machine anymore so much as it does an electric car.

370

00:27:15,240 --> 00:27:18,240

Time to bring the Frankenwasher to life.

371

00:27:19,240 --> 00:27:21,240

This should be live so watch out there.

372

00:27:27,240 --> 00:27:29,240

Is it faster or slower than the spin cycle?

373

00:27:30,240 --> 00:27:33,240

Alex, pretty close to the spin cycle for me.

374

00:27:33,240 --> 00:27:36,240

It looks a little bit slower but it looks pretty close.

375

00:27:36,240 --> 00:27:41,240

Okay, I wasn't going all the way up yet so we've done it.

376

00:27:41,240 --> 00:27:42,240

We've got it.

377

00:27:42,240 --> 00:27:44,240

Okay, now I'll power it off.

378

00:27:44,240 --> 00:27:50,240

With the washing machine ready to go, it's time to tackle the task that can be delayed no longer.

379

00:27:55,240 --> 00:28:00,240

Does dog pee plus baking soda equal explosion?

380

00:28:00,240 --> 00:28:05,240

According to the amazing killer washing machine story, it does.

381

00:28:05,240 --> 00:28:08,240

Jamie and Adam need some willing donor dogs.

382

00:28:08,240 --> 00:28:10,240

Does the dain have to pee?

383

00:28:10,240 --> 00:28:11,240

He just went.

384

00:28:11,240 --> 00:28:16,240

Oh no, where's the likely tree? Any ideas where the most likely tree is?

385

00:28:16,240 --> 00:28:18,240

That garbage can right there.

386

00:28:18,240 --> 00:28:19,240

That garbage can?

387

00:28:19,240 --> 00:28:20,240

Does that stop him pee on the ground?

388

00:28:20,240 --> 00:28:22,240

Excellent, okay, alright.

389

00:28:22,240 --> 00:28:25,240

Jamie is sticking with the cup and stick method.

390

00:28:25,240 --> 00:28:30,240

While Adam is confident the foil pans will produce the gold.

391

00:28:30,240 --> 00:28:34,240

And sure enough, here's our first customer.

392

00:28:34,240 --> 00:28:39,240

Jamie, he was going to go in my pans. You messed it all up.

393

00:28:39,240 --> 00:28:42,240

Here, you take this camera and you go over there.

394

00:28:42,240 --> 00:28:44,240

You and I will stay right here.

395

00:28:44,240 --> 00:28:49,240

Then a dog loving friend of the Mythbusters tries a rear guard action.

396

00:28:52,240 --> 00:28:58,240

Meanwhile, out on the park's perimeter, a lone wolf is on patrol.

397

00:28:59,240 --> 00:29:02,240

Is your dog getting close or?

398

00:29:02,240 --> 00:29:03,240

No.

399

00:29:03,240 --> 00:29:05,240

He's not putting out.

400

00:29:05,240 --> 00:29:08,240

Then a bounty hunter nabs a sample.

401

00:29:08,240 --> 00:29:12,240

Wow, thank you. Good job.

402

00:29:12,240 --> 00:29:19,240

Seconds later, the persistent tailing by our panhandler brings up a speck of gold too.

403

00:29:19,240 --> 00:29:25,240

Here we go. Beautiful. Excellent.

404

00:29:25,240 --> 00:29:28,240

That's not much, but that's all that I need.

405

00:29:28,240 --> 00:29:30,240

I got it.

406

00:29:34,240 --> 00:29:40,240

At the workshop, Buster is hauled up for another traumatic test of endurance.

407

00:29:40,240 --> 00:29:46,240

Even for a crash test dummy, he's constantly outside his comfort zone.

408

00:29:46,240 --> 00:29:54,240

The Mythbusters have dropped him, crushed him, blasted him, and still...

409

00:29:54,240 --> 00:29:56,240

Buster survived.

410

00:29:56,240 --> 00:29:59,240

The dummy soldiers on till another day.

411

00:29:59,240 --> 00:30:09,240

But even lifting Buster's 180-pound frame into the washing machine is causing aggravation.

412

00:30:09,240 --> 00:30:10,240

Grab one of his feet.

413

00:30:10,240 --> 00:30:12,240

Tell me what you're doing.

