

1

00:00:00,000 --> 00:00:06,520

Do not try any of the experiments you are about to see at home.

2

00:00:06,520 --> 00:00:07,520

You heard him.

3

00:00:07,520 --> 00:00:11,800

Don't do it.

4

00:00:11,800 --> 00:00:17,520

On this bone breaking episode of Mythbusters, I'm felt down I was so excited, can a pile

5

00:00:17,520 --> 00:00:21,720

of acid pills really help blast a man out of jail?

6

00:00:21,720 --> 00:00:24,520

Person can do plenty of things to a guy.

7

00:00:24,520 --> 00:00:30,280

The Fizz packs a puncher, but is it enough to crack solid concrete?

8

00:00:30,280 --> 00:00:35,840

This is the big one.

9

00:00:35,840 --> 00:00:40,240

Then we turn out the lights on the struggle to smuggle.

10

00:00:40,240 --> 00:00:42,040

Let's go blind some drivers.

11

00:00:42,040 --> 00:00:49,120

Can an outlaw cash in by crashing the border at night without headlights?

12

00:00:49,120 --> 00:00:50,120

That sucked.

13

00:00:50,120 --> 00:00:55,400

And assuming it works, would anyone live to tell the tale?

14

00:00:55,400 --> 00:01:01,440

Who are the Mythbusters?

15

00:01:01,440 --> 00:01:04,960

Adam Savage, I feel perfectly normal, and Jamie Heineman.

16

00:01:04,960 --> 00:01:06,320

Pain is your friend.

17

00:01:06,320 --> 00:01:11,640

Between them more than 30 years of special effects experience.

18

00:01:11,640 --> 00:01:16,960

Joining them, Grant Imahara, Kerry Byron.

19

00:01:16,960 --> 00:01:19,920

And I'm starting to get the idea that this shouldn't be done inside.

20

00:01:20,120 --> 00:01:22,480

Sorry, Bellachy.

21

00:01:22,480 --> 00:01:24,560

And featuring Jesse Cones.

22

00:01:24,560 --> 00:01:25,840

That was awesome.

23

00:01:25,840 --> 00:01:30,280

They don't just tell the myths.

24

00:01:30,280 --> 00:01:49,560

They put them to the test.

25

00:01:49,560 --> 00:01:56,080

You mean besides cure hangover?

26

00:01:56,080 --> 00:01:57,080

Yeah.

27

00:01:57,080 --> 00:01:58,080

I don't know.

28

00:01:58,080 --> 00:01:59,080

I'll bite.

29

00:01:59,080 --> 00:02:00,080

What can you do?

30

00:02:00,080 --> 00:02:01,760

You can break out of jail.

31

00:02:01,760 --> 00:02:02,760

No.

32

00:02:02,760 --> 00:02:03,760

Yeah.

33

00:02:03,760 --> 00:02:09,240

The myth is that an industrious inmate lined the inside of his cell wall with sheet plastic,

34

00:02:09,240 --> 00:02:13,560

and he had collected something like 10 years worth of antacid tablets which he exposed

35

00:02:13,560 --> 00:02:20,040

to water, creating enough CO₂ to pressurize the cell and break the cell walls and he escaped.

36

00:02:20,040 --> 00:02:22,040

I love it.

37

00:02:22,040 --> 00:02:23,360

What's not to love?

38

00:02:23,360 --> 00:02:25,560

For instant freedom, just add water.

39

00:02:25,560 --> 00:02:31,480

But can the massive amount of CO₂ produced from a pile of bubbling tablets really budge

40

00:02:31,480 --> 00:02:32,480

Britson mortar?

41

00:02:32,480 --> 00:02:38,080

We'll need to capture every ounce of energy from a giant chemical belch.

42

00:02:38,080 --> 00:02:41,840

Well, I reckon the best place to start is to figure out what kind of pressures we can

43

00:02:41,840 --> 00:02:43,960

get out of antacid tablets here in the shop.

44

00:02:43,960 --> 00:02:44,960

I think you're right.

45

00:02:44,960 --> 00:02:48,600

Maybe we should start out on a small scale and see what we're dealing with with the

46

00:02:48,600 --> 00:02:51,000

pressures, the physics, the chemistry, that kind of thing.

47

00:02:51,000 --> 00:02:59,080

Yeah, we're definitely going to need all of that information before we go full scale.

48

00:02:59,080 --> 00:03:04,000

Before anyone breaks out the beakers, they'll need to start building a full scale cell which

49

00:03:04,000 --> 00:03:06,880

should be as tough as its tenant.

50

00:03:06,880 --> 00:03:10,960

While normally people go to great lengths to avoid a prison cell, we've actually had

51

00:03:10,960 --> 00:03:14,720

to go to great lengths to get up close and cozy with one.

52

00:03:14,720 --> 00:03:18,720

In fact, it's far and away the sturdiest shack we've ever built.

53

00:03:18,720 --> 00:03:25,160

It's a cozy 10 feet long by 7 feet wide by 6 and a half feet high, maximum security

54

00:03:25,160 --> 00:03:26,160

cell.

55

00:03:26,160 --> 00:03:28,560

It's got a lot better techniques than I do.

56

00:03:28,560 --> 00:03:29,560

That's pretty clear.

57

00:03:29,560 --> 00:03:33,160

They're all like throwing it and stuff and kind of impressed.

58

00:03:33,160 --> 00:03:35,680

It is pretty to watch.

59

00:03:35,680 --> 00:03:39,760

And hey, these guys are fast.

60

00:03:39,760 --> 00:03:40,760

This is a professional help thing.

61

00:03:40,760 --> 00:03:42,440

It's pretty good.

62

00:03:42,440 --> 00:03:44,640

This morning we had a yellow rectangle on the floor.

63

00:03:44,640 --> 00:03:47,600

This afternoon, most of our prison cell.

64

00:03:47,600 --> 00:03:50,640

But the day's only half done for Adam and Jamie.

65

00:03:50,640 --> 00:03:56,840

It's back to M5 to find out how much potentially explosive pressure they can hope to wrangle

66

00:03:56,840 --> 00:03:59,520

from the humble antacid tablet.

67

00:03:59,520 --> 00:04:04,760

Jamie starts with a volumetric test to see how much gas is produced by measuring the

68

00:04:04,760 --> 00:04:08,200

water it displaces.

69

00:04:08,200 --> 00:04:13,360

So you release the antacid into here and expands.

70

00:04:13,360 --> 00:04:17,920

That expansion of gas pushes water out of this one into here and whatever volume we get

71

00:04:17,920 --> 00:04:20,960

in here is how much gas was produced by the antacid.

72

00:04:20,960 --> 00:04:21,960

You agree?

73

00:04:21,960 --> 00:04:22,960

I love it.

74

00:04:22,960 --> 00:04:23,960

Let's do it.

75

00:04:23,960 --> 00:04:26,800

There's more than enough water to make this work.

76

00:04:26,800 --> 00:04:31,720

Jamie pulls the quick release magnet and they're off and bubbling.

77

00:04:31,720 --> 00:04:32,720

Look at that.

78

00:04:32,720 --> 00:04:33,720

It works.

79

00:04:33,720 --> 00:04:37,360

And they've got a result in seconds.

80

00:04:37,360 --> 00:04:41,880

So it looks like one pill produces about 75 milliliters of gas.

81

00:04:41,880 --> 00:04:43,440

Yeah, about 80.

82

00:04:43,440 --> 00:04:49,840

Well now my question would be, do two pills displace 160 milliliters?

83

00:04:49,840 --> 00:04:53,160

Does it scale perfectly linearly?

84

00:04:53,160 --> 00:04:59,160

Double the gas from double the pills would make sense, but science is rarely so simple.

85

00:04:59,160 --> 00:05:00,160

Wow.

86

00:05:00,160 --> 00:05:06,000

The volume of gas produced scoots past the 160 mark and continues to climb.

87

00:05:06,760 --> 00:05:09,960

This one's looking like 275.

88

00:05:09,960 --> 00:05:16,200

To see if the trend continues, the next logical step is to try four pills.

