

A close-up portrait of a woman with dark hair, wearing black-rimmed glasses and a blue top. She is smiling slightly. The background is dark and out of focus.

**The Skeptic Zone**  
**Show 370 - 22 Nov 2015**

**Jo Benhamu**

1  
00:00:22,550 --> 00:00:09,080  
welcome to the skeptic zone the podcast

2  
00:00:29,790 --> 00:00:25,230  
hello and welcome to the skeptic zone

3  
00:00:32,970 --> 00:00:29,800  
episode number 374 the 22nd of November

4  
00:00:36,750 --> 00:00:32,980  
2015 Richard Saunders here with you from

5  
00:00:40,860 --> 00:00:36,760  
Sydney Australia a nice overcast cool

6  
00:00:42,720 --> 00:00:40,870  
mild Sydney Australia over the last few

7  
00:00:46,590 --> 00:00:42,730  
days there's been a heatwave so this is

8  
00:00:48,030 --> 00:00:46,600  
a nice reprieve a nice rest coming up on

9  
00:00:49,320 --> 00:00:48,040  
this week's show we're going to kick off

10  
00:00:51,119 --> 00:00:49,330  
with an interview with honour my

11  
00:00:53,190 --> 00:00:51,129  
favorite skeptics from around the world

12  
00:00:56,610 --> 00:00:53,200  
Michael Marshall from the good thinking

13  
00:01:00,360 --> 00:00:56,620

society in the UK Marsh as he's known

14

00:01:02,490 --> 00:01:00,370

now Marsh appeared recently on the BBC

15

00:01:05,090 --> 00:01:02,500

on their morning programme watched by

16

00:01:09,330 --> 00:01:05,100

millions of people to put yet another

17

00:01:12,810 --> 00:01:09,340

nail in the coffin of that wacky crazy

18

00:01:17,130 --> 00:01:12,820

bizarre ridiculous where's my thesaurus

19

00:01:19,580 --> 00:01:17,140

mmm modality of homeopathy Marsh is

20

00:01:22,430 --> 00:01:19,590

going to tell us about that and the

21

00:01:25,469 --> 00:01:22,440

government blacklist when it comes to a

22

00:01:27,630 --> 00:01:25,479

medication in the UK what's going on

23

00:01:29,850 --> 00:01:27,640

there Michael Marshall from the good

24

00:01:32,100 --> 00:01:29,860

thinking society to kick off this week's

25

00:01:34,400 --> 00:01:32,110

episode of the skeptic zone following

26

00:01:36,930 --> 00:01:34,410

that it's evidence please with Joe

27

00:01:41,609 --> 00:01:36,940

alabasta Joe is going to be looking at

28

00:01:43,680 --> 00:01:41,619

the recent story of a mother so so moved

29

00:01:45,749 --> 00:01:43,690

and concerned by the plight of her child

30

00:01:47,760 --> 00:01:45,759

with whooping cough she actually put up

31

00:01:51,449 --> 00:01:47,770

a video online of her child with

32

00:01:55,380 --> 00:01:51,459

whooping cough to warn other parents of

33

00:01:57,330 --> 00:01:55,390

how awful this disease is she got a

34

00:01:59,730 --> 00:01:57,340

strong reaction lots of positive

35

00:02:01,969 --> 00:01:59,740

feedback of course other parents saying

36

00:02:05,999 --> 00:02:01,979

well done and this is an important thing

37

00:02:08,609 --> 00:02:06,009

but my goodness me the reaction she got

38

00:02:10,949 --> 00:02:08,619

from those anti-vaccination lunatics out

39

00:02:15,110 --> 00:02:10,959

there those people who are very keen to

40

00:02:17,850 --> 00:02:15,120

undermine our scientific advancements

41

00:02:20,280 --> 00:02:17,860

what's that expression the road to hell

42

00:02:21,930 --> 00:02:20,290

is paved with good intentions most of

43

00:02:23,070 --> 00:02:21,940

them really think they're doing the

44

00:02:26,070 --> 00:02:23,080

right thing they think they're on a

45

00:02:28,770 --> 00:02:26,080

crusade they think they're saving us all

46

00:02:30,340 --> 00:02:28,780

from the evil conspiracy of one world

47

00:02:34,750 --> 00:02:30,350

government or

48

00:02:37,630 --> 00:02:34,760

the big farmer monopolies or whatever it

49

00:02:39,910 --> 00:02:37,640

is I hope they think they're doing the

50

00:02:42,730 --> 00:02:39,920

right thing but of course this poor

51  
00:02:46,240 --> 00:02:42,740  
mother has been on the bad end of awful

52  
00:02:47,920 --> 00:02:46,250  
comments awful feedback we're going to

53  
00:02:49,830 --> 00:02:47,930  
hear a report from Joe all about this

54  
00:02:52,210 --> 00:02:49,840  
we're going to hear the video to this

55  
00:02:55,240 --> 00:02:52,220  
this poor little baby who has whooping

56  
00:02:58,000 --> 00:02:55,250  
cough and then we'll play a little clip

57  
00:03:00,610 --> 00:02:58,010  
from recent ABC television program the

58  
00:03:02,800 --> 00:03:00,620  
drum where they're discussing this this

59  
00:03:04,630 --> 00:03:02,810  
topic following that it's a weakened

60  
00:03:08,620 --> 00:03:04,640  
science from the Royal Institution of

61  
00:03:10,510 --> 00:03:08,630  
Australia w WR I a you sob you an

62  
00:03:12,850 --> 00:03:10,520  
institution that certainly defends

63  
00:03:15,520 --> 00:03:12,860

science and reason then to round off the

64

00:03:16,960 --> 00:03:15,530

show it's Maynard spooky action yet

65

00:03:19,060 --> 00:03:16,970

another interview from the recent

66

00:03:21,160 --> 00:03:19,070

Australian skeptics national convention

67

00:03:24,640 --> 00:03:21,170

this week Maynard's going to be speaking

68

00:03:27,160 --> 00:03:24,650

to a former skeptic zone reporter a vice

69

00:03:30,610 --> 00:03:27,170

president of Australian skeptics Joanne

70

00:03:33,250 --> 00:03:30,620

been amoo Chow and Benham ooh she's a

71

00:03:36,250 --> 00:03:33,260

clinical nurse consultant but she also

72

00:03:39,790 --> 00:03:36,260

coordinates clinical trials in radiation

73

00:03:43,380 --> 00:03:39,800

oncology wow that's a mouthful she's

74

00:03:45,850 --> 00:03:43,390

going to be discussing prostate cancer

75

00:03:47,860 --> 00:03:45,860

what an interesting interview it is I

76

00:03:52,840 --> 00:03:47,870

encourage you all to listen especially

77

00:03:54,850 --> 00:03:52,850

if your man around my age an interesting

78

00:03:56,860 --> 00:03:54,860

interview at jo-ann been amoo a defender

79

00:04:00,100 --> 00:03:56,870

of science of course a big happy

80

00:04:02,100 --> 00:04:00,110

birthday to dr. Reggie dr. Rachel Dunlop

81

00:04:05,230 --> 00:04:02,110

known to millions of dr. HC of course

82

00:04:07,360 --> 00:04:05,240

who just celebrated her birthday well

83

00:04:12,030 --> 00:04:07,370

done Reggie and now it's time for me to

84

00:04:15,580 --> 00:04:12,040

run downstairs and have some of the devo

85

00:04:19,270 --> 00:04:15,590

delicious indescribable peanut butter

86

00:04:21,190 --> 00:04:19,280

slice Jo alabaster and her family made

87

00:04:24,940 --> 00:04:21,200

for me we had a little celebration on

88

00:04:27,490 --> 00:04:24,950

door get together just today I got a big

89

00:04:29,580 --> 00:04:27,500

birthday coming up in there in the very

90

00:04:32,740 --> 00:04:29,590

near future and it was a little quiet

91

00:04:35,800 --> 00:04:32,750

chance to celebrate that and my goodness

92

00:04:38,940 --> 00:04:35,810

me Joe alabaster's peanut butter slicer

93

00:04:41,100 --> 00:04:38,950

oh boy I'm still recovering mmm-hmm

94

00:04:43,860 --> 00:04:41,110

but there's still room for a one slice

95

00:05:05,130 --> 00:04:43,870

mall i'm doing that and i hope you enjoy

96

00:05:10,990 --> 00:05:07,840