414

00:30:12,240 --> 00:30:14,240

If you followed me, it would all happen equally.

415

00:30:14,240 --> 00:30:15,240

We've got a forklift here.

416

00:30:15,240 --> 00:30:18,240

His feet go up and in and then we lift him up.

417

00:30:18,240 --> 00:30:19,240

No.

418

00:30:19,240 --> 00:30:20,240

No.

419

00:30:20,240 --> 00:30:21,240

We've got a forklift.

420

00:30:21,240 --> 00:30:24,240

You're still complaining about how heavy he is.

421

00:30:24,240 --> 00:30:25,240

We've got a forklift set right here.

422

00:30:25,240 --> 00:30:26,240

Oh, come on. Come on.

423

00:30:26,240 --> 00:30:28,240

In two minutes we'll be done.

424

00:30:28,240 --> 00:30:30,240

He's swinging the butt all the way upside down.

425

00:30:30,240 --> 00:30:31,240

Like this.

426

00:30:31,240 --> 00:30:33,240

There's a camera out of there.

427

00:30:33,240 --> 00:30:34,240

Yeah.

428

00:30:34,240 --> 00:30:35,240

Yeah.

429

00:30:35,240 --> 00:30:36,240

Now we lift him.

430

00:30:36,240 --> 00:30:37,240

Oh, wait.

431

00:30:37,240 --> 00:30:39,240

He's copping a field, right?

432

00:30:39,240 --> 00:30:40,240

There we go.

433

00:30:40,240 --> 00:30:41,240

Buster!

434

00:30:45,240 --> 00:30:46,240

See?

435

00:30:46,240 --> 00:30:47,240

See?

436

00:30:47,240 --> 00:30:48,240

We're done.

437

00:30:50,240 --> 00:30:52,240

See, that was easy.

438

00:30:53,240 --> 00:30:58,240

Some of last season's fashions are packed around his legs.

439

00:30:58,240 --> 00:31:01,240

I told you no colors with the whites.

440

00:31:01,240 --> 00:31:02,240

All right.

441

00:31:02,240 --> 00:31:04,240

We've got the bleach up here.

442

00:31:04,240 --> 00:31:05,240

All right.

443

00:31:05,240 --> 00:31:06,240

Let's do it.

444

00:31:06,240 --> 00:31:07,240

Okay.

445

00:31:07,240 --> 00:31:08,240

I'm going to operate it from over here.

446

00:31:08,240 --> 00:31:10,240

It's safe distance.

447

00:31:13,240 --> 00:31:17,240

Jamie throws the switch on the Frankenwasher.

448

00:31:22,240 --> 00:31:23,240

Hahaha!

449

00:31:31,240 --> 00:31:35,240

I'm glad we were all suitably safe distance.

450

00:31:45,240 --> 00:31:46,240

That was a lot of fun.

451

00:31:46,240 --> 00:31:47,240

That was pretty cool.

452

00:31:47,240 --> 00:31:50,240

He was like a top or a Tasmanian devil.

453

00:31:50,240 --> 00:31:53,240

And now for the experiment's final phase.

454

00:31:53,240 --> 00:31:56,240

There's a baking soda dumped all over the place.

455

00:31:56,240 --> 00:32:01,240

I think that's exactly where a dog would pee if a dog came in and was startled by all this.

456

00:32:01,240 --> 00:32:03,240

Which it no doubt would be.

457

00:32:03,240 --> 00:32:06,240

So we have our carefully collected specimens.

458

00:32:06,240 --> 00:32:09,240

Shall we see if this causes a small explosion?

459

00:32:09,240 --> 00:32:11,240

Did someone say explosion?

460

00:32:11,240 --> 00:32:13,240

We'd better dress for the occasion.

461

00:32:13,240 --> 00:32:18,240

Basically now I'm about to pour the dogwee on the pile of baking soda,

462

00:32:18,240 --> 00:32:21,240

which if the myth is correct should cause a small explosion.

463

00:32:21,240 --> 00:32:25,240

Or if we're actually on Earth, we'll do absolutely bupeless.

464

00:32:27,240 --> 00:32:29,240

Burn all!

465

00:32:36,240 --> 00:32:37,240

Nothing.

466

00:32:37,240 --> 00:32:39,240

Nothing happened.