89

00:05:16,200 --> 00:05:21,480

Double the two pill result would be 550 milliliters of displaced water.

90

00:05:21,480 --> 00:05:24,880

And before long, Jamie's wishing he'd brought a bigger beaker.

91

00:05:24,880 --> 00:05:28,640

It's actually going more than double.

92

00:05:28,640 --> 00:05:33,760

It's clear there's CO₂ aplenty, but the myth depends specifically on the pressure the gas

93

00:05:33,760 --> 00:05:35,000

generates.

94

00:05:35,000 --> 00:05:36,960

So that's what they'll measure next.

95

00:05:36,960 --> 00:05:40,080

Testing pressure in three, two, one.

96

00:05:40,080 --> 00:05:44,120

Look at that.

97

00:05:44,120 --> 00:05:48,240

They start over with one tablet and again the results come quickly.

98

00:05:48,240 --> 00:05:51,440

What are we getting there?

99

00:05:51,440 --> 00:05:53,000

1.9, 2 psi?

100

00:05:53,000 --> 00:05:56,480

Yeah, it's about 1.9, just a hair under two.

101

00:05:56,480 --> 00:06:02,240

Now for a mini moment of truth to see if pressure, like volume, increases exponentially.

102

00:06:02,240 --> 00:06:03,240

All right.

103

00:06:03,240 --> 00:06:07,200

Two tablet pressure test.

104

00:06:07,200 --> 00:06:12,280

If the pressure just doubles, the two tabs will fizzle at four psi.

105

00:06:12,280 --> 00:06:13,400

Both pills are still going.

106

00:06:13,400 --> 00:06:14,880

Both tablets are still bubbling.

107

00:06:14,880 --> 00:06:16,280

Two psi is roundly past.

108

00:06:16,280 --> 00:06:18,160

Two and a half psi is on its way.

109

00:06:18,160 --> 00:06:22,280

Two and a half psi, handily passed by the both tablets and now rounding up on three

110

00:06:22,280 --> 00:06:23,280

psi.

111

00:06:23,280 --> 00:06:25,080

Three psi, will we get three and a half psi?

112

00:06:25,080 --> 00:06:26,080

Three and a half.

113

00:06:26,080 --> 00:06:27,080

Anyone for three and a half?

114

00:06:27,080 --> 00:06:29,920

Yes, both pills seem to want to go to three and a half psi on our way to four.

115

00:06:29,920 --> 00:06:31,480

Four psi, four psi.

116

00:06:31,680 --> 00:06:34,080

Go, go, yes.

117

00:06:34,080 --> 00:06:39,400

Passing four psi, the expected linear expansion rate of the two tablets and it seems that

118

00:06:39,400 --> 00:06:42,960

their expansion rate is in fact exponential.

119

00:06:42,960 --> 00:06:47,960

In practical terms, that means they might be able to crack the jail cell with relatively

120

00:06:47,960 --> 00:06:49,520

few antacid tablets.

121

00:06:49,520 --> 00:06:52,200

Shall we go up to three tablets?

122

00:06:52,200 --> 00:06:53,200

Let's.

123

00:06:53,200 --> 00:06:56,480

I got to say when we started this out, I didn't have high hopes that there'd be a lot of pressure

124

00:06:56,480 --> 00:06:59,040

being generated by antacid tablets.

125

00:06:59,080 --> 00:07:02,800

But so far what we're finding is actually kind of thrilling.

126

00:07:02,800 --> 00:07:04,520

Look at those puppies go.

127

00:07:04,520 --> 00:07:05,800

Oh yeah.

128

00:07:05,800 --> 00:07:10,680

We're finding that if you double the amount of antacid tablets, you get more than double

129

00:07:10,680 --> 00:07:11,680

the pressure.

130

00:07:11,680 --> 00:07:12,680

8.2, okay?

131

00:07:12,680 --> 00:07:14,680

I'm calling it, I'm going to release pressure, okay?

132

00:07:14,680 --> 00:07:15,680

Okay.

133

00:07:15,680 --> 00:07:18,120

It seems to increase exponentially.

134

00:07:18,120 --> 00:07:21,520

This could be a gargantuan amount of pressure we can create in this prison cell.

135

00:07:21,520 --> 00:07:23,440

I'm pretty excited.

136

00:07:23,560 --> 00:07:29,160

To make doubly sure, Jamie wants to run a last set of tests in a bigger container.

137

00:07:29,160 --> 00:07:32,960

I feel like I'm diffusing a nuclear bomb.

138

00:07:32,960 --> 00:07:36,760

Alright, replace the core very carefully.

139

00:07:36,760 --> 00:07:42,840

Don't let the two substances react with each other.

140

00:07:42,840 --> 00:07:47,880

They christen the chamber with 20 antacid pills, hoping it's tough enough to handle

141

00:07:47,880 --> 00:07:48,880

the pressure.

142

00:07:49,880 --> 00:07:54,120

Alright, it's holding steady at 10 psi.

143

00:07:54,120 --> 00:07:55,760

Shall we next go to double?

144

00:07:55,760 --> 00:07:56,760

Okay.

145

00:07:56,760 --> 00:08:03,000

If passed results hold true, the pressure from 40 tablets should comfortably pass 20

146

00:08:03,000 --> 00:08:04,000

psi.

147

00:08:04,000 --> 00:08:08,680

Only this time, it doesn't.

148

00:08:08,680 --> 00:08:11,960

It seems to be settling in at 18 psi.

149

00:08:11,960 --> 00:08:16,200

So we're not getting that exponential leap we were getting in the small scale.

150

00:08:16,200 --> 00:08:18,200

The increase was 80%.

151

00:08:18,200 --> 00:08:20,680

That's not exponential or even linear.

152

00:08:20,680 --> 00:08:21,680

So what do you say?

153

00:08:21,680 --> 00:08:23,720

Should we double it one more time, try 80 tablets?

154

00:08:23,720 --> 00:08:24,720

Yeah.

155

00:08:24,720 --> 00:08:25,720

Cool.

156

00:08:25,720 --> 00:08:29,960

It seems the size of the container does affect the pressure.

157

00:08:29,960 --> 00:08:30,960

Here we go.

158

00:08:30,960 --> 00:08:37,480

With 80 tablets, the gauge climbs to 20, then slows down.

159

00:08:37,480 --> 00:08:41,480

We might absolutely be at the pressure limit of this stuff.

160

00:08:41,480 --> 00:08:43,120

Yeah, you may be right.

161

00:08:43,120 --> 00:08:47,960

But keep in mind that 25 psi is a lot in any building.

162

00:08:47,960 --> 00:08:51,560

In fact, I don't think most buildings would be able to withstand that.

163

00:08:51,560 --> 00:08:52,720

Oh, I think you're totally right.

164

00:08:52,720 --> 00:08:58,080

I think if we can get 10 psi in this prison cell, we're going to bring it crumbling to

165

00:08:58,080 --> 00:09:00,080

the ground.

166

00:09:00,080 --> 00:09:01,600

Well that's the dream.

167

00:09:01,600 --> 00:09:06,360

But again, doubling the dose only raises the pressure by 80%.

168

00:09:06,360 --> 00:09:07,920

At least there's a pattern.

169

00:09:07,920 --> 00:09:09,600

But what's the direction?

170

00:09:10,600 --> 00:09:13,800

Sure, there's a lot of fizzy goodness, but does it mean anything?

171

00:09:13,800 --> 00:09:15,360

Well, I've grafted out.

172

00:09:15,360 --> 00:09:16,920

I think it does mean something.

173

00:09:16,920 --> 00:09:17,920

Let me explain.

174

00:09:17,920 --> 00:09:18,920

Follow me.

175

00:09:18,920 --> 00:09:19,920

Right.

176

00:09:19,920 --> 00:09:25,600

So the first test on top was volume displacement.

177

00:09:25,600 --> 00:09:28,120

How much gas the tablets put out when you combine them with water?

178

00:09:28,120 --> 00:09:31,920

We tested it three times, doubling the number of tablets for each test.