and joining me now on the line from

97

00:05:12,940 --> 00:05:11,000

Liverpool as he does every so often not

98

00:05:14,740 --> 00:05:12,950

often enough of course it's Michael

99

00:05:17,020 --> 00:05:14,750

Marshall from the good thinking society

100

00:05:18,300 --> 00:05:17,030

hello Michael hello Richard nice to

101  
00:05:21,880 --> 00:05:18,310  
speak to you again always a pleasure

102  
00:05:23,530 --> 00:05:21,890  
thank you and as our Sydney listeners

103  
00:05:25,480 --> 00:05:23,540  
might know there's been a heatwave

104  
00:05:26,860 --> 00:05:25,490  
recently in Sydney and right now we're

105  
00:05:28,420 --> 00:05:26,870  
on the tail end of it so I don't care

106  
00:05:31,050 --> 00:05:28,430  
what sort of whether you're having a

107  
00:05:33,070 --> 00:05:31,060  
Liverpool I would swap with you gladly

108  
00:05:34,630 --> 00:05:33,080  
well I don't think we'll ever have the

109  
00:05:36,700 --> 00:05:34,640  
kind of heat that you guys have in

110  
00:05:38,050 --> 00:05:36,710  
Australia it's it's the warmest November

111  
00:05:40,270 --> 00:05:38,060  
ever I think here in Liverpool it's

112  
00:05:41,620 --> 00:05:40,280  
sunny outside which is a nice but it's

113  
00:05:44,230 --> 00:05:41,630

also disconcerting about the long-term

114

00:05:45,490 --> 00:05:44,240

future of the planet but yeah it's not

115

00:05:48,550 --> 00:05:45,500

quite the heat that you guys are having

116

00:05:50,590 --> 00:05:48,560

air well let's put the weather aside for

117

00:05:52,660 --> 00:05:50,600

the moment marsh and let's talk about

118

00:05:55,420 --> 00:05:52,670

more interesting in probably more

119

00:05:57,430 --> 00:05:55,430

important things now news is filtered

120

00:05:59,200 --> 00:05:57,440

through to us here in Australia about

121

00:06:01,870 --> 00:05:59,210

something called a black list which I'll

122

00:06:03,580 --> 00:06:01,880

ask you to expand upon in a minute but

123

00:06:06,640 --> 00:06:03,590

also you've been out and about you've

124

00:06:08,200 --> 00:06:06,650

been appearing on national TV can you

125

00:06:10,420 --> 00:06:08,210

put all that together for our listeners

126  
00:06:11,710 --> 00:06:10,430  
yeah absolutely so this is this isn't as

127  
00:06:13,030 --> 00:06:11,720  
quite exciting for a sweetie this is

128  
00:06:14,470 --> 00:06:13,040  
well one of the projects we've been

129  
00:06:16,630 --> 00:06:14,480  
working on with good thinking fur I

130  
00:06:17,920 --> 00:06:16,640  
think it's been about a year I think one

131  
00:06:19,360 --> 00:06:17,930  
of the previous times I was on the show

132  
00:06:20,620 --> 00:06:19,370  
I think I mentioned that one of the

133  
00:06:22,810 --> 00:06:20,630  
things we were really looking at we had

134  
00:06:24,790 --> 00:06:22,820  
a legal team and we were poring over all

135  
00:06:26,560 --> 00:06:24,800  
the different ways that we could could

136  
00:06:28,090 --> 00:06:26,570  
bring legal challenges against the NHS

137  
00:06:29,920 --> 00:06:28,100  
provision of homeopathy so spending

138  
00:06:31,330 --> 00:06:29,930

actually government money on our health

139

00:06:34,240 --> 00:06:31,340

service on something we know it doesn't

140

00:06:35,590 --> 00:06:34,250

work and in 2010 the NHS even said we

141

00:06:37,480 --> 00:06:35,600

know this doesn't work they've still

142

00:06:39,550 --> 00:06:37,490

been spending 5 million pounds a year on

143

00:06:40,720 --> 00:06:39,560

it so it's we feel that a bit out of

144

00:06:41,860 --> 00:06:40,730

order and we were just looking at lots

145

00:06:43,390 --> 00:06:41,870

of different routes that we could try

146

00:06:44,950 --> 00:06:43,400

and challenge this and what are the ones

147

00:06:46,330 --> 00:06:44,960

we came across is actually just this one

148

00:06:47,800 --> 00:06:46,340

has hit the news it's it's a very

149

00:06:51,220 --> 00:06:47,810

technical one but it could be really

150

00:06:53,409 --> 00:06:51,230

significant so the NHS has a list called

151

00:06:55,240 --> 00:06:53,419

a blacklist schedule one of the drugs

152

00:06:57,400 --> 00:06:55,250

regulations and on this list you put

153

00:06:59,860 --> 00:06:57,410

anything that you don't want a GP to

154

00:07:01,719 --> 00:06:59,870

prescribe so it might be this drug over

155

00:07:03,969 --> 00:07:01,729

here by a pharmaceutical that's been

156

00:07:06,290 --> 00:07:03,979

proven not to be effective at all or it

157

00:07:07,760 --> 00:07:06,300

might be a drug that is expend

158

00:07:09,350 --> 00:07:07,770

but there is a cheaper one available

159

00:07:11,270 --> 00:07:09,360

elsewhere that's better you know it's

160

00:07:12,740 --> 00:07:11,280

when it goes off patent you don't pay if

161

00:07:14,029 --> 00:07:12,750

the expensive drug just use the cheap

162

00:07:15,830 --> 00:07:14,039

drug and save a lot of money so maybe

163

00:07:17,360 --> 00:07:15,840

you put the expensive one on this black

164

00:07:18,350 --> 00:07:17,370

list and there's things like that and

165

00:07:21,110 --> 00:07:18,360

there's things like if you can buy it

166

00:07:22,430 --> 00:07:21,120

very easily in supermarkets or

167

00:07:24,290 --> 00:07:22,440

pharmacies and it's not going hard to

168

00:07:25,490 --> 00:07:24,300

find this very cheap then if you go on

169

00:07:28,249 --> 00:07:25,500

the black list so you can't get

170

00:07:30,529 --> 00:07:28,259

ibuprofen or paracetamol or something

171

00:07:32,689 --> 00:07:30,539

like that on the NHS because why bother

172

00:07:34,189 --> 00:07:32,699

getting the whole health service to go

173

00:07:35,899 --> 00:07:34,199

through the bureaucracy and the admin of

174

00:07:38,360 --> 00:07:35,909

getting getting you a prescription which

175

00:07:39,619 --> 00:07:38,370

you pay a pound for which for something

176

00:07:41,300 --> 00:07:39,629

that you can go into a supermarket and

177

00:07:43,580 --> 00:07:41,310

buy for 20 pence you know so there's

178

00:07:44,930 --> 00:07:43,590

lots of different reasons and this list

179

00:07:46,279 --> 00:07:44,940

got three thousand different things on

180

00:07:47,510 --> 00:07:46,289

it some of the things are like say they

181

00:07:49,399 --> 00:07:47,520

actually work whether it's not worth

182

00:07:51,020 --> 00:07:49,409

they're not cost effective so we have a

183

00:07:53,540 --> 00:07:51,030

look at the reasons why stuff gets added

184

00:07:55,040 --> 00:07:53,550

to this list and won't you know if it

185

00:07:57,290 --> 00:07:55,050

doesn't work it should go on the list

186

00:07:59,540 --> 00:07:57,300

well we know homeopathy doesn't work the

187

00:08:02,089 --> 00:07:59,550

government stated this for five years so

188

00:08:03,260 --> 00:08:02,099

surely it only takes one reason to go on

189

00:08:05,480 --> 00:08:03,270

the list so that should be reason enough

190

00:08:07,129 --> 00:08:05,490

but we've got the next reason now is it

191

00:08:09,409 --> 00:08:07,139

is there something available that's

192

00:08:10,879 --> 00:08:09,419

better but cheaper well everything is

193

00:08:13,969 --> 00:08:10,889

better than it because it doesn't work