467

00:32:39,240 --> 00:32:41,240

Get me the Jack Russell Terrier urine.

468

00:32:41,240 --> 00:32:42,240

That ought to do it.

469

00:32:42,240 --> 00:32:44,240

They're hyper little creatures.

470

00:32:45,240 --> 00:32:48,240

Alright, everybody behind the Lexan shield.

471

00:32:48,240 --> 00:32:49,240

Are you ready?

472

00:32:50,240 --> 00:32:51,240

On set!

473

00:32:55,240 --> 00:32:56,240

What do you know?

474

00:32:56,240 --> 00:32:57,240

Nothing happened.

475

00:32:57,240 --> 00:32:58,240

No explosion at all.

476

00:32:58,240 --> 00:33:02,240

Well, Jimmy, that's actually a first for us.

477

00:33:02,240 --> 00:33:05,240

There's not one fact about this myth that's true.

478

00:33:05,240 --> 00:33:10,240

Yeah, you know, usually at least there's a tiny grain of truth somewhere in the stuff that we're dealing with.

479

00:33:10,240 --> 00:33:12,240

It has to start somewhere.

480

00:33:12,240 --> 00:33:15,240

But, you know, this one, it just isn't there.

481

00:33:15,240 --> 00:33:18,240

It's not practical, it's not reasonable, it doesn't make any sense.

482

00:33:18,240 --> 00:33:20,240

Myth decimated.

483

00:33:21,240 --> 00:33:23,240

One myth busted.

484

00:33:23,240 --> 00:33:26,240

But what about the unfinished chicken gun business?

485

00:33:26,240 --> 00:33:28,240

Three, two...

486

00:33:28,240 --> 00:33:33,240

You'll recall that while testing which chicken hits hardest, frozen or thawed,

487

00:33:33,240 --> 00:33:39,240

the guys discovered that their light airplane windshields were not rated for bird strikes.

488

00:33:39,240 --> 00:33:44,240

As a result, all their flying chickens smashed every windshield.

489

00:33:44,240 --> 00:33:47,240

This chicken went through it like butter.

490

00:33:47,240 --> 00:33:48,240

Whoa.

491

00:33:48,240 --> 00:33:51,240

So this is the experiment take two.

492

00:33:52,240 --> 00:33:57,240

To finally lay this myth to rest, they have rethought their methodology.

493

00:33:57,240 --> 00:33:58,240

No more windshields.

494

00:33:58,240 --> 00:34:01,240

This is purely a moment of impact test.

495

00:34:01,240 --> 00:34:05,240

The chickens will be fired at a solid steel plate.

496

00:34:05,240 --> 00:34:11,240

By using the high-speed camera to measure the time between the start and finish of impact,

497

00:34:11,240 --> 00:34:16,240

they hope to see a difference between frozen and thawed chickens.

498

00:34:20,240 --> 00:34:25,240

The three frozen chickens clock more than 140 miles an hour.

499

00:34:25,240 --> 00:34:29,240

The impact time, 7 1-thousandths of a second.

500

00:34:29,240 --> 00:34:32,240

It automatically deboned the chicken, didn't it?

501

00:34:32,240 --> 00:34:34,240

Three, two, one.

502

00:34:36,240 --> 00:34:45,240

Impact times for the three thawed chickens showed a perfect match with the frozen poultry.

503

00:34:45,240 --> 00:34:48,240

Seven one-thousandths of a second.

504

00:34:48,240 --> 00:34:49,240

Here we go.

505

00:34:49,240 --> 00:34:51,240

One point of impact.

506

00:34:51,240 --> 00:34:57,240

Two, three, four, five, six, seven.

507

00:34:57,240 --> 00:35:00,240

And then now it's starting to move back again.

508

00:35:00,240 --> 00:35:02,240

It's given all of its impact in that amount of time.

509

00:35:03,240 --> 00:35:08,240

The results from the high-speed camera seem to be fairly convincing.

510

00:35:08,240 --> 00:35:11,240

You know that adage that it's not the falling that kills you, it's the stopping?

511

00:35:11,240 --> 00:35:14,240

The stopping is where the force gets imparted.

512

00:35:14,240 --> 00:35:18,240

So both the frozen and the thawed chicken have the same mass.