179

00:09:31,920 --> 00:09:35,840

Now, we had an expectation that when we doubled the number of tablets, we'd get double the

180

00:09:35,840 --> 00:09:37,920

volume of gas, but this was not so.

181

00:09:37,920 --> 00:09:40,840

In fact, the improvement was much greater.

182

00:09:40,840 --> 00:09:46,080

250% the amount of gas every time we doubled the tablets.

183

00:09:46,080 --> 00:09:47,440

That's an exponential growth rate.

184

00:09:47,440 --> 00:09:48,920

But what about the pressure?

185

00:09:48,920 --> 00:09:50,480

That was the next test we did.

186

00:09:50,480 --> 00:09:54,080

Again, testing it three times, doubling the number of tablets each time.

187

00:09:54,080 --> 00:09:58,400

And in this, we still saw an exponential growth a little less than what we saw in the volumetric

188

00:09:58,400 --> 00:09:59,400

test.

189

00:09:59,400 --> 00:10:02,640

About 150% improvement each time we doubled the number of tablets.

190

00:10:02,640 --> 00:10:04,920

Is it contingent upon the volume we're working with?

191

00:10:04,920 --> 00:10:06,040

Well, we wondered that too.

192

00:10:06,040 --> 00:10:11,120

So we went up to a 10-digger container here, doubling the number of tablets each time.

193

00:10:11,120 --> 00:10:15,560

And now we're seeing much more of a linear growth, about an 80% improvement every time.

194

00:10:15,560 --> 00:10:17,840

But the fact that this is slowly dropping concerns us.

195

00:10:17,840 --> 00:10:19,440

What does this mean for the full-size cell?

196

00:10:19,440 --> 00:10:23,000

Does this mean that when we get that big, the volume won't mean anything and that we

197

00:10:23,000 --> 00:10:25,080

won't get the pressure we're looking for?

198

00:10:25,080 --> 00:10:26,560

We don't know.

199

00:10:26,560 --> 00:10:31,200

There will be an answer unless effort explodes first.

200

00:10:31,200 --> 00:10:37,880

After the break, Jesse Grant and Tori turn out the lights in the struggle to smuggle.

201

00:10:37,880 --> 00:10:43,880

And later, Adam and Jamie get major results as they continue to double the dosage.

202

00:10:43,880 --> 00:10:58,440

We like breaking glass.

203

00:10:58,440 --> 00:10:59,440

This is a first.

204

00:10:59,440 --> 00:11:00,440

What's that?

205

00:11:00,440 --> 00:11:01,440

Is it a blueprint in the dark?

206

00:11:01,440 --> 00:11:02,440

Yes.

207

00:11:02,440 --> 00:11:04,720

But also, a myth about smuggling in the dark.

208

00:11:04,720 --> 00:11:07,560

And we're not talking about your old-timey, Barbary Coast Pirates.

209

00:11:07,560 --> 00:11:09,640

We're talking about modern-day smuggling.

210

00:11:09,640 --> 00:11:10,640

Well, tell me about it.

211

00:11:10,640 --> 00:11:14,600

Well, according to the viewers, what people are doing is trying to get, let's say, maple

212

00:11:14,600 --> 00:11:16,800

syrup across the Canadian border to the United States.

213

00:11:16,800 --> 00:11:20,400

And what they'll do is they'll pick a very low-key border crossing and then wait until

214

00:11:20,400 --> 00:11:21,400

nightfall.

215

00:11:21,400 --> 00:11:22,400

Not just any night.

216

00:11:22,400 --> 00:11:25,360

Very cold, dark, wintery night where it's almost pitch black.

217

00:11:25,360 --> 00:11:29,160

They go through the border and they do their entire journey in complete darkness.

218

00:11:29,160 --> 00:11:30,640

And bam, you're a smuggler.

219

00:11:30,640 --> 00:11:34,480

All right, so the myth that we're testing here is can you drive in the dark without

220

00:11:34,480 --> 00:11:37,720

your headlights at speeds and still not hit anything?

221

00:11:37,720 --> 00:11:39,800

Sounds like fun to me.

222

00:11:39,800 --> 00:11:43,160

It's a technique that's been said to be used by smugglers.

223

00:11:43,160 --> 00:11:49,240

Turn off the headlights, hit the gas, race past the border, and know when the wiser.

224

00:11:49,240 --> 00:11:53,960

But can it be done in the near-pitch dark without coming a proper?

225

00:11:53,960 --> 00:11:55,200

I don't know about this one, you guys.

226

00:11:55,200 --> 00:11:56,200

I mean, I have my doubts.

227

00:11:56,200 --> 00:11:59,200

It's like, yeah, your eyes can adjust to the dark in 20 minutes.

228

00:11:59,200 --> 00:12:03,440

But I mean, are they going to be able to process images just as fast and as accurately as if

229

00:12:03,440 --> 00:12:04,440

you had your headlights on?

230

00:12:04,440 --> 00:12:06,360

Well, that's what we got to find out, right?

231

00:12:06,360 --> 00:12:07,360

Why don't we do this?

232

00:12:07,360 --> 00:12:10,280

We'll do our experiment at an indoor go-kart track.

233

00:12:10,280 --> 00:12:12,840

That way we'll have control over the light levels at all times.

234

00:12:12,840 --> 00:12:17,600

And we can do one run with headlights and compare it to a run in complete darkness.

235

00:12:17,600 --> 00:12:18,600

Go-karts?

236

00:12:18,600 --> 00:12:19,600

High speeds in the dark?

237

00:12:19,600 --> 00:12:21,640

Sounds like a recipe for disaster to me.

238

00:12:21,640 --> 00:12:22,920

Let's do it.

239

00:12:22,920 --> 00:12:26,640

As always, there's work to do before the fun starts.

240

00:12:26,640 --> 00:12:33,400

These guys are actors, producers, and stagehands in their own drive-in movie.

241

00:12:33,400 --> 00:12:39,920

The trees are strictly scenery, but wild animals could be a deadly hazard to anyone crazy enough

242

00:12:39,920 --> 00:12:43,440

to cruise the 49th parallel with the lights off, okay?

243

00:12:43,440 --> 00:12:48,080

Now, if you were smuggling maple syrup across the Canadian border, one obstacle you might

244

00:12:48,080 --> 00:12:51,440

encounter would be a moose.

245

00:12:51,440 --> 00:12:52,960

Now I've made a moose before.

246

00:12:52,960 --> 00:12:54,720

However, that one was made out of solid rubber.

247

00:12:54,720 --> 00:12:59,320

It was actually designed to withstand an impact from a real car going 60 miles an hour.

248

00:12:59,320 --> 00:13:00,320

Wow!

249

00:13:00,320 --> 00:13:02,760

Did you see how high the moose got on that hit?

250

00:13:02,760 --> 00:13:08,120

For the record, that's what happens when a car plays chicken with a giant rubber moose.

251

00:13:08,120 --> 00:13:12,040

It's a result Torey's not anxious to replicate.

252

00:13:12,040 --> 00:13:15,760

I'm going with the material that it's going to break away when we hit him with the car.

253

00:13:15,760 --> 00:13:20,920

So I'm going to make the moose out of Styrofoam.

254

00:13:20,920 --> 00:13:23,120

Hurry up, we need those down by lunch.

255

00:13:23,120 --> 00:13:28,200

In fact, the team has till nightfall to ready the props for the great syrup smuggle.

256

00:13:28,200 --> 00:13:30,680

A moose.

257

00:13:30,680 --> 00:13:33,000

Grants found a venue that's willing to stay up late.

258

00:13:33,000 --> 00:13:37,320

So to put this myth to the test, we couldn't just go out on city streets and drive around

259

00:13:37,320 --> 00:13:38,320

with no headlights.

260

00:13:38,320 --> 00:13:39,320

That'd be way too dangerous.

261

00:13:39,320 --> 00:13:43,320

To test this out, we need a venue that's controlled and repeatable.

262

00:13:43,320 --> 00:13:47,320

We're going to drive this course in the dark, watch what the headlights are, and then we

263

00:13:47,320 --> 00:13:48,320

put them off.