194

00:08:16,100 --> 00:08:13,979

so it takes that box you know they were

195

00:08:18,110 --> 00:08:16,110

saying it even if people really wanted

196

00:08:20,300 --> 00:08:18,120

their homeopathy if it was problem this

197

00:08:22,249 --> 00:08:20,310

list and GPS couldn't prescribe it would

198

00:08:24,170 --> 00:08:22,259

this stop anybody getting as anybody's

199

00:08:25,999 --> 00:08:24,180

access to homeopathy well no because you

200

00:08:27,110 --> 00:08:26,009

can go into your pharmacies you can go

201  
00:08:28,279 --> 00:08:27,120  
into your boots and your whole new

202  
00:08:31,459 --> 00:08:28,289  
Barrett and your health stores and

203  
00:08:32,569 --> 00:08:31,469  
homeopathy costs about a fiver well if

204  
00:08:33,949 --> 00:08:32,579  
you're on the NHS you could get a

205  
00:08:35,810 --> 00:08:33,959  
prescription it costs about seven or

206  
00:08:37,519 --> 00:08:35,820  
eight pounds so it's actually cheaper do

207  
00:08:38,990 --> 00:08:37,529  
not get it on prescription so we kind of

208  
00:08:40,670 --> 00:08:39,000  
made this case the government and said

209  
00:08:41,930 --> 00:08:40,680  
you've got this black list you've got it

210  
00:08:44,000 --> 00:08:41,940  
because you've got it you've got a duty

211  
00:08:46,040 --> 00:08:44,010  
under the European laws to maintain this

212  
00:08:47,960 --> 00:08:46,050  
list we think homeopathy has to be on it

213  
00:08:50,300 --> 00:08:47,970

and this is the arguably been making to

214

00:08:51,949 --> 00:08:50,310

them for since the start of 2015 and

215

00:08:53,480 --> 00:08:51,959

initially they said well we're not going

216

00:08:54,740 --> 00:08:53,490

to add anything to the list we've got no

217

00:08:56,569 --> 00:08:54,750

plans to change the list we haven't

218

00:08:58,490 --> 00:08:56,579

changed it for a long time we're just

219

00:09:00,920 --> 00:08:58,500

not going to look at it and we said yeah

220

00:09:02,780 --> 00:09:00,930

but legally you have to and you can't

221

00:09:04,759 --> 00:09:02,790

just decide arbitrarily the random point

222

00:09:06,650 --> 00:09:04,769

to stop doing your job on this list

223

00:09:07,639 --> 00:09:06,660

because if you imagine that you make one

224

00:09:09,139 --> 00:09:07,649

of the products that's on the list

225

00:09:10,550 --> 00:09:09,149

you're gonna be pretty annoyed that

226

00:09:12,350 --> 00:09:10,560

you're on the list and this other

227

00:09:13,810 --> 00:09:12,360

product that's newer isn't on the list

228

00:09:15,949 --> 00:09:13,820

so it's going to be sort of like

229

00:09:17,780 --> 00:09:15,959

discriminating against your worthless

230

00:09:19,250 --> 00:09:17,790

product in the win and we may at this

231

00:09:20,060 --> 00:09:19,260

point in them said I mean if that's your

232

00:09:21,710 --> 00:09:20,070

policy then

233

00:09:23,810 --> 00:09:21,720

you might find that everyone on that

234

00:09:25,280 --> 00:09:23,820

list has a right to get in touch with a

235

00:09:28,070 --> 00:09:25,290

fairly angry letter from their lawyers

236

00:09:29,930 --> 00:09:28,080

and to make this point back and the

237

00:09:31,580 --> 00:09:29,940

great news is that a couple of weeks ago

238

00:09:35,090 --> 00:09:31,590

we have finally from the department

239

00:09:36,290 --> 00:09:35,100

health and they're in early 2016 they're

240

00:09:38,420 --> 00:09:36,300

gonna they're appointed they've

241

00:09:40,160 --> 00:09:38,430

appointed a minister to look at a proper

242

00:09:41,930 --> 00:09:40,170

consultation on whether homeopathy

243

00:09:44,630 --> 00:09:41,940

should go on this list we're going to

244

00:09:46,430 --> 00:09:44,640

part that consultation the people we

245

00:09:48,410 --> 00:09:46,440

know who are experts in the field people

246

00:09:49,580 --> 00:09:48,420

at Ed's ardern stand the UK's chief

247

00:09:51,410 --> 00:09:49,590

medical officer those are the people

248

00:09:53,060 --> 00:09:51,420

that will be looking to get involved and

249

00:09:54,440 --> 00:09:53,070

share their expert opinion on this and I

250

00:09:56,870 --> 00:09:54,450

think we've got a really good shot at

251

00:09:59,390 --> 00:09:56,880

getting homeopathy banned in GP

252

00:10:00,830 --> 00:09:59,400

surgeries and as I say it's not going to

253

00:10:02,720 --> 00:10:00,840

stop your average consumer if they

254

00:10:04,160 --> 00:10:02,730

really feel they need their sugar pills

255

00:10:06,500 --> 00:10:04,170

aren't going to do anything they can

256

00:10:08,810 --> 00:10:06,510

walk into a pharmacy they can walk into

257

00:10:10,010 --> 00:10:08,820

a supermarket they can look online and

258

00:10:11,570 --> 00:10:10,020

get there for me off of thee but it's

259

00:10:13,610 --> 00:10:11,580

it's the fact that it's going to stop it

260

00:10:16,310 --> 00:10:13,620

being prescribed on the NHS and that is

261

00:10:17,870 --> 00:10:16,320

a huge huge symbolic victory as well as

262

00:10:19,100 --> 00:10:17,880

a real victory it'll save a couple

263

00:10:21,080 --> 00:10:19,110

hundred thousand pounds ago but the

264

00:10:22,600 --> 00:10:21,090

symbolism of it is so important that

265

00:10:25,010 --> 00:10:22,610

we're no longer endorsing this

266

00:10:27,920 --> 00:10:25,020

absolutely it would send a powerful

267

00:10:30,910 --> 00:10:27,930

message around the world and I can I can

268

00:10:34,010 --> 00:10:30,920

almost hear the homeopaths screeching

269

00:10:35,600 --> 00:10:34,020

yeah well if you if you look at any of

270

00:10:37,370 --> 00:10:35,610

the comments on any of the news coverage

271

00:10:39,320 --> 00:10:37,380

you live you have definitely heard or

272

00:10:41,180 --> 00:10:39,330

the homeopath sir with a few things to

273

00:10:43,370 --> 00:10:41,190

say it because you say I was on TV about

274

00:10:46,070 --> 00:10:43,380

this on breakfast news debating with her

275

00:10:47,540 --> 00:10:46,080

with a homeopath are there and Simon was

276

00:10:50,090 --> 00:10:47,550

on Simon seeing head of the good

277

00:10:52,040 --> 00:10:50,100

thinking society he was on the TV and

278

00:10:53,900 --> 00:10:52,050

the radio and lots of different radio

279

00:10:55,670 --> 00:10:53,910

and we made it into every national

280

00:10:57,170 --> 00:10:55,680

newspaper as well so he was it was

281

00:10:58,700 --> 00:10:57,180

really big news when you couldn't have

282

00:11:00,140 --> 00:10:58,710

missed it really if you were sort of

283

00:11:01,700 --> 00:11:00,150

paying attention to the news at all that

284

00:11:03,770 --> 00:11:01,710

day and the great thing about that is

285

00:11:05,770 --> 00:11:03,780

it's because everywhere give us that

286

00:11:07,580 --> 00:11:05,780

coverage because everywhere give us very

287

00:11:09,500 --> 00:11:07,590

positive coverage about what we were

288

00:11:11,030 --> 00:11:09,510

trying to do it puts pressure on the

289

00:11:13,700 --> 00:11:11,040

government to do this right they can't

290

00:11:15,410 --> 00:11:13,710

just bow down to any lobbying from

291

00:11:16,820 --> 00:11:15,420

homeopaths without following the letter

292