513

00:35:18,240 --> 00:35:21,240

They have effectively the same speed.

514

00:35:21,240 --> 00:35:27,240

So the only difference between the two is going to be how much time they take to impart their energy to the plate.

515

00:35:28,240 --> 00:35:33,240

And on the high-speed camera we showed that each of them exerted all their energy in seven milliseconds.

516

00:35:33,240 --> 00:35:35,240

Almost exactly.

517

00:35:35,240 --> 00:35:37,240

Basically, there was no difference.

518

00:35:37,240 --> 00:35:39,240

So does that mean the myth is busted?

519

00:35:39,240 --> 00:35:43,240

At these speeds, frozen or thawed chicken myth busted no difference at all.

520

00:35:48,240 --> 00:35:52,240

Now that we're done testing, we get to have some fun.

521

00:35:52,240 --> 00:35:55,240

That'd be pumpkin chunking kind of fun.

522

00:35:55,240 --> 00:35:57,240

Dude, look at this.

523

00:35:57,240 --> 00:36:01,240

It's what you get when the pumpkin chunking champion buys your pumpkin for you.

524

00:36:01,240 --> 00:36:03,240

It's perfect.

525

00:36:04,240 --> 00:36:11,240

With the day almost done, what better way to finish than with a few pumpkin chunking rounds of

their own?

526

00:36:11,240 --> 00:36:13,240

What?

527

00:36:15,240 --> 00:36:17,240

Was there anything in its way?

528

00:36:17,240 --> 00:36:20,240

I suspect that the pumpkin went through here.

529

00:36:21,240 --> 00:36:24,240

Oh, here we go.

530

00:36:25,240 --> 00:36:27,240

Tammy, can I ride it?

531

00:36:27,240 --> 00:36:31,240

Three, two, one.

532

00:36:40,240 --> 00:36:42,240

That was so cool.

533

00:36:42,240 --> 00:36:45,240

You feel a little tingle between your legs when that sucker went out.

534

00:36:45,240 --> 00:36:47,240

I do.

535

00:36:47,240 --> 00:36:50,240

It's going to be hard to top that.

536

00:36:56,240 --> 00:37:00,240

The myth busters are about to probe the mysteries of the deep

537

00:37:00,240 --> 00:37:03,240

in the aquarium at California's Monterey Bay,

538

00:37:03,240 --> 00:37:06,240

one of the world's largest marine sanctuaries.

539

00:37:06,240 --> 00:37:10,240

This odd story is one of the more enduring legends,

540

00:37:10,240 --> 00:37:13,240

with its origins way back in medieval times.

541

00:37:13,240 --> 00:37:16,240

No, really, honey, those are octopus hickeys.

542

00:37:16,240 --> 00:37:29,240

Well, this one might seem a little silly at first, but I think we're going to have some fun with this.

543

00:37:29,240 --> 00:37:33,240

This woman admitted to the hospital with abdominal pains,

544

00:37:33,240 --> 00:37:37,240

and the doctors, upon examining her, thought that she was pregnant,

545

00:37:37,240 --> 00:37:43,240

so they did an emergency cesarean on her and pulled what turned out to be a live octopus from her belly.

546

00:37:43,240 --> 00:37:45,240

This is the myth.

547

00:37:45,240 --> 00:37:51,240

It seems that perhaps six months before, she was diving and ingested an octopus's egg while diving,

548

00:37:51,240 --> 00:37:55,240

and it had grown to full size in her stomach.

549

00:37:55,240 --> 00:38:00,240

I think partially this story is playing upon young girls' fears of pregnancy

550

00:38:00,240 --> 00:38:04,240

and their mother's fears that the young girls could become pregnant.

551

00:38:04,240 --> 00:38:09,240

I mean, it's almost the same as the story that you can get pregnant by going in the swimming pool

552

00:38:09,240 --> 00:38:14,240

if there happens to be sperm floating around in that pool despite the chlorine.

553

00:38:14,240 --> 00:38:21,240

To ground this myth in reality, Adam and Jamie consult the experts at Monterey Bay Aquarium.

554

00:38:21,240 --> 00:38:25,240

We have shrimp and squid.

555

00:38:25,240 --> 00:38:27,240

That's exactly what I had for dinner last night.