264

00:13:48,320 --> 00:13:49,320

We're going to be racing against the clock.

265

00:13:49,720 --> 00:13:50,720

Against each other.

266

00:13:50,720 --> 00:13:55,720

And we're going to try to go as fast as we can without crashing.

267

00:13:55,720 --> 00:14:00,720

Yeah, because if you crash, that means you got caught by the cars.

268

00:14:00,720 --> 00:14:05,720

And to make sure we don't remember the course, we're going to drive the first round in one

269

00:14:05,720 --> 00:14:06,720

direction.

270

00:14:06,720 --> 00:14:10,720

And then the second time around, we'll go completely backwards because there's no way

271

00:14:10,720 --> 00:14:13,320

we can remember that.

272

00:14:13,320 --> 00:14:17,420

Sounds like a plan, but let's not put the cart before the moose.

273

00:14:17,420 --> 00:14:21,420

They still need to litter the track with some natural impediments.

274

00:14:23,420 --> 00:14:29,420

Hiding somewhere around a corner, our surprise moose will test the driver's reaction time.

275

00:14:29,420 --> 00:14:30,420

You have to get another one.

276

00:14:30,420 --> 00:14:32,420

This one's not trained very well.

277

00:14:32,420 --> 00:14:33,420

Yeah, that's good.

278

00:14:33,420 --> 00:14:36,420

And dropped randomly at the end of a straight bit.

279

00:14:36,420 --> 00:14:37,420

Perfect.

280

00:14:37,420 --> 00:14:40,420

This log will test their long range visual acuity.

281

00:14:40,420 --> 00:14:42,420

But that's not all.

282

00:14:42,420 --> 00:14:47,420

Now our third and final obstacle tests whether you can read a sign and make a snap decision.

283

00:14:47,420 --> 00:14:51,920

Both of these signs have four letter words that begin with C. Obviously, you want to

284

00:14:51,920 --> 00:14:56,420

go towards the cafe and not the cops.

285

00:14:56,420 --> 00:14:58,420

And here's a timely thought.

286

00:14:58,420 --> 00:15:00,420

If they can't see in the dark.

287

00:15:00,420 --> 00:15:02,420

Now I know what you're asking yourself.

288

00:15:02,420 --> 00:15:03,420

Wait a minute.

289

00:15:03,420 --> 00:15:05,420

If you guys are driving in the dark, how are we going to see?

290

00:15:05,420 --> 00:15:06,420

I'll tell you how.

291

00:15:06,420 --> 00:15:08,420

Kill the lights.

292

00:15:08,420 --> 00:15:13,420

We have special infrared cameras and infrared lights that will allow you to see what we're

293

00:15:13,420 --> 00:15:14,420

doing.

294

00:15:14,420 --> 00:15:17,420

But just because you can see what we're doing doesn't mean we can see what we're doing.

295

00:15:17,420 --> 00:15:20,420

To us, it's still pitch black.

296

00:15:23,420 --> 00:15:28,420

Ultimate success depends on not getting caught and not crashing.

297

00:15:28,420 --> 00:15:31,420

But a good smuggling trip is also a fast one.

298

00:15:31,420 --> 00:15:37,420

So each of our would be felons takes one hot lap to see just how fast they are with

299

00:15:37,420 --> 00:15:39,420

the headlights on.

300

00:15:39,420 --> 00:15:41,420

Here I go.

301

00:15:46,420 --> 00:15:49,420

The track is tight and the moose is lurking.

302

00:15:49,420 --> 00:15:52,420

But Grant's not holding back.

303

00:15:52,420 --> 00:15:53,420

Moose.

304

00:15:53,420 --> 00:15:55,420

And this is the moose.

305

00:15:55,420 --> 00:15:56,420

Wait for the log.

306

00:15:56,420 --> 00:15:57,420

Wait for the log.

307

00:15:57,420 --> 00:15:58,420

He gets around the log.

308

00:15:58,420 --> 00:16:04,420

Approaching the finish without a scratch, it's grand in provisional pole position.

309

00:16:04,420 --> 00:16:07,420

And he's going down the right path.

310

00:16:08,420 --> 00:16:10,420

That's pretty cool.

311

00:16:14,420 --> 00:16:21,420

So first Tori, then Jesse take their turns, anxious to beat Grant's time without bouncing

312

00:16:21,420 --> 00:16:23,420

the cars off the scenery.

313

00:16:23,420 --> 00:16:29,420

Unseen by the drivers, the obstacles are all repositioned from one lap to the next.

314

00:16:30,420 --> 00:16:33,420

They were all fast and faultless.

315

00:16:33,420 --> 00:16:37,420

No mean feat on a twisting track without street lights.

316

00:16:42,420 --> 00:16:45,420

That was so much different than just regular daylight.

317

00:16:45,420 --> 00:16:47,420

Yeah, it's way scarier.

318

00:16:47,420 --> 00:16:50,420

Alright, let's go check the leaderboard.

319

00:16:50,420 --> 00:16:52,420

What?

320

00:16:52,420 --> 00:16:56,420

It's glory for Tori, but just by a whisker.

321

00:16:56,420 --> 00:16:59,420

Alright, well, at least you've got a control now.

322

00:16:59,420 --> 00:17:01,420

Yes, now the hard part.

323

00:17:01,420 --> 00:17:04,420

It's time to drive in complete darkness.

324

00:17:04,420 --> 00:17:05,420

No headlights.

325

00:17:05,420 --> 00:17:07,420

Have I told you guys that I'm afraid of the dark?

326

00:17:07,420 --> 00:17:08,420

Perfect.

327

00:17:08,420 --> 00:17:10,420

It's going to be funny.

328

00:17:26,420 --> 00:17:37,420

A good ad acid does two key things.

329

00:17:37,420 --> 00:17:41,420

It cures your heartburn and quells in digestion.

330

00:17:41,420 --> 00:17:49,420

But if these jailbirds knew what else it could do, they'd put up with the pain and start

331

00:17:49,420 --> 00:17:51,420

stashing the rations.

332

00:17:52,420 --> 00:17:59,420

Adam and Jamie are testing the myth that a con busted out by exploding his cell with

333

00:17:59,420 --> 00:18:03,420

ten years worth of stockpiled ad acid.

334

00:18:03,420 --> 00:18:07,420

Unlikely or not, the method has plenty of merit.

335

00:18:07,420 --> 00:18:09,420

Stage one of our test cell is complete.

336

00:18:09,420 --> 00:18:12,420

The walls are up, but they are hollow.

337

00:18:12,420 --> 00:18:14,420

And in a prison, they're not hollow soon.

338

00:18:14,420 --> 00:18:20,420

We will fill them with rebar and concrete and cap it off with a cast concrete roof.

339

00:18:21,420 --> 00:18:25,420

We've decided to make the roof as strong as we can, because what we're really testing

340

00:18:25,420 --> 00:18:27,420

here is the strength of the walls.

341

00:18:27,420 --> 00:18:30,420

And we can't do that if the roof breaks first.

342

00:18:30,420 --> 00:18:32,420

So we've done a proper job of it.

343

00:18:32,420 --> 00:18:34,420

We've brought in a cement truck.

344

00:18:34,420 --> 00:18:36,420

The whole thing is going to be steel reinforced with rebar.

345

00:18:36,420 --> 00:18:42,420

And again, we're relying on the skills of people who normally do this kind of thing for a living.

346

00:18:42,420 --> 00:18:47,420

When the quick set sets, Adam ups the realism by adding some basic amenities.

347

00:18:47,420 --> 00:18:52,420

It's not every day a toilet's installed just for the ambience.

348

00:18:52,420 --> 00:19:00,420

Then Jamie brings in that most crucial of fittings, a custom built door that's as strong as the cell.

349

00:19:00,420 --> 00:19:06,420

I built this door out of a solid piece of inch and a quarter bullet resistant plastic.

350

00:19:06,420 --> 00:19:10,420

That's exactly the same material we use for the panels in our blast screens.

351

00:19:10,420 --> 00:19:14,420

It's set inside a heavy steel frame with very solid hinges.