00:11:18,200 --> 00:11:16,830

of the law and we think we've got a good

293

00:11:20,180 --> 00:11:18,210

handle on the law on this one so we

294

00:11:22,430 --> 00:11:20,190

think is a real chance and this will

295

00:11:25,130 --> 00:11:22,440

it'll stop gp's prescribing it which is

296

00:11:27,110 --> 00:11:25,140

one element of the funding the other way

297

00:11:28,250 --> 00:11:27,120

that the homeopathic gets funded it on

298

00:11:30,290 --> 00:11:28,260

the NHS in this country is through

299

00:11:32,720 --> 00:11:30,300

homeopathic hospitals which we still

300

00:11:33,860 --> 00:11:32,730

have one or two of we have five they

301

00:11:36,320 --> 00:11:33,870

start they're closed down

302

00:11:38,240 --> 00:11:36,330

so in all of the five million pounds

303

00:11:40,640 --> 00:11:38,250

that we spend on homeopathy in the UK it

304

00:11:42,710 --> 00:11:40,650

covers about 110,000 pounds which isn't

305

00:11:45,050 --> 00:11:42,720

a huge amount but at the same time our

306

00:11:47,030 --> 00:11:45,060

other work is knocking on the doors of

307

00:11:48,620 --> 00:11:47,040

those hospitals and challenging the

308

00:11:50,180 --> 00:11:48,630

funding there so what we do it is with

309

00:11:52,100 --> 00:11:50,190

challenging every little bit of this and

310

00:11:54,440 --> 00:11:52,110

this just shows it's another step on the

311

00:11:56,329 --> 00:11:54,450

on the way towards the NHS becoming

312

00:11:58,519 --> 00:11:56,339

homeopathy free and actually being able

313

00:11:59,840 --> 00:11:58,529

to solve yeah but its head up into their

314

00:12:02,930 --> 00:11:59,850

priority and say we're no longer

315

00:12:05,000 --> 00:12:02,940

attached to this complete quackery it's

316

00:12:06,650 --> 00:12:05,010

going to happen I mean it is one thing

317

00:12:10,130 --> 00:12:06,660

I've learned over the years of being in

318

00:12:12,440 --> 00:12:10,140

the skeptical game is um things happen

319

00:12:14,840 --> 00:12:12,450

at their own pace and sometimes it can

320

00:12:17,810 --> 00:12:14,850

be very slow and can be bewildering I

321

00:12:20,660 --> 00:12:17,820

mean if we take homeopathy as an example

322

00:12:22,670 --> 00:12:20,670

it so clearly doesn't work and it

323

00:12:25,519 --> 00:12:22,680

clearly cannot work if the laws of

324

00:12:28,340 --> 00:12:25,529

physics hold true you think that it

325

00:12:31,250 --> 00:12:28,350

would be a quick death but it's quite

326

00:12:33,340 --> 00:12:31,260

staggering how it it hangs on and there

327

00:12:37,100 --> 00:12:33,350

seems to be some sort of lethargy

328

00:12:39,740 --> 00:12:37,110

officialdom to put the nail in the

329

00:12:41,449 --> 00:12:39,750

coffin yeah I think that's right and in

330

00:12:43,400 --> 00:12:41,459

a way I can sort of see why I mean the

331

00:12:44,900 --> 00:12:43,410

majority of the public don't really know

332

00:12:46,610 --> 00:12:44,910

what homeopathy is most of the time

333

00:12:47,990 --> 00:12:46,620

occasion it will sort of come into view

334

00:12:50,120 --> 00:12:48,000

when there's a big story in the papers

335

00:12:51,740 --> 00:12:50,130

or you know when a lot of random

336

00:12:53,360 --> 00:12:51,750

skeptics decide to take homeopathic

337

00:12:54,530 --> 00:12:53,370

overdoses on the streets and it kind of

338

00:12:56,780 --> 00:12:54,540

pushes the conversation into the

339

00:12:58,250 --> 00:12:56,790

narrative and into the landscape a

340

00:12:59,990 --> 00:12:58,260

little bit but other than that your

341

00:13:01,610 --> 00:13:00,000

average person just thinks well this is

342

00:13:04,370 --> 00:13:01,620

herb or medicine it's a natural medicine

343

00:13:06,140 --> 00:13:04,380

I live I might not try it but maybe it's

344

00:13:07,910 --> 00:13:06,150

maybe other people should have access to

345

00:13:09,829 --> 00:13:07,920

it and maybe that's not a bad thing and

346

00:13:10,940 --> 00:13:09,839

those sound like persuasive argument so

347

00:13:13,130 --> 00:13:10,950

I can imagine that there are politicians

348

00:13:15,440 --> 00:13:13,140

who think if I was to make a stand on

349

00:13:16,610 --> 00:13:15,450

homeopathy how many people's vote to my

350

00:13:18,230 --> 00:13:16,620

wedding and how many people's votes am I

351

00:13:21,350 --> 00:13:18,240

losing and this is the other thing for

352

00:13:22,579 --> 00:13:21,360

us is that when we when we were campaign

353

00:13:24,019 --> 00:13:22,589

about homeopathy when I was just doing

354

00:13:25,910 --> 00:13:24,029

this in my spare time and it is a

355

00:13:27,890 --> 00:13:25,920

volunteer and you know how you if time

356

00:13:29,449 --> 00:13:27,900

can get quite limited we did the 10 23

357

00:13:31,310 --> 00:13:29,459

campaign and we had a little bit of

358

00:13:34,310 --> 00:13:31,320

local success on the NHS getting rid of

359

00:13:36,290 --> 00:13:34,320

it in the world just near Liverpool but

360

00:13:38,240 --> 00:13:36,300

because we weren't we didn't have the

361

00:13:40,490 --> 00:13:38,250

time and the expertise to follow that

362

00:13:42,770 --> 00:13:40,500

conversation we missed when the

363

00:13:44,870 --> 00:13:42,780

homeopaths lobbied for that decision to

364

00:13:46,250 --> 00:13:44,880

be undone and because it was just the

365

00:13:47,540 --> 00:13:46,260

homeopath lobbying and there was no

366

00:13:49,280 --> 00:13:47,550

voice on our side

367

00:13:51,050 --> 00:13:49,290

they were successful and I think this is

368

00:13:52,790 --> 00:13:51,060

a big part of it is that often when

369

00:13:54,470 --> 00:13:52,800

these things these consultations come up

370

00:13:56,840 --> 00:13:54,480

all these decisions are there to

371

00:13:58,550 --> 00:13:56,850

potentially be made skeptics might not

372

00:14:00,380 --> 00:13:58,560

see it or when they do see it we might

373

00:14:02,480 --> 00:14:00,390

kind of go Oh brilliant the NHS is going

374

00:14:04,550 --> 00:14:02,490

to get rid of homeopathy fantastic yeah

375

00:14:05,690 --> 00:14:04,560

but actually what we need to see is the

376

00:14:07,280 --> 00:14:05,700

NHS looks like they're going to get rid

377

00:14:08,750 --> 00:14:07,290

of homeopathy I need to send them a

378

00:14:10,160 --> 00:14:08,760

letter of support because they're going

379

00:14:12,530 --> 00:14:10,170

to get a thousand letters from people

380

00:14:14,540 --> 00:14:12,540

who want to get who wanted to stay so

381

00:14:15,980 --> 00:14:14,550

they need to hear our voice in this in

382

00:14:17,990 --> 00:14:15,990

this conversation and that's why yes

383

00:14:19,490 --> 00:14:18,000

we're trying to be a lobbyist that's why

384

00:14:21,710 --> 00:14:19,500

we're trying to put together a campaign

385

00:14:23,389 --> 00:14:21,720

or a project of good thinking to

386

00:14:26,540 --> 00:14:23,399

represent the skeptical voice and make

387

00:14:27,920 --> 00:14:26,550

sure it's a balanced view point but the

388

00:14:29,449 --> 00:14:27,930

the politicians here they don't just

389

00:14:31,100 --> 00:14:29,459

hear from home your pats and people who

390

00:14:33,769 --> 00:14:31,110