556

00:38:27,240 --> 00:38:29,240

Sauteed and a little butter?

557

00:38:29,240 --> 00:38:30,240

Yeah, exactly.

558

00:38:30,240 --> 00:38:35,240

Feeding the giant Pacific octopus is Julia Marietini's job,

559

00:38:35,240 --> 00:38:39,240

but today it seems Adam is on the menu.

560

00:38:39,240 --> 00:38:41,240

You taste different.

561

00:38:41,240 --> 00:38:43,240

Oh, wow.

562

00:38:43,240 --> 00:38:48,240

Oh, you must taste really good because he's really interested in you.

563

00:38:48,240 --> 00:38:55,240

Oh, that is so cool.

564

00:38:55,240 --> 00:38:58,240

Yeah, he's very excited.

565

00:38:58,240 --> 00:39:03,240

While Adam's making a new friend, Jamie tackles the big questions.

566

00:39:03,240 --> 00:39:10,240

Julia, what kind of conditions do the eggs require to be successful at, you know, bearing little octopuses?

567

00:39:10,240 --> 00:39:14,240

Well, they really do require the attention of the mother.

568

00:39:14,240 --> 00:39:18,240

She will blow jets of water on them to make sure that they're aerated.

569

00:39:18,240 --> 00:39:19,240

She'll clean them.

570

00:39:19,240 --> 00:39:23,240

They also require the correct temperature, the correct salinity,

571

00:39:23,240 --> 00:39:26,240

and if all goes well, then they'll hatch out.

572

00:39:26,240 --> 00:39:29,240

For giant octopus, it's about six months later.

573

00:39:29,240 --> 00:39:33,240

Is it possible, let's say, if an octopus egg had just detached and was floating free,

574

00:39:33,240 --> 00:39:36,240

could a diver actually swim in and swallow one of these things?

575

00:39:36,240 --> 00:39:39,240

That's the only part of the story that could possibly happen.

576

00:39:39,240 --> 00:39:44,240

By some fluke, the octopus eggs are small enough that maybe a person could swallow them,

577

00:39:44,240 --> 00:39:46,240

but there's no way they would hatch out.

578

00:39:46,240 --> 00:39:49,240

The conditions in the stomach would not be amenable to their hatching?

579

00:39:49,240 --> 00:39:50,240

Not at all.

580

00:39:50,240 --> 00:39:54,240

The octopus myth is already looking pretty shaky.

581

00:39:54,240 --> 00:39:57,240

The mythbusters must now take another tag.

582

00:39:57,240 --> 00:40:03,240

You know, Jamie, talking to Julia, it's just, it's really obvious to me that the whole idea of octopus pregnancy is just ridiculous.

583

00:40:03,240 --> 00:40:08,240

I mean, an octopus egg can't even survive in open water without constant tending from the mother.

584

00:40:08,240 --> 00:40:11,240

It's definitely not going to survive in someone's stomach.

585

00:40:11,240 --> 00:40:20,240

Yeah, but you know, there are myths around other creatures like frogs, lizards, snakes, even nutes, you know, that this can happen with.

586

00:40:20,240 --> 00:40:23,240

The octopus is perhaps the most recent incarnation.

587

00:40:23,240 --> 00:40:29,240

Other recent incarnations of this narrative are where a boy is getting water out of a garden hose

588

00:40:29,240 --> 00:40:33,240

and he swallows frog eggs, like the four nutes, toads.

589

00:40:33,240 --> 00:40:39,240

Going back to medieval times, you have serpents and snakes, perhaps the most wicked, seeming creature.

590

00:40:39,240 --> 00:40:43,240

Many stories were fables created to scare children.

591

00:40:43,240 --> 00:40:47,240

Others were chilling examples of what would happen to sinners.

592

00:40:47,240 --> 00:40:55,240

Sometimes the sufferers would regurgitate the unwelcome visitor, but usually the episode would end badly.

593

00:40:55,240 --> 00:41:00,240

So it's something taking you over, something insidious, something making you bad.

594

00:41:00,240 --> 00:41:05,240

And I'm sure in some versions of the narrative you did something wrong to let it in.

595

00:41:05,240 --> 00:41:12,240

So is it possible for foreign organisms to survive inside the human body?