352

00:19:14,420 --> 00:19:18,420

In fact, I'd bet this is actually stronger than a normal jail door.

353

00:19:18,420 --> 00:19:22,420

Look at that, it's actually fitting.

354

00:19:22,420 --> 00:19:25,420

They're not getting out. Let's go.

355

00:19:25,420 --> 00:19:27,420

OK.

356

00:19:27,420 --> 00:19:32,420

With the cell now complete, that just leaves the giant plastic bag.

357

00:19:32,420 --> 00:19:36,420

And that's something they'll first test back in the shop.

358

00:19:36,420 --> 00:19:42,420

Previous tests show that doubling the tablets won't quite double the pressure.

359

00:19:42,420 --> 00:19:47,420

We might absolutely be at the pressure limit of this stuff.

360

00:19:47,420 --> 00:19:55,420

But the boys are aware that the PSI needed to breach those jail walls could be as low as five or ten.

361

00:19:55,420 --> 00:19:59,420

All right then, 100 tablets here we come.

362

00:19:59,420 --> 00:20:06,420

It's a gamble their bedding will break the tank as Adam supplies the one-of-the-escapies.

363

00:20:06,420 --> 00:20:11,420

So our prisoner lined the inside of his cell with plastic to seal it.

364

00:20:11,420 --> 00:20:14,420

We've replicated that here in this small scale.

365

00:20:14,420 --> 00:20:17,420

We've got a hundred tablets. We've got some water.

366

00:20:17,420 --> 00:20:24,420

We've got the plastic bag and we're looking to see how that plastic interacts with this box.

367

00:20:24,420 --> 00:20:30,420

So with a shimmy and a shake, there you go.

368

00:20:30,420 --> 00:20:34,420

They're set to pop.

369

00:20:34,420 --> 00:20:38,420

That was fast. Are you OK?

370

00:20:38,420 --> 00:20:42,420

Yeah.

371

00:20:42,420 --> 00:20:46,420

Turns out it's a little harder to dump over a cup of water inside this thing than we anticipated.

372

00:20:46,420 --> 00:20:51,420

And that made me hold on to it a couple seconds too long.

373

00:20:51,420 --> 00:20:54,420

Ah, the joys of practical science.

374

00:20:54,420 --> 00:21:01,420

On a happier note, while the underside panel is busted, the myth is far from it.

375

00:21:01,420 --> 00:21:06,420

This tells me exactly what I knew about the pressures, which is they can get quite high in an enclosed space.

376

00:21:06,420 --> 00:21:09,420

And that speaks very well for us going full scale.

377

00:21:09,420 --> 00:21:16,420

But first up, that last test is well worth repeating, this time with thicker glass.

378

00:21:16,420 --> 00:21:17,420

You ready?

379

00:21:17,420 --> 00:21:19,420

Do it!

380

00:21:19,420 --> 00:21:22,420

With a flick of the wrist, the process begins.

381

00:21:22,420 --> 00:21:27,420

Now for all you who think that dogs can sense danger, let's freeze it right here.

382

00:21:27,420 --> 00:21:33,420

That's Jamie's Dog Zero, who just changed her mind about coming downstairs.

383

00:21:33,420 --> 00:21:38,420

Wow, I can see it bowing up on top.

384

00:21:38,420 --> 00:21:42,420

There it goes!

385

00:21:42,420 --> 00:21:44,420

Oh look, and they actually escaped.

386

00:21:44,420 --> 00:21:48,420

They did!

387

00:21:48,420 --> 00:21:54,420

OK, a glass tank is not a concrete cell, but the figures are all adding up.

388

00:21:54,420 --> 00:21:59,420

This is good. I'm psyched. The pressures are real.

389

00:21:59,420 --> 00:22:03,420

I don't think there's anything to do now, but go whole hog on this puppy.

390

00:22:08,420 --> 00:22:17,420

As if smuggling wasn't risky enough, Tori, Grant and Jesse have found a way to double the danger.

391

00:22:17,420 --> 00:22:20,420

They've bought their times with headlights on.

392

00:22:20,420 --> 00:22:24,420

Now it's time for Lights Out.

393

00:22:24,420 --> 00:22:27,420

My prediction for what it's going to be like without headlights?

394

00:22:27,420 --> 00:22:31,420

Impossible. It's going to be really, really crazy.

395

00:22:31,420 --> 00:22:42,420

Considering that I can't even walk around this course in the dark, Grant's chances of making it to the course in the go-kart, I think are not going to be good.

396

00:22:42,420 --> 00:22:47,420

But Grant can improve his odds of survival by sitting in solitary.

397

00:22:47,420 --> 00:22:53,420

In a few minutes, his pupils will dilate, allowing more light to pass through to the retina.

398

00:22:53,420 --> 00:22:58,420

But there's more to it than that, as the guys found out on the Pirates Special.

399

00:22:58,420 --> 00:23:08,420

We were trying to see if a pirate's eye patch could have actually been a kind of tool to get instant night vision by swapping it from one good eye to the other, and it really seemed to work.

400

00:23:08,420 --> 00:23:11,420

That's amazing.

401

00:23:11,420 --> 00:23:18,420

Apparently, one of the key factors in human night vision is a chemical in the rod cells of the eye called Rodopsin.

402

00:23:18,420 --> 00:23:23,420

It's actually bleached out in normal light, and it takes about 20 minutes of darkness to

regenerate.

403

00:23:23,420 --> 00:23:27,420

So that's how long we'll spend sitting in the dark.

404

00:23:27,420 --> 00:23:31,420

At the track, it's as black as a yard of Pachimini.

405

00:23:31,420 --> 00:23:33,420

How's that look? Can you tell me? I can't see.

406

00:23:33,420 --> 00:23:41,420

To counter the possibility that he's memorized the track from his last run, Grant will set off in the opposite direction.

407

00:23:41,420 --> 00:23:51,420

This is one of those things that is just so crazy.

408

00:23:51,420 --> 00:23:58,420

If it wasn't for the sound of the engine and the squealing of the wheels, it would be just like a nightmare.

409

00:23:58,420 --> 00:24:04,420

Just these blurry shapes rushing past you, and then, wow, something's right to your face.

410

00:24:04,420 --> 00:24:08,420

I mean, it is a totally surreal experience.

411

00:24:08,420 --> 00:24:13,420

You know what I hate to tell you? From the get-go, you went down the wrong path, and you got caught by the cops.

412

00:24:13,420 --> 00:24:18,420

In other words, Grant flunked the test. But can Jesse do any better?

413

00:24:18,420 --> 00:24:22,420

At the very least, she's confident.

414

00:24:22,420 --> 00:24:32,420

I'm not afraid one bit. I'm kind of excited, actually. I don't know. I'm praying for the best.

415

00:24:32,420 --> 00:24:37,420

One problem with those sensitive ride cells is they mostly help with peripheral vision.

416

00:24:37,420 --> 00:24:45,420

The fovea, which is used to focus, has very few.

417

00:24:45,420 --> 00:24:50,420

It was fairly close to what I had expected. I knew I was going to be hesitant in stepping on the gas.

418

00:24:50,420 --> 00:24:57,420

She missed the moose, but latched onto the log. So if this was the real world, she too would have crashed and burned.

419

00:24:57,420 --> 00:25:00,420

I think I still have the log attached to me.

420

00:25:00,420 --> 00:25:06,420

And now, for the man voted most likely to burn rubber in a drive-thru.

421

00:25:06,420 --> 00:25:10,420

Alright, so I have been sitting in the dark for 20 minutes. My eyes are completely adjusted.

422

00:25:10,420 --> 00:25:13,420

You know what? I'm actually surprised at how well I can see right now.

423

00:25:13,420 --> 00:25:24,420

With nary a trip, nor a stumble, Tori makes his way to the cart. The flag drops, and he's off to a start that's more like a stop.

424

00:25:24,420 --> 00:25:31,420

That was so hard. I couldn't see anything. I had to get like six feet away from the sun before I could even tell which way to go.