use homeopathy they're also hearing from

391

00:14:35,509 --> 00:14:33,779

rationalist to say that five million

392

00:14:37,579 --> 00:14:35,519

pounds can go to a lot of good causes

393

00:14:39,370 --> 00:14:37,589

can do a lot of good on the NHS if it's

394

00:14:42,110 --> 00:14:39,380

not going on stuff we nor doesn't work

395

00:14:44,540 --> 00:14:42,120

well of course they also have the

396

00:14:46,340 --> 00:14:44,550

situation and the same is true here that

397

00:14:49,040 --> 00:14:46,350

we have to be vigilant because the other

398

00:14:51,500 --> 00:14:49,050

side are eager and keen and they have

399

00:14:53,269 --> 00:14:51,510

many supporters waiting by their

400

00:14:55,639 --> 00:14:53,279

computers to send letters or to take

401  
00:14:57,530 --> 00:14:55,649  
action of the drop of the hat so that's

402  
00:15:00,340 --> 00:14:57,540  
of course that's something we have to

403  
00:15:02,810 --> 00:15:00,350  
bear in mind not only with homeopathy

404  
00:15:04,460 --> 00:15:02,820  
exactly but especially things like the

405  
00:15:06,740 --> 00:15:04,470  
anti-vaccination crowd and things like

406  
00:15:09,290 --> 00:15:06,750  
that but just getting back to this TV

407  
00:15:10,490 --> 00:15:09,300  
appearance I was pretty impressed much I

408  
00:15:13,310 --> 00:15:10,500  
thought you did pretty well what was the

409  
00:15:15,620 --> 00:15:13,320  
name of that show that was BBC Breakfast

410  
00:15:16,880 --> 00:15:15,630  
I mean that's the flagship TV program

411  
00:15:18,769 --> 00:15:16,890  
for the BBC in the morning it's watched

412  
00:15:21,769 --> 00:15:18,779  
by a 6 million people live so it was a

413  
00:15:23,060 --> 00:15:21,779

very very bizarre situation I kind of

414

00:15:24,829 --> 00:15:23,070

found out the day before that I was

415

00:15:26,870 --> 00:15:24,839

going in I thought oh god can I really

416

00:15:28,790 --> 00:15:26,880

do this am I gonna bottle this but ya

417

00:15:30,500 --> 00:15:28,800

know it was it was fun it was it was a

418

00:15:32,750 --> 00:15:30,510

bizarre situation but it was an awful

419

00:15:37,100 --> 00:15:32,760

lot of fun yeah it was nice to be able

420

00:15:38,840 --> 00:15:37,110

to put forward our own reasoning because

421

00:15:40,880 --> 00:15:38,850

so many people will try and paint us is

422

00:15:42,380 --> 00:15:40,890

like oh well these are big evil skeptics

423

00:15:44,210 --> 00:15:42,390

and they're probably being paid by Big

424

00:15:46,550 --> 00:15:44,220

Pharma they want to take away you know

425

00:15:47,870 --> 00:15:46,560

they want to take away your choice and

426

00:15:50,590 --> 00:15:47,880

we were able to say essentially that

427

00:15:52,880 --> 00:15:50,600

just at this country i mean the the

428

00:15:55,160 --> 00:15:52,890

British Medical Association the junior

429

00:15:56,540 --> 00:15:55,170

doctors have had their peer cut very

430

00:15:57,949 --> 00:15:56,550

recently and they are about to go on

431

00:15:59,269 --> 00:15:57,959

strike I think next week where there's

432

00:16:01,010 --> 00:15:59,279

going to be the first strike on the NHS

433

00:16:03,020 --> 00:16:01,020

full striking in

434

00:16:04,940 --> 00:16:03,030

got very very many years so I was able

435

00:16:06,560 --> 00:16:04,950

to say take five million pounds away

436

00:16:07,670 --> 00:16:06,570

from homeopathy what can you do with

437

00:16:09,170 --> 00:16:07,680

that money well you could give it to the

438

00:16:11,150 --> 00:16:09,180

junior doctors for 14 people who think

439

00:16:12,020 --> 00:16:11,160

five millions not much tell that to the

440

00:16:14,360 --> 00:16:12,030

people who haven't go on strike because

441

00:16:15,590 --> 00:16:14,370

out an air pear cut yet we're financing

442

00:16:17,240 --> 00:16:15,600

something we know doesn't work so was

443

00:16:19,220 --> 00:16:17,250

able to put those arguments across

444

00:16:21,650 --> 00:16:19,230

result was a was very valuable to get to

445

00:16:23,390 --> 00:16:21,660

get a message out there I think so and

446

00:16:25,520 --> 00:16:23,400

what I'll do focuses I'll linked the

447

00:16:28,280 --> 00:16:25,530

video of michael marshall on that show

448

00:16:29,660 --> 00:16:28,290

in this week's show note so you can just

449

00:16:31,400 --> 00:16:29,670

google the name of the show and Michael

450

00:16:33,380 --> 00:16:31,410

Marshall I'm sure it'll come up in

451  
00:16:35,770 --> 00:16:33,390  
youtube it was it was quite a good

452  
00:16:39,350 --> 00:16:35,780  
performance and that the man you were

453  
00:16:41,510 --> 00:16:39,360  
pitted against was interesting this what

454  
00:16:43,580 --> 00:16:41,520  
one thing that really took me when I was

455  
00:16:46,550 --> 00:16:43,590  
watching it is when he was claiming

456  
00:16:49,280 --> 00:16:46,560  
something what was yes there is minut

457  
00:16:51,080 --> 00:16:49,290  
something particle all the substances in

458  
00:16:53,420 --> 00:16:51,090  
the home homeopathic preparations

459  
00:16:55,550 --> 00:16:53,430  
nothing no there's not does he know what

460  
00:16:56,960 --> 00:16:55,560  
he's talking about the other question is

461  
00:16:58,040 --> 00:16:56,970  
about you to do they have nothing in

462  
00:17:01,190 --> 00:16:58,050  
them actually the majority of

463  
00:17:03,650 --> 00:17:01,200

homeopathic medicines on sale in in the

464

00:17:05,090 --> 00:17:03,660

High Street pharmacies do contain small

465

00:17:08,449 --> 00:17:05,100

amounts admittedly but they do contain

466

00:17:10,010 --> 00:17:08,459

the substances on the label yeah well

467

00:17:11,270 --> 00:17:10,020

this is the thing I think and it's it's

468

00:17:13,100 --> 00:17:11,280

hard to know I mean obviously you and a

469

00:17:15,560 --> 00:17:13,110

lot of pressure maybe he made an error

470

00:17:17,150 --> 00:17:15,570

of judgment i'm not quite sure but yeah

471

00:17:18,770 --> 00:17:17,160

I mean he certainly knows he's talking

472

00:17:20,240 --> 00:17:18,780

about because I mean he was labeled as

473

00:17:22,699 --> 00:17:20,250

he is it came up on screen Isaiah can

474

00:17:24,230 --> 00:17:22,709

consultant rheumatologist but the the

475

00:17:27,410 --> 00:17:24,240

job titles they fail to mention was that

476

00:17:28,790 --> 00:17:27,420

he's the clinical director of the London

477

00:17:30,860 --> 00:17:28,800

homeopathic hospital and he's the

478

00:17:34,030 --> 00:17:30,870

homeopath to the Queen as they didn't

479

00:17:36,350 --> 00:17:34,040

mention the his uh his deep-rooted

480

00:17:38,540 --> 00:17:36,360

career in homeopathy when they put his

481

00:17:39,860 --> 00:17:38,550

job title up but yeah so I was pointing

482

00:17:41,180 --> 00:17:39,870

out because if the thing is all the way

483

00:17:42,620 --> 00:17:41,190

through is that the morning as they were

484

00:17:43,910 --> 00:17:42,630

trailing this on TV they were saying

485

00:17:45,620 --> 00:17:43,920

well it's about taking if something

486

00:17:47,210 --> 00:17:45,630

taking a little bit of something that

487

00:17:48,740 --> 00:17:47,220

would cause an illness to get rid of an

488