596

00:41:12,240 --> 00:41:23,240

We can replicate a stomach or several of them and put, you know, stuff that eggs would run into, like acids and maybe salinity, temperature factors.

597

00:41:23,240 --> 00:41:28,240

And we'll see which ones survive and which ones don't and which environments they work in.

598

00:41:28,240 --> 00:41:29,240

Yeah.

599

00:41:29,240 --> 00:41:35,240

Busting the pregnancy story means a myth busters trip to the lab supply store.

600

00:41:35,240 --> 00:41:38,240

Or should that be candy store?

601

00:41:39,240 --> 00:41:41,240

I love this stuff.

602

00:41:41,240 --> 00:41:43,240

One of everything.

603

00:41:44,240 --> 00:41:48,240

I've never seen continuous pipe cleaner before. I didn't even know it existed.

604

00:41:48,240 --> 00:41:50,240

Which is smoother.

605

00:41:51,240 --> 00:41:53,240

That's smoother.

606

00:41:55,240 --> 00:41:57,240

You think we need to get some beard covers here?

607

00:41:57,240 --> 00:41:59,240

What you have isn't really quite a beard though.

608

00:41:59,240 --> 00:42:00,240

I'm not sure what it is.

609

00:42:00,240 --> 00:42:02,240

It's like an accessory tuft.

610

00:42:03,240 --> 00:42:06,240

Ever wondered what's really inside Adam's head?

611

00:42:06,240 --> 00:42:08,240

Now somebody wave from the other side.

612

00:42:08,240 --> 00:42:10,240

Oh, that's cool.

613

00:42:11,240 --> 00:42:13,240

When do you ever get a chance?

614

00:42:14,240 --> 00:42:18,240

I'm a little embarrassed. That was kind of a personal experience.

615

00:42:18,240 --> 00:42:19,240

Thanks guys.

616

00:42:19,240 --> 00:42:21,240

Thank you guys.

617

00:42:21,240 --> 00:42:24,240

Well, Adam, do we have everything we need here for this experiment?

618

00:42:24,240 --> 00:42:26,240

I think we do.

619

00:42:26,240 --> 00:42:31,240

We've got the acid, we've got the salt, we've got the voltmeter for testing salinity, thermometer,

620

00:42:31,240 --> 00:42:36,240

and perhaps most importantly, in fact, without this we couldn't do the experiment,

621

00:42:36,240 --> 00:42:38,240

we have our test subjects here.

622

00:42:38,240 --> 00:42:40,240

Alright, frog eggs.

623

00:42:40,240 --> 00:42:46,240

With the octopus angle ruled out, they have opted for frog's eggs and tadpoles.

624

00:42:46,240 --> 00:42:52,240

Small and common enough in nature to be swallowed and they don't need constant parental care.

625

00:42:52,240 --> 00:42:54,240

Now those puppies came all the way from Florida.

626

00:42:54,240 --> 00:42:57,240

They have a lot of frog farms down there, I understand.

627

00:43:01,240 --> 00:43:04,240

Three flasks represent different conditions in the stomach.

628

00:43:04,240 --> 00:43:06,240

One for body temperature.

629

00:43:06,240 --> 00:43:08,240

Water heated to 98.6.

630

00:43:08,240 --> 00:43:10,240

One of salt water.

631

00:43:10,240 --> 00:43:12,240

The same salinity as the human body.

632

00:43:12,240 --> 00:43:18,240

A third with a pH of 2 contains acid, imitating human stomach juices.

633

00:43:18,240 --> 00:43:22,240

A fourth flask is the control sample.

634

00:43:22,240 --> 00:43:25,240

Alright, so we've got some tadpoles and some eggs in there.

635

00:43:25,240 --> 00:43:27,240

What's the other two of each?

636

00:43:27,240 --> 00:43:30,240

Okay, you've got the little squirt bulb.

637

00:43:30,240 --> 00:43:32,240

I do, I do. Here we go.

638

00:43:32,240 --> 00:43:38,240

The control sample of eggs and tadpoles will swim in a flask of aerated water,

639

00:43:38,240 --> 00:43:42,240

the ideal environment for tadpoles survival.

640

00:43:42,240 --> 00:43:44,240

You ready for the acidity?