425

00:25:31,420 --> 00:25:37,420

Jesse, of course, had the same problem, but it's what happens next that shocks the fans.

426

00:25:37,420 --> 00:25:42,420

The lethal lack of light has turned Tori timid.

427

00:25:42,420 --> 00:25:49,420

You cannot see anything. I mean, you see shapes here and there. You have no idea. You're going to crash into something at any moment.

428

00:25:49,420 --> 00:25:54,420

The fact that I didn't hit the moose or the log, I think I just got lucky.

429

00:25:54,420 --> 00:26:02,420

Tori was far and away the slowest. Then again, he's the only one who didn't crash or drive straight to the cops.

430

00:26:02,420 --> 00:26:05,420

I'm the only one that made the delivery, but I mean, look how long it took me.

431

00:26:05,420 --> 00:26:11,420

With a lap that was four times longer than his effort with headlights, this myth is veering off course.

432

00:26:11,420 --> 00:26:16,420

Then, Jesse decides to steer straight for the cliff.

433

00:26:16,420 --> 00:26:19,420

And we're missing one huge thing here. What's that?

434

00:26:19,420 --> 00:26:23,420

What happens when a car comes in oncoming direction and shines their headlights right in our face?

435

00:26:23,420 --> 00:26:27,420

You know, that's a good point. I mean, that would totally ruin your night vision.

436

00:26:27,420 --> 00:26:34,420

It sure would. And in the interest of proper procedure, we're about to put that to the test.

437

00:26:34,420 --> 00:26:38,420

Up next, mass destruction through mass medication.

438

00:26:38,420 --> 00:26:40,420

I fell down. I was so excited.

439

00:26:40,420 --> 00:26:45,420

While Grant's little friend does its best to kill Tori.

440

00:26:47,420 --> 00:26:52,420

Please do not try what we do on this show at home. We're what you call experts.

441

00:26:52,420 --> 00:26:54,420

It's safer that way.

442

00:27:16,420 --> 00:27:18,420

Lisa Mann on his own recognizance.

443

00:27:18,420 --> 00:27:19,420

Okay.

444

00:27:19,420 --> 00:27:20,420

Freedom!

445

00:27:20,420 --> 00:27:23,420

An ad acid explosion might just be the craziest.

446

00:27:23,420 --> 00:27:31,420

But if someone's snatched two pills per meal over ten years, that's 22,000 tabs ready to blow.

447

00:27:31,420 --> 00:27:39,420

What makes us imagine that 22,000 of these little puppies has any chance at all of breaking us out of a steel reinforced, poured concrete jail cell.

448

00:27:39,420 --> 00:27:42,420

After all, in the shop, we got pressures up to 42 psi.

449

00:27:42,420 --> 00:27:45,420

And how is 42 pounds of anything going to break out of this wall?

450

00:27:45,420 --> 00:27:51,420

I'll tell you. It's all about a little thing we like to call a distributed load. Allow me to demonstrate.

451

00:27:51,420 --> 00:27:54,420

And yes, you can try this at home.

452

00:27:54,420 --> 00:28:01,420

Now when I blow against the surface area of one square inch, I'm able to lift a maximum of 1.1

pounds with my breath.

453

00:28:05,420 --> 00:28:13,420

But expelled inside of a plastic bag with a vast surface area, that lungful of air can work miracles.

454

00:28:13,420 --> 00:28:20,420

Now over an area of 100 square inches, all of a sudden I can lift 125 pounds.

455

00:28:20,420 --> 00:28:24,420

And that's probably more than Adam can bench press.

456

00:28:37,420 --> 00:28:39,420

I fell down. I was so excited.

457

00:28:40,420 --> 00:28:46,420

And so back to work. While Jamie tapes over the bumps and sharp edges, Adam gets technical.

458

00:28:47,420 --> 00:28:54,420

Right about now, I'll bet you're wondering how we're going to monitor what kind of pressures we might be getting from our antacid tablets during the experiment.

459

00:28:54,420 --> 00:29:05,420

This is how. One of the most sensitive gauge clusters we've ever put together for the show, it measures everything from the lowly sensitive 0 to 5 pounds per square inch of pressure all the way up to 200 pounds.

460

00:29:05,420 --> 00:29:08,420

Now if we get anywhere close to this, I'm running.

461

00:29:08,420 --> 00:29:17,420

And now with the help of some double-sided tape, Jamie and Adam start piecing together that vital component, the big plastic bubble.

462

00:29:18,420 --> 00:29:21,420

This is working great. So far.

463

00:29:21,420 --> 00:29:32,420

It looks less and less likely that one desperate jailbird could manage all this, building the bubble or even devising a way to get the water from the sink to the stack.

464

00:29:32,420 --> 00:29:37,420

But this is a case of not letting a good story get in the way of the facts.

465

00:29:39,420 --> 00:29:45,420

I don't know, man. You know how you think about something like this for ages, but then when you finally start to do it, it becomes really real?

466

00:29:45,420 --> 00:29:51,420

I mean, in addition to actually real, but real in your head, I'm starting to feel like this may work.

467

00:29:51,420 --> 00:29:54,420

Yeah, well, prison can do funny things to a guy.

468

00:29:56,420 --> 00:30:00,420

What is Buster doing outside this bag? There's actually a very good reason for it.

469

00:30:00,420 --> 00:30:05,420

The fact is that when antacid tablets react with water, one of the byproducts is carbon dioxide.

470

00:30:05,420 --> 00:30:13,420

And if you're in a bag with the carbon dioxide byproduct of 22,000 tablets of antacid, there's very high risk of suffocation.

471

00:30:13,420 --> 00:30:19,420

So Buster is up against the door, Jamie, to try and breathe some fresh air while his cell crumbles around him.

472

00:30:19,420 --> 00:30:24,420

But now for the real star of the show, antacid by the bucket full.

473

00:30:25,420 --> 00:30:27,420

Okay, here you go, Adam.

474

00:30:30,420 --> 00:30:31,420

Thank you.

475

00:30:32,420 --> 00:30:38,420

The tablets are heat-drawn, the toilet and basin, right under the hose that's been pushed through a hole in the wall.

476

00:30:41,420 --> 00:30:47,420

Don't ask me how he hid these from the guards. I have the slightest idea. We're here to test the physics.

477

00:30:47,420 --> 00:30:50,420

I think we're good to go. All right, let's seal it up.

478

00:30:50,420 --> 00:30:51,420

All right.

479

00:30:54,420 --> 00:30:55,420

Will it work?

480

00:30:56,420 --> 00:31:04,420

Well, the math says it could. Honestly, I have no idea, but I tell you one thing. I'm not going to be standing near it when it goes off.

481

00:31:15,420 --> 00:31:16,420

That guy looked crazy.

482

00:31:16,420 --> 00:31:21,420

Jesse's decided that driving in darkness means facing the dazzle of oncoming headlights.

483

00:31:26,420 --> 00:31:27,420

The light is on.

484

00:31:31,420 --> 00:31:36,420

Grant's stand-in for an oncoming car takes him back to his robot roots.

485

00:31:36,420 --> 00:31:38,420

It's a combat robot that I built.

486

00:31:38,420 --> 00:31:46,420

I mount a pair of headlights to it, and we should be able to remotely turn them on as well as drive around in the oncoming lane of traffic.

487

00:31:46,420 --> 00:31:51,420

And then we'll finally find out the effect that headlights have on your eyes.

488

00:31:56,420 --> 00:31:59,420

Good boy. Let's go blind some drivers.

489

00:32:00,420 --> 00:32:05,420

Actually, just one driver. Tori volunteers to be the deer in the headlights.

490

00:32:06,420 --> 00:32:09,420

Hey there, little buddy. What's your name?

491

00:32:09,420 --> 00:32:10,420

Say hello to Blinky.

492

00:32:11,420 --> 00:32:16,420

The obstacles are reset, and Grant puts Blinky behind the wall at the first turn.

493

00:32:16,420 --> 00:32:19,420

This lap could be all over in a flash.

494

00:32:20,420 --> 00:32:25,420

There goes Tori, and here comes the other guy.