00:17:51,020 --> 00:17:48,750

illness so it's at it's like taking

489

00:17:52,610 --> 00:17:51,030

pollen to cure her fever so when I went

490

00:17:53,540 --> 00:17:52,620

on the first thing I said was well we

491

00:17:55,520 --> 00:17:53,550

need to know what we're talking about

492

00:17:56,960 --> 00:17:55,530

this is substances I've got nothing at

493

00:17:58,970 --> 00:17:56,970

all in these treatments that just sugar

494

00:18:01,010 --> 00:17:58,980

pills there is no apollon in the hay

495

00:18:02,720 --> 00:18:01,020

fever tablet there's no sulfur in the

496

00:18:04,340 --> 00:18:02,730

sulfur tablets they're just sugar pills

497

00:18:06,380 --> 00:18:04,350

which i think is a very key point to get

498

00:18:10,400 --> 00:18:06,390

across it's a point we have to keep

499

00:18:12,200 --> 00:18:10,410

making and maggie in making because many

500

00:18:13,590 --> 00:18:12,210

people out there in the media to are

501  
00:18:16,620 --> 00:18:13,600  
under the impression

502  
00:18:18,510 --> 00:18:16,630  
homeopathy is small doses of something

503  
00:18:20,640 --> 00:18:18,520  
or other and yes we have to keep

504  
00:18:23,279 --> 00:18:20,650  
hammering the fact that no it's no dose

505  
00:18:25,620 --> 00:18:23,289  
it's nothing it's Lloyd yeah and yeah

506  
00:18:27,600 --> 00:18:25,630  
and I wonder how much of the the

507  
00:18:30,779 --> 00:18:27,610  
homeopathy lobby groups to hold me off

508  
00:18:32,909 --> 00:18:30,789  
the industry bodies want to keep that

509  
00:18:35,310 --> 00:18:32,919  
confusion alive so they want they want

510  
00:18:36,960 --> 00:18:35,320  
outright lie because that would be very

511  
00:18:38,760 --> 00:18:36,970  
very unwise if than board there well say

512  
00:18:40,529 --> 00:18:38,770  
is that while we take my new doses and

513  
00:18:42,539 --> 00:18:40,539

we with their very diluted but they

514

00:18:44,580 --> 00:18:42,549

won't say how dilute it they won't tell

515

00:18:46,529 --> 00:18:44,590

you there's nothing in it and this is

516

00:18:48,419 --> 00:18:46,539

the reason that I think that's such a

517

00:18:50,190 --> 00:18:48,429

powerful hard to infer for skeptics

518

00:18:51,419 --> 00:18:50,200

because the moment that you start

519

00:18:53,310 --> 00:18:51,429

pointing out there is nothing in

520

00:18:55,049 --> 00:18:53,320

homeopathy the homie up homie past

521

00:18:56,640 --> 00:18:55,059

they've got one of two choices one is to

522

00:18:58,289 --> 00:18:56,650

say well of course there's nothing in it

523

00:19:00,060 --> 00:18:58,299

it all works on the energies and

524

00:19:02,010 --> 00:19:00,070

vibrations of the water of the memory of

525

00:19:04,890 --> 00:19:02,020

the sugar and everyone goes sorry what

526

00:19:07,110 --> 00:19:04,900

no that sounds like nonsense all they

527

00:19:08,580 --> 00:19:07,120

have to pretend that there's something

528

00:19:10,020 --> 00:19:08,590

in it and this is something that

529

00:19:11,970 --> 00:19:10,030

happened when I was talking to peter

530

00:19:13,620 --> 00:19:11,980

fisher that the Queen's homeopath he

531

00:19:15,450 --> 00:19:13,630

said well actually the majority of

532

00:19:17,100 --> 00:19:15,460

homeopathic remedies on sale do have

533

00:19:19,470 --> 00:19:17,110

something in it i'll be at small amounts

534

00:19:20,970 --> 00:19:19,480

now that simply isn't true i don't know

535

00:19:23,250 --> 00:19:20,980

where he's got bad information from I

536

00:19:25,500 --> 00:19:23,260

mean I looked across the the big

537

00:19:27,330 --> 00:19:25,510

homeopathic retailers peak like Nelson's

538

00:19:29,310 --> 00:19:27,340

the majority of actually in a quick

539

00:19:31,110 --> 00:19:29,320

analysis of what they sailed them to

540

00:19:33,140 --> 00:19:31,120

sell the majority of them simply have

541

00:19:36,090 --> 00:19:33,150

nothing in I mean because you have the

542

00:19:37,950 --> 00:19:36,100

anything below 12 12 see we have a

543

00:19:39,450 --> 00:19:37,960

gradual limit might still contain

544

00:19:41,210 --> 00:19:39,460

something so if it's typically you'll

545

00:19:44,430 --> 00:19:41,220

buy remedies that are 30 c or above

546

00:19:46,440 --> 00:19:44,440

sometimes you'll buy 6 c which is a one

547

00:19:48,510 --> 00:19:46,450

with 12 zeroes after it that's how how

548

00:19:50,279 --> 00:19:48,520

much how well dilute it is it's not past

549

00:19:52,350 --> 00:19:50,289

the Avogadro limit so it may still be

550

00:19:54,029 --> 00:19:52,360

something in it tiny tiny amounts but

551  
00:19:56,430 --> 00:19:54,039  
the thing is most places that sell

552  
00:19:58,560 --> 00:19:56,440  
homeopathy of 40 different homeopathic

553  
00:20:00,990 --> 00:19:58,570  
treatments 30 of them will be 30 c or

554  
00:20:02,909 --> 00:20:01,000  
above and they might have 10 6 c1 so

555  
00:20:04,890 --> 00:20:02,919  
even just looking at it looking at it

556  
00:20:07,529 --> 00:20:04,900  
like that the majority certainly have

557  
00:20:09,450 --> 00:20:07,539  
nothing in it and that's a very untrue

558  
00:20:10,919 --> 00:20:09,460  
statement that mr. Fisher or dr. Fisher

559  
00:20:12,149 --> 00:20:10,929  
made during that interview it's

560  
00:20:14,130 --> 00:20:12,159  
unfortunate didn't have the chance to

561  
00:20:16,320 --> 00:20:14,140  
come back on that and because you don't

562  
00:20:17,640 --> 00:20:16,330  
to get in a tit-for-tat basically well

563  
00:20:19,500 --> 00:20:17,650

and it's also something I've learned

564

00:20:21,450 --> 00:20:19,510

after many years of doing this too is

565

00:20:23,760 --> 00:20:21,460

that when you're in a situation like

566

00:20:26,400 --> 00:20:23,770

that noon you're having some sort of

567

00:20:28,870 --> 00:20:26,410

media debate with somebody and you know

568

00:20:30,430 --> 00:20:28,880

the points and you know what you're

569

00:20:32,350 --> 00:20:30,440

saying is backed up by the evidence and

570

00:20:35,170 --> 00:20:32,360

they make an outrageous statement you

571

00:20:38,590 --> 00:20:35,180

can't always nail it you cannot and you

572

00:20:40,300 --> 00:20:38,600

can lose sleep thinking why didn't I say

573

00:20:44,230 --> 00:20:40,310

this why didn't I say this sometimes you

574

00:20:45,610 --> 00:20:44,240

do you do yeah yeah but it's very sorry

575

00:20:47,170 --> 00:20:45,620

you make a choice about what you're

576  
00:20:48,940 --> 00:20:47,180  
focusing on and the point that I focused

577  
00:20:52,270 --> 00:20:48,950  
on which i think is also a very good

578  
00:20:54,190 --> 00:20:52,280  
argument to use is that we're talking

579  
00:20:56,980 --> 00:20:54,200  
about something that for five years at

580  
00:20:58,960 --> 00:20:56,990  
least the NHS the government the every

581  
00:21:00,820 --> 00:20:58,970  
scientific chief science officer the

582  
00:21:02,170 --> 00:21:00,830  
British Medical Association they've been

583  
00:21:04,480 --> 00:21:02,180  
unanimous that this stuff doesn't work

584  
00:21:06,070 --> 00:21:04,490  
so the NHS has said this thing does not

585  
00:21:07,780 --> 00:21:06,080  
work and yet we're going to spend five