641

00:43:44,240 --> 00:43:45,240

Okay.

642

00:43:45,240 --> 00:43:47,240

Okay, which one is that? Acid. This one here.

643

00:43:47,240 --> 00:43:53,240

Hydrochloric acid actually secretes in the stomach and its powerful stuff.

644

00:43:53,240 --> 00:43:55,240

Extremely corrosive.

645

00:43:55,240 --> 00:43:57,240

A single drop can eat through wood.

646

00:43:57,240 --> 00:44:03,240

Jamie and Adam need to dilute their pure hydrochloric to match stomach acidity.

647

00:44:03,240 --> 00:44:05,240

Yeah, real close.

648

00:44:05,240 --> 00:44:06,240

Alright.

649

00:44:06,240 --> 00:44:12,240

The pH scale runs from 0 to 14.

650

00:44:12,240 --> 00:44:16,240

Pure water is neutral with a pH of 7.

651

00:44:16,240 --> 00:44:21,240

Anything below 7 is acid and anything above is alkaline.

652

00:44:21,240 --> 00:44:27,240

Common examples range from battery acid at 1, the stomach at 2,

653

00:44:27,240 --> 00:44:33,240

an apple scores a pH of 4 and milk of magnesium a mile 10.5.

654

00:44:33,240 --> 00:44:36,240

I don't see him doing so hot.

655

00:44:36,240 --> 00:44:40,240

He's definitely more laconic than his racetrack friends here, you know.

656

00:44:40,240 --> 00:44:44,240

He's just going to sit there on the top.

657

00:44:44,240 --> 00:44:47,240

Next, the body temperature test.

658

00:44:47,240 --> 00:44:51,240

They heat water to 98.6 degrees Fahrenheit.

659

00:44:51,240 --> 00:44:56,240

Okay, here we go.

660

00:44:56,240 --> 00:45:01,240

He's not, you know, doing a racetrack thing like his brethren down here in the Pyrex.

661

00:45:02,240 --> 00:45:08,240

For the next phase of the experiment, Adam's making a personal contribution.

662

00:45:08,240 --> 00:45:11,240

Here we go.

663

00:45:11,240 --> 00:45:16,240

What Adam's doing is measuring the electrical conductivity of the saliva.

664

00:45:16,240 --> 00:45:23,240

Now, we're going to try and replicate that conductivity in water by adding salt to it.

665

00:45:23,240 --> 00:45:27,240

Electrical resistance is the best way to determine salinity

666

00:45:27,240 --> 00:45:31,240

because dissolved salts are strong conductors.

667

00:45:31,240 --> 00:45:36,240

In Adam's mouth, the resistance is low, measuring around 4 kilo ohms.

668

00:45:36,240 --> 00:45:38,240

There's one.

669

00:45:38,240 --> 00:45:41,240

He's doing pretty good.

670

00:45:41,240 --> 00:45:43,240

No, he's actually doing fine.

671

00:45:43,240 --> 00:45:45,240

There's another.

672

00:45:48,240 --> 00:45:52,240

Salinity, they both seem to be doing okay, so we should leave this overnight.

673

00:45:52,240 --> 00:45:54,240

See how it does.

674

00:45:54,240 --> 00:45:55,240

Yeah.

675

00:45:55,240 --> 00:45:58,240

Tadpoles might find it tough going in the stomach,

676

00:45:58,240 --> 00:46:02,240

but are there any life forms tailored to the conditions?

677

00:46:02,240 --> 00:46:05,240

Here, I've got some worms we'll set for you.

678

00:46:05,240 --> 00:46:09,240

If anyone knows about creatures surviving in the human stomach,

679

00:46:09,240 --> 00:46:14,240

it's Dr. Jim McCarrow from the University of California at San Francisco.

680

00:46:14,240 --> 00:46:18,240

As a professor of pathology, he's heard all the stories.

681

00:46:18,240 --> 00:46:24,240

Why would it not be possible for a thing like an octopus or a snake to grow and develop in your body?

682

00:46:24,240 --> 00:46:30,240

The acid in your stomach is there to dissolve meat and other food materials,

683

00:46:30,240 --> 00:46:35,240

and any type of living organism that doesn't have a way to protect itself against that

684

00:46:35,240 --> 00:46:38,240

is going to just wind up as digested food.