495

00:32:34,420 --> 00:32:35,420

Give me the lights!

496

00:32:36,420 --> 00:32:38,420

Dude, that was so crazy.

497

00:32:39,420 --> 00:32:46,420

That sucked. All of a sudden the lights went on, and it was like an instant black wall with two little headlights.

498

00:32:46,420 --> 00:32:51,420

As soon as the car was coming towards you with the headlights on, you would be completely blinded and you would crash.

499

00:32:51,420 --> 00:32:52,420

Done for.

500

00:32:52,420 --> 00:32:58,420

So technically, this myth is busted. They simply couldn't drive fast enough with any control.

501

00:32:58,420 --> 00:33:05,420

The concept still has a chance, assuming the Crimbs have access to some high-tech headwear.

502

00:33:06,420 --> 00:33:10,420

Straight ahead, can a gadget save Tori from crashing and burning?

503

00:33:11,420 --> 00:33:15,420

While the boys in the bunker finally get things fizzing.

504

00:33:15,420 --> 00:33:16,420

This is the big one.

505

00:33:24,420 --> 00:33:32,420

After days of exertion and experimentation, it's finally time to appraise the legend of Ant-Assad Jailbreak.

506

00:33:32,420 --> 00:33:35,420

So with our guys hopefully out of harm's way...

507

00:33:36,420 --> 00:33:42,420

...Ant-Assad Jailbreak circumstances of the myth start the water flowing...

508

00:33:42,420 --> 00:33:44,420

...and start the hearts pumping.

509

00:33:50,420 --> 00:33:52,420

How much water are we putting in there?

510

00:33:52,420 --> 00:33:54,420

We have about 350 gallons.

511

00:33:54,420 --> 00:33:56,420

We're not putting that much in though.

512

00:33:56,420 --> 00:33:58,420

We'll run it as long as it takes.

513

00:33:59,420 --> 00:34:06,420

Fighting words from a man in a tangerine jumpsuit, but the nostrils soon confirm their worst fears.

514

00:34:07,420 --> 00:34:11,420

I'm smelling the Ant-Assad tablets. That means we've got a leak somewhere.

515

00:34:11,420 --> 00:34:12,420

Yeah.

516

00:34:12,420 --> 00:34:18,420

With the pressure at zero, at least according to the gauges, Adam ventures forth.

517

00:34:21,420 --> 00:34:25,420

This felonious fable looks dead in the water.

518

00:34:25,420 --> 00:34:27,420

Well, I guess that means myth busted, huh?

519

00:34:27,420 --> 00:34:28,420

No.

520

00:34:28,420 --> 00:34:32,420

I think it's entirely feasible that we got a leak around the sink or the toilet.

521

00:34:32,420 --> 00:34:38,420

I think we need to remove the sink, remove the toilet, make a really nice pristine bag in there and try it again.

522

00:34:38,420 --> 00:34:39,420

Eliminate the variables.

523

00:34:39,420 --> 00:34:40,420

Exactly.

524

00:34:40,420 --> 00:34:41,420

Okay.

525

00:34:43,420 --> 00:34:45,420

And eliminate they do.

526

00:34:45,420 --> 00:34:47,420

Out goes the old plastic bubble.

527

00:34:47,420 --> 00:34:50,420

There's no choice but to build another from scratch.

528

00:34:51,420 --> 00:34:53,420

And Adam uninstalls the fixtures.

529

00:34:53,420 --> 00:34:58,420

It's decided that no matter what, this next attempt will be their last.

530

00:34:58,420 --> 00:35:03,420

But we badly want a result, and that means going the extra mile.

531

00:35:05,420 --> 00:35:11,420

What we're doing here is preparing for phase two, where we can hopefully deliver a lot more water a lot faster.

532

00:35:11,420 --> 00:35:15,420

So to install a bigger pipe in the roof, we need to cut a nice round hole.

533

00:35:15,420 --> 00:35:20,420

And the tool for this job is the incredible carbide tipped hole saw.

534

00:35:20,420 --> 00:35:24,420

This is the one Adam bought for his wife on their last anniversary.

535

00:35:24,420 --> 00:35:27,420

The new plan has three steps.

536

00:35:27,420 --> 00:35:29,420

First, more water.

537

00:35:29,420 --> 00:35:32,420

Second, build a tighter and better bubble.

538

00:35:35,420 --> 00:35:37,420

I'm ready to go. Should we bring the tub in?

539

00:35:37,420 --> 00:35:38,420

Yeah.

540

00:35:38,420 --> 00:35:40,420

And third, up the medication.

541

00:35:40,420 --> 00:35:43,420

This tub will be filled with enough raw ingredients,

542

00:35:43,420 --> 00:35:50,420

citric acid and baking soda to approximate 72,000 antacid pills.

543

00:35:50,420 --> 00:35:57,420

Add 28,000 store-bought tablets, and the magic number is 100,000.

544

00:35:57,420 --> 00:36:02,420

Looking at this building and how well it's built, it actually terrifies me.

545

00:36:02,420 --> 00:36:05,420

I mean, with pressure vessels, it's not like an explosive.

546

00:36:05,420 --> 00:36:08,420

You don't know when it's going to go off, or if it's going to go off.

547

00:36:08,420 --> 00:36:10,420

It's just, it's nasty.

548

00:36:10,420 --> 00:36:12,420

It's either going to do it or it's not.

549

00:36:12,420 --> 00:36:14,420

This is the big one.

550

00:36:16,420 --> 00:36:17,420

This is for real.

551

00:36:17,420 --> 00:36:21,420

Turn the engine on and go to phase one. Release the water.

552

00:36:24,420 --> 00:36:29,420

Want more? Walk on to [Discovery.com slash MythBusters](http://Discovery.com/slash/MythBusters). Go.

553

00:36:38,420 --> 00:36:43,420

Alright, so it looks like the naked eye just isn't up to their man's of this smuggling mission.

554

00:36:43,420 --> 00:36:45,420

Which means it's time to deploy some technology.

555

00:36:48,420 --> 00:36:51,420

Check this out, night vision goggles.

556

00:36:51,420 --> 00:36:56,420

That's right. These babies are state-of-the-art third generation from B.E. Myers.

557

00:36:56,420 --> 00:37:00,420

They take all the available light and amplify it into an image we can see.

558

00:37:00,420 --> 00:37:02,420

Now this is the kind of technology you've been talking about.

559

00:37:02,420 --> 00:37:06,420

Yeah, so I'm going to do a run in the dark using nothing but these and see how I do.

560

00:37:06,420 --> 00:37:11,420

Okay, but this time no lollygagging around the track at a snail's pace. Let's make it realistic.

561

00:37:11,420 --> 00:37:14,420

I'll be chasing after you like I'm the cop.

562

00:37:15,420 --> 00:37:19,420

These night vision goggles are legal in the U.S. but not in Canada.

563

00:37:19,420 --> 00:37:24,420

Still, I don't suppose that would deter a depraved syrup smuggler.

564

00:37:24,420 --> 00:37:26,420

Are you ready? I'm ready.

565

00:37:26,420 --> 00:37:27,420

Alright, here we go.

566

00:37:30,420 --> 00:37:31,420

Okay, lights out.

567

00:37:32,420 --> 00:37:36,420

So can technology work with a human eye fan?

568

00:37:36,420 --> 00:37:40,420

Tori's first few laps are fast and bouncy.

569

00:37:44,420 --> 00:37:45,420

Seeing is not a problem.

570

00:37:45,420 --> 00:37:51,420

Being able to judge how far you are from objects or seeing around you, that is the problem.

571

00:37:51,420 --> 00:37:53,420

I mean, it is truly tunnel vision.

572

00:37:53,420 --> 00:37:56,420

You have no depth of field. You have no peripheral vision.

573

00:37:56,420 --> 00:38:00,420

I mean, I must have banged into the wall, you know, half a dozen times.

574

00:38:01,420 --> 00:38:09,420

Now, Officer Jesse gives chase and you get the feeling it won't be long before justice catches up with our scoundrel.