586  
00:21:09,340 --> 00:21:07,790  
million pounds a year on it since then

587  
00:21:10,990 --> 00:21:09,350  
now the point I was making on the show

588  
00:21:12,610 --> 00:21:11,000

was that if what we were talking about

589

00:21:14,260 --> 00:21:12,620

was a pharmaceutical rather than

590

00:21:16,180 --> 00:21:14,270

homeopathy there would be nobody

591

00:21:17,770 --> 00:21:16,190

defending that not one person would come

592

00:21:18,850 --> 00:21:17,780

on and say well actually I think we

593

00:21:20,080 --> 00:21:18,860

should have a good look at the evidence

594

00:21:21,760 --> 00:21:20,090

and maybe people should be allowed to

595

00:21:24,010 --> 00:21:21,770

choose it and maybe we should have it

596

00:21:25,630 --> 00:21:24,020

there until more studies done no there

597

00:21:27,670 --> 00:21:25,640

was no there's no way in the world you'd

598

00:21:29,230 --> 00:21:27,680

allow a pharma company to put a drug on

599

00:21:30,850 --> 00:21:29,240

the NHS and spent five million pounds

600

00:21:32,830 --> 00:21:30,860

when the NHS has looked at the evidence

601  
00:21:34,420 --> 00:21:32,840  
says it does not work we'd be outraged

602  
00:21:36,250 --> 00:21:34,430  
by this but because it's got home

603  
00:21:37,800 --> 00:21:36,260  
because it's called homeopathy because

604  
00:21:40,030 --> 00:21:37,810  
it's got this special privileged status

605  
00:21:41,710 --> 00:21:40,040  
we like to say well it's patient choice

606  
00:21:45,460 --> 00:21:41,720  
well patients have a right to choose

607  
00:21:47,560 --> 00:21:45,470  
between things that work it's deceitful

608  
00:21:49,330 --> 00:21:47,570  
or certainly incredibly misleading to

609  
00:21:50,830 --> 00:21:49,340  
give patients a choice of one of two

610  
00:21:52,330 --> 00:21:50,840  
different things and you know one

611  
00:21:54,280 --> 00:21:52,340  
doesn't work and you don't tell them

612  
00:21:55,960 --> 00:21:54,290  
which is which that's not informed

613  
00:21:58,000 --> 00:21:55,970

consent you know it's not patient choice

614

00:22:00,850 --> 00:21:58,010

that's a fool's choice you know it's a

615

00:22:03,010 --> 00:22:00,860

it's a it's a broken choice early as

616

00:22:05,980 --> 00:22:03,020

well if I might use a Liverpool analogy

617

00:22:07,870 --> 00:22:05,990

it's a long and winding road I feel the

618

00:22:09,100 --> 00:22:07,880

years well actually there's another big

619

00:22:10,810 --> 00:22:09,110

thing going on with homeopathy at the

620

00:22:13,180 --> 00:22:10,820

moment so i mentioned that that this

621

00:22:14,830 --> 00:22:13,190

blacklisting will prevent a gps

622

00:22:16,630 --> 00:22:14,840

prescribing but that's only one slice of

623

00:22:17,830 --> 00:22:16,640

bird the funding the other way that

624

00:22:19,360 --> 00:22:17,840

we're challenging the funding is to look

625

00:22:21,580 --> 00:22:19,370

at every little bit around the country

626

00:22:24,640 --> 00:22:21,590

and to see whether the way that they

627

00:22:26,680 --> 00:22:24,650

they justify funding actually plays by

628

00:22:28,120 --> 00:22:26,690

the rules is it actually lawful and so I

629

00:22:30,340 --> 00:22:28,130

think I wasn't sure little while ago

630

00:22:32,110 --> 00:22:30,350

talking about this big thing we've been

631

00:22:34,510 --> 00:22:32,120

managed to achieve in Liverpool where

632

00:22:35,770 --> 00:22:34,520

we'd challenge the local health service

633

00:22:37,540 --> 00:22:35,780

to say you've made this decision to

634

00:22:38,980 --> 00:22:37,550

spend money in homeopathy the way you've

635

00:22:39,880 --> 00:22:38,990

made this decision does not go by the

636

00:22:41,950 --> 00:22:39,890

books

637

00:22:43,270 --> 00:22:41,960

we're going to take you to court unless

638

00:22:45,460 --> 00:22:43,280

you rescind the decision and makes it

639

00:22:47,380 --> 00:22:45,470

actually is consult see what you mean

640

00:22:48,970 --> 00:22:47,390

will rescind the decision and have that

641

00:22:50,050 --> 00:22:48,980

consultation open and we've been in

642

00:22:51,280 --> 00:22:50,060

touch with them to make sure we can see

643

00:22:53,500 --> 00:22:51,290

how that consultation is going to be

644

00:22:56,230 --> 00:22:53,510

designed that consultation is now open

645

00:22:58,090 --> 00:22:56,240

and it's open until December 22nd so it

646

00:23:00,670 --> 00:22:58,100

means that again this is an opportunity

647

00:23:01,930 --> 00:23:00,680

for skeptical voices in Liverpool and if

648

00:23:03,190 --> 00:23:01,940

there's any skeptical voice in Liverpool

649

00:23:04,630 --> 00:23:03,200

who don't already know about the merger

650

00:23:06,610 --> 00:23:04,640

I'd skeptic society but do listen to

651  
00:23:08,560 --> 00:23:06,620  
shore I will be frankly disappointed in

652  
00:23:10,180 --> 00:23:08,570  
you listeners but yeah so people in

653  
00:23:12,490 --> 00:23:10,190  
Liverpool can answer if you I think even

654  
00:23:13,870 --> 00:23:12,500  
if in the UK you can take a survey now

655  
00:23:15,340 --> 00:23:13,880  
it might well be that at the end they

656  
00:23:17,350 --> 00:23:15,350  
say well we'll just look at the ones in

657  
00:23:18,670 --> 00:23:17,360  
livable and you spent two or three

658  
00:23:20,560 --> 00:23:18,680  
minutes filling something in that

659  
00:23:22,240 --> 00:23:20,570  
doesn't but isn't helpful but the flip

660  
00:23:23,740 --> 00:23:22,250  
side is you might they might look at it

661  
00:23:25,330 --> 00:23:23,750  
and say well the majority of these are

662  
00:23:26,410 --> 00:23:25,340  
in Liverpool so we'll with them but

663  
00:23:28,030 --> 00:23:26,420

these are the ones over here have made

664

00:23:30,130 --> 00:23:28,040

some very good points so it might still

665

00:23:31,810 --> 00:23:30,140

be worth you carelessness dropping over

666

00:23:33,790 --> 00:23:31,820

to the survey and just filling that in

667

00:23:35,500 --> 00:23:33,800

because it really can't harm because I

668

00:23:37,330 --> 00:23:35,510

guarantee there are homeopaths all

669

00:23:39,580 --> 00:23:37,340

around the UK offering their thoughts on

670

00:23:42,010 --> 00:23:39,590

that service so yeah hopefully this is

671

00:23:44,290 --> 00:23:42,020

the first big opportunity we've got to

672

00:23:47,800 --> 00:23:44,300

follow through our legal action and and

673

00:23:49,600 --> 00:23:47,810

push homeopathy onto the agenda and off

674

00:23:51,460 --> 00:23:49,610

the NHS you know if it's if it can't be

675

00:23:53,290 --> 00:23:51,470

lawfully justified so there's a real

676

00:23:56,350 --> 00:23:53,300

opportunity here and this is the first

677

00:23:59,080 --> 00:23:56,360

of what we will do in each different

678

00:24:00,430 --> 00:23:59,090

region that funds it until we either get

679

00:24:02,350 --> 00:24:00,440

rid of it or until they can finally find

680

00:24:04,870 --> 00:24:02,360

a way of saying actually our decision is

681

00:24:06,760 --> 00:24:04,880

completely legal completely lawful you

682

00:24:08,950 --> 00:24:06,770

know as far as we can tell I can't see a

683

00:24:09,970 --> 00:24:08,960

way that it can be but you never know

684

00:24:11,920 --> 00:24:09,980

how these things go but this is

685

00:24:13,860 --> 00:24:11,930

certainly a really great very strong

686

00:24:17,890 --> 00:24:13,870

opportunity for a real success here

687

00:24:19,860 --> 00:24:17,900

that's fantastic so what what our

688

00:24:22,750 --> 00:24:19,870

listeners do should they run to your

689

00:24:24,670 --> 00:24:22,760

website if they haven't done already how

690

00:24:26,380 --> 00:24:24,680

else can they help you well I think the

691

00:24:27,940 --> 00:24:26,390

best thing to do there as there's two

692

00:24:29,260 --> 00:24:27,950

things they can do if you go to the

693

00:24:30,670 --> 00:24:29,270

Merseyside skeptics Society website

694

00:24:32,080 --> 00:24:30,680

we've got a statement up there about

695

00:24:33,640 --> 00:24:32,090

this consultation because obviously it's

696

00:24:35,350 --> 00:24:33,650

a Liverpool thing we want to keep it

697

00:24:37,660 --> 00:24:35,360

with the community group and in good

698

00:24:39,850 --> 00:24:37,670

thinking who I work for as obviously

699

00:24:41,080 --> 00:24:39,860

supporting the MSS who I call run so

700

00:24:42,940 --> 00:24:41,090

it's a slightly odd thing have a good

701  
00:24:45,300 --> 00:24:42,950  
foot in both camps but it's a it's a

702  
00:24:48,730 --> 00:24:45,310  
fortunate I said I know what that's like

703  
00:24:50,230 --> 00:24:48,740  
yes if you got a motorcycle kept excuse

704  
00:24:52,480 --> 00:24:50,240  
eee a statement there about what you can

705  
00:24:53,650 --> 00:24:52,490  
do with Thea this uh this consultation

706  
00:24:54,550 --> 00:24:53,660  
the survey

707  
00:24:56,200 --> 00:24:54,560  
and the other thing that we need in

708  
00:24:57,760 --> 00:24:56,210  
terms of good thinking is help funding

709  
00:24:59,800 --> 00:24:57,770  
our work so obviously this is taken a

710  
00:25:01,360 --> 00:24:59,810  
lot of time a lot of my time over the

711  
00:25:03,430 --> 00:25:01,370  
last kind of girl literally hundreds

712  
00:25:05,230 --> 00:25:03,440  
maybe even thousands of hours by this

713  
00:25:06,640 --> 00:25:05,240

point of Alaska you're 18 months to get

714

00:25:08,800 --> 00:25:06,650

to a point where we've got this foothold

715

00:25:11,410 --> 00:25:08,810

and it's taken legal consultation as

716

00:25:12,670 --> 00:25:11,420

well so any listeners who appreciate the

717

00:25:14,380 --> 00:25:12,680

work that we're doing and think that

718

00:25:16,660 --> 00:25:14,390

homeopathy shouldn't be on the NHS in

719

00:25:18,070 --> 00:25:16,670

Liverpool and in the whole country and

720

00:25:19,420 --> 00:25:18,080

want to do something to help than

721

00:25:20,920 --> 00:25:19,430

certainly helping us out with a bit of

722

00:25:22,390 --> 00:25:20,930

funding is it would be absolutely

723

00:25:24,970 --> 00:25:22,400

phenomenal and the way to do that is to

724

00:25:27,160 --> 00:25:24,980

go to good thinking society org forward

725

00:25:29,050 --> 00:25:27,170

slash doughnut and you can either throw

726

00:25:31,960 --> 00:25:29,060

some money in is a one-off or you can

727

00:25:34,030 --> 00:25:31,970

set up a small monthly donation and that

728

00:25:36,100 --> 00:25:34,040

funds all of our work and it's it's are

729

00:25:37,840 --> 00:25:36,110

really one of our very few sources of

730

00:25:39,760 --> 00:25:37,850

funding and it's the kind of thing

731

00:25:40,840 --> 00:25:39,770

that'll keep us going doing the work

732

00:25:42,280 --> 00:25:40,850

we've been doing in the work I've been

733

00:25:44,800 --> 00:25:42,290

talking about on this show when I up

734

00:25:46,150 --> 00:25:44,810

here semi-regularly it'll keep us going

735

00:25:47,830 --> 00:25:46,160

for a lot longer so yeah that's a

736

00:25:50,010 --> 00:25:47,840

that'll be a huge huge bonus for us I

737

00:25:53,110 --> 00:25:50,020

would really really help good thinking

738

00:25:55,290 --> 00:25:53,120

society dot org folks head there good

739

00:25:58,930 --> 00:25:55,300

thinking society org forward slash

740

00:26:01,900 --> 00:25:58,940

donate that's what I'd like all all

741

00:26:04,120 --> 00:26:01,910

skeptics own UK listeners to do in fact

742

00:26:05,830 --> 00:26:04,130

all folks wherever you are around the

743

00:26:08,380 --> 00:26:05,840

world certainly certainly would

744

00:26:10,710 --> 00:26:08,390

recommend a visit to good thinking

745

00:26:13,300 --> 00:26:10,720

society org where you can find out more

746

00:26:15,070 --> 00:26:13,310

marsh it's been a great pleasure once

747

00:26:18,310 --> 00:26:15,080

again to have you on the show as a a

748

00:26:20,410 --> 00:26:18,320

semi-regular sort of contributor which

749

00:26:23,470 --> 00:26:20,420

I'm quite pleased about please give my

750

00:26:26,170 --> 00:26:23,480

best to Simon Singh and family I will do

751

00:26:29,230 --> 00:26:26,180

absolutely he's a he's a top bloke and

752

00:26:31,570 --> 00:26:29,240

as I remind him every time I see him one

753

00:26:35,350 --> 00:26:31,580

of the best books i have ever written on

754

00:26:39,160 --> 00:26:35,360

any topic ever was his code book mmm it

755

00:26:41,140 --> 00:26:39,170

was superb because even somebody like me

756

00:26:43,840 --> 00:26:41,150

after reading that book I understood how

757

00:26:45,190 --> 00:26:43,850

the Enigma machine worked and if anybody

758

00:26:46,780 --> 00:26:45,200

can explain that in such a way that

759

00:26:49,300 --> 00:26:46,790

people like me can understand it that

760

00:26:51,220 --> 00:26:49,310

says enough I think yeah absolutely i

761

00:26:53,770 --> 00:26:51,230

mean yeah when you read Simon's books

762

00:26:55,450 --> 00:26:53,780

he's got a knack of making complicated

763

00:26:57,670 --> 00:26:55,460

things seem straightforward and easy and

764

00:26:59,320 --> 00:26:57,680

that's a it's a real talent so yeah

765

00:27:01,300 --> 00:26:59,330

working with Simon's are always always

766

00:27:02,980 --> 00:27:01,310

been a pleasure and yeah the work we're

767

00:27:04,270 --> 00:27:02,990

doing is great and it's it's always a

768

00:27:06,100 --> 00:27:04,280

pleasure speaking to you as well Richard

769

00:27:06,630 --> 00:27:06,110

I love being on the show thanks Marsh

770

00:27:08,030 --> 00:27:06,640

and I hope

771

00:27:29,250 --> 00:27:08,040

catch up in the not-too-distant future

772

00:27:31,740 --> 00:27:29,260

thank you i hope so I want to help

773

00:27:34,410 --> 00:27:31,750

support the skeptic zonin look pretty

774

00:27:39,510 --> 00:27:34,420

damn stylish while you're about it visit

775

00:27:41,850 --> 00:27:39,520

mr. Katz origami jewelry WWE pegs on TV

776

00:27:45,440 --> 00:27:41,860

and click the link or simply Google mr.

777

00:27:49,320 --> 00:27:45,450

Katz origami jewelry also on Facebook

778

00:28:03,840 --> 00:27:49,330

pendants earrings and cufflinks support

779

00:28:08,310 --> 00:28:03,850

mr. cat support the skeptic zone what we

780

00:28:12,089 --> 00:28:08,320

want is some more evidence please is joe

781

00:28:18,130 --> 00:28:16,050

hello this is Joe alabaster