685

00:46:38,240 --> 00:46:43,240

So are there creatures that do have that type of protection that can make it through the acid in the stomach?

686

00:46:43,240 --> 00:46:44,240

Oh, most certainly.

687

00:46:44,240 --> 00:46:50,240

Tapeworms, for example, which are a type of parasite that you get from eating undercooked pork or beef.

688

00:46:50,240 --> 00:46:57,240

Also, certain types of roundworms, where in this case it's the egg of the worm that makes it through,

689

00:46:57,240 --> 00:46:59,240

and then hatches in your intestine.

690

00:46:59,240 --> 00:47:03,240

And in both of those cases, the reason that they can actually make it through the gastric acid

691

00:47:03,240 --> 00:47:06,240

is that they're coated with a very hard shell.

692

00:47:06,240 --> 00:47:10,240

It's called a cuticle, and it's about as hard as your fingernail.

693

00:47:10,240 --> 00:47:15,240

So by having this, basically this armor on its surface,

694

00:47:15,240 --> 00:47:18,240

these worms can make it through the gastric acid,

695

00:47:18,240 --> 00:47:23,240

get into the small intestine, and basically live in paradise because they have as much food as they want to eat.

696

00:47:23,240 --> 00:47:27,240

In the United States, between 1900 and 1920,

697

00:47:27,240 --> 00:47:31,240

tapeworms were being advertised for weight loss.

698

00:47:31,240 --> 00:47:35,240

Each segment of the worm was sold individually with claims like,

699

00:47:35,240 --> 00:47:39,240

no ill effects and easily swallowed.

700

00:47:39,240 --> 00:47:44,240

Today, worldwide, about a billion people are infected with parasitic worms,

701

00:47:44,240 --> 00:47:47,240

particularly in tropical regions.

702

00:47:47,240 --> 00:47:50,240

You know, with things this big and this prevalent,

703

00:47:50,240 --> 00:47:54,240

it's not surprising that a lot of stories probably evolved

704

00:47:54,240 --> 00:47:57,240

because people were seeing these things in their environment all the time,

705

00:47:57,240 --> 00:48:01,240

and they probably attained mythical proportions.

706

00:48:01,240 --> 00:48:05,240

When you look at the leap to an octopus, doesn't seem like that great leap.

707

00:48:05,240 --> 00:48:09,240

Sure, I mean, imagine these all bunched together.

708

00:48:09,240 --> 00:48:13,240

It would be like a medusa head, and they'd often be passed by a child that way,

709

00:48:13,240 --> 00:48:19,240

so you actually would see something that looks like a medusa head lying in the crib.

710

00:48:19,240 --> 00:48:22,240

That must be it. What do you think?

711

00:48:22,240 --> 00:48:26,240

I think no pasta for lunch.

712

00:48:26,240 --> 00:48:29,240

Alright, Jamie, it's been three days. How are our frogs doing?

713

00:48:29,240 --> 00:48:32,240

Well, most of them are still alive.

714

00:48:32,240 --> 00:48:34,240

You know, the control group is great.

715

00:48:34,240 --> 00:48:36,240

They're happy little tadpoles swimming way in there.

716

00:48:36,240 --> 00:48:38,240

They look even bigger than they were the couple days ago.

717

00:48:38,240 --> 00:48:44,240

I believe they have grown a little bit, and the salt water seems to be fine with them.

718

00:48:44,240 --> 00:48:48,240

They're doing just as well as a control group, actually.

719

00:48:48,240 --> 00:48:49,240

What were the killers?

720

00:48:49,240 --> 00:48:52,240

The real killers were the acid and the high temperature.

721

00:48:52,240 --> 00:48:54,240

Well, that killed them each in like 10 or 15 minutes, didn't it?

722

00:48:54,240 --> 00:48:56,240

Pretty much, yeah.

723

00:48:59,240 --> 00:49:04,240

Well, Jamie, I think we've done everything we can to show that octopus pregnancy is absolutely ridiculous.

724

00:49:04,240 --> 00:49:06,240

We've busted it wide open.

725

00:49:06,240 --> 00:49:08,240

And the octopus really liked your hand.

726

00:49:08,240 --> 00:49:10,240

I think I'm actually in love.