575

00:38:09,420 --> 00:38:20,420

And then you have the cop chasing you and, you know, that's a whole new game where it's like now you have the stress of somebody catching you and you're having to react quickly.

576

00:38:24,420 --> 00:38:27,420

But what's the ultimate verdict?

577

00:38:27,420 --> 00:38:35,420

I mean, you can drive with the Night Vision goggles, but as soon as you started chasing me, I had to speed up and my reaction time had to speed up.

578

00:38:35,420 --> 00:38:43,420

And having total vision, basically, I totally misjudged that last turn, crashed into the wall and that's when you smacked into me and stopped me.

579

00:38:43,420 --> 00:38:48,420

So driving with Night Vision goggles might help a little, but less than we'd hoped.

580

00:38:48,420 --> 00:38:51,420

The myth is first tested, totally busted.

581

00:38:52,420 --> 00:38:53,420

Is it dangerous?

582

00:38:53,420 --> 00:38:55,420

Yeah, absolutely.

583

00:38:58,420 --> 00:39:01,420

Turn everything up to full.

584

00:39:01,420 --> 00:39:05,420

And still to come, the bubbliest bust out in history.

585

00:39:05,420 --> 00:39:07,420

The door's gonna go.

586

00:39:14,420 --> 00:39:26,420

In a last ditch attempt to bust out of jail, Adam and Jamie unleash the supposedly awesome power of antacid, some in tablet form and some as raw ingredients.

587

00:39:26,420 --> 00:39:32,420

They start by drenching just the pill pile with the small hose. This is phase one.

588

00:39:33,420 --> 00:39:36,420

The pressure's still increasing on the plastic. I can see it moving.

589

00:39:36,420 --> 00:39:37,420

Really?

590

00:39:37,420 --> 00:39:39,420

Yeah, right in the corner down there.

591

00:39:39,420 --> 00:39:43,420

Even better, Adam's gauge cluster is finally feeling the pressure.

592

00:39:44,420 --> 00:39:50,420

Oh, we're getting something on the needle just a tiny bit. We got maybe 20% of 1 psi.

593

00:39:51,420 --> 00:39:56,420

We've probably taken care of more than half of the antacid tablets there, 14, 15,000 at this point.

594

00:40:03,420 --> 00:40:07,420

My crazy is that door seemed like it's pushing out on the bottom. It is.

595

00:40:07,420 --> 00:40:08,420

Is it?

596

00:40:08,420 --> 00:40:10,420

Look along the rail on the bottom.

597

00:40:10,420 --> 00:40:11,420

Yeah.

598

00:40:11,420 --> 00:40:13,420

The door is pressing out on the top and the bottom.

599

00:40:13,420 --> 00:40:16,420

We're at just a hair's breadth under one half of a psi.

600

00:40:16,420 --> 00:40:20,420

Yeah, the pile is almost entirely wet. The foam's crawled all the way up it.

601

00:40:20,420 --> 00:40:23,420

I don't know, dude. You want to do what we do best?

602

00:40:23,420 --> 00:40:24,420

Yeah.

603

00:40:24,420 --> 00:40:25,420

You want to take it to the next level?

604

00:40:25,420 --> 00:40:28,420

Yeah, over the top. Cue the deluge.

605

00:40:29,420 --> 00:40:33,420

Let's go to phase two to turn everything up to full.

606

00:40:33,420 --> 00:40:36,420

Phase two is the tub and the fire.

607

00:40:37,420 --> 00:40:42,420

If it does what it should, we're just moments away from the world's biggest belch.

608

00:40:45,420 --> 00:40:46,420

There we go.

609

00:40:46,420 --> 00:40:48,420

Water's pouring into our tub.

610

00:40:48,420 --> 00:40:49,420

Okay, everybody.

611

00:40:49,420 --> 00:40:51,420

Oh, we're at one psi.

612

00:40:51,420 --> 00:40:52,420

It's climbing like a rocket.

613

00:40:52,420 --> 00:40:54,420

One and a half psi.

614

00:40:54,420 --> 00:40:55,420

Look at the door.

615

00:40:55,420 --> 00:40:57,420

I'm going to go to the next level.

616

00:40:57,420 --> 00:40:59,420

I'm going to go to the next level.

617

00:40:59,420 --> 00:41:01,420

I'm going to go to the next level.

618

00:41:01,420 --> 00:41:03,420

It's climbing like a rocket.

619

00:41:03,420 --> 00:41:04,420

One and a half psi.

620

00:41:04,420 --> 00:41:05,420

Look at the door.

621

00:41:05,420 --> 00:41:06,420

Eyes open.

622

00:41:06,420 --> 00:41:07,420

Guys, be careful.

623

00:41:07,420 --> 00:41:08,420

Two psi.

624

00:41:08,420 --> 00:41:10,420

The door's going to go.

625

00:41:10,420 --> 00:41:12,420

Two and a half psi.

626

00:41:12,420 --> 00:41:14,420

Oh, my God.

627

00:41:17,420 --> 00:41:19,420

We're coming up to four psi.

628

00:41:19,420 --> 00:41:21,420

That's a joyous...

629

00:41:25,420 --> 00:41:26,420

Oh, my God.

630

00:41:26,420 --> 00:41:27,420

Is everyone okay?

631

00:41:31,420 --> 00:41:32,420

Dude!

632

00:41:32,420 --> 00:41:34,420

Look at that.

633

00:41:34,420 --> 00:41:39,420

You could hear it and within seconds the door started to potato chip.

634

00:41:39,420 --> 00:41:45,420

This massive door that I built is just like creaking and groaning and curling from all

635

00:41:45,420 --> 00:41:46,420

of this pressure.

636

00:41:46,420 --> 00:41:48,420

It was agonizing to watch it.

637

00:41:48,420 --> 00:41:54,420

This 150-pound piece of inch and a quarter bullet-resistant plastic, and yet all it

638

00:41:54,420 --> 00:42:00,420

took was one 6-mil piece of plastic with 4 pounds per square inch of pressure behind

639

00:42:00,420 --> 00:42:02,420

it to deflect this door.

640

00:42:02,420 --> 00:42:06,420

This is a great place to get your hands on.

641

00:42:06,420 --> 00:42:08,420

It's a great place to get your hands on.

642

00:42:08,420 --> 00:42:10,420

It's a great place to get your hands on.

643

00:42:10,420 --> 00:42:12,420

It's a great place to get your hands on.

644

00:42:12,420 --> 00:42:14,420

This is a great place to get your hands on.

645

00:42:14,420 --> 00:42:16,420

It's a great place to get your hands on.

646

00:42:16,420 --> 00:42:19,420

More than half a day for an hour to take off.

647

00:42:19,420 --> 00:42:24,420

With 4 pounds per square inch of pressure behind it to deflect this door.

648

00:42:24,420 --> 00:42:27,420

That much, and this is where it ended up.

649

00:42:27,420 --> 00:42:31,420

During the test, it was probably stretched easily twice that far.

650

00:42:31,420 --> 00:42:36,420

It's a cracker result, but just where does that leave prisoner Buster?

651

00:42:36,420 --> 00:42:39,420

Let's posit that he's inside the bag.

652

00:42:39,420 --> 00:42:44,220

on that. And what if he's able to actually seal himself outside the bag during a reaction?

653

00:42:44,220 --> 00:42:49,860

Well, I'll just put it this way. The amount of force required to bend this door like this,

654

00:42:49,860 --> 00:42:54,340

it's more than enough to squish our poor inmate like a grape.

655

00:42:54,340 --> 00:43:02,580

So the myth, like the inmate, is all washed up.

656

00:43:02,580 --> 00:43:08,340

I think we have clearly demonstrated the awesome power inside an antacid tablet, at least under

657

00:43:08,540 --> 00:43:09,540

bright conditions.

658

00:43:09,540 --> 00:43:12,540

Yeah, but they ain't going to break you out of jail. Busted.

659

00:43:12,540 --> 00:43:13,540

Totally busted.

660

00:43:13,540 --> 00:43:20,540

Yet another common household item that can wreak destruction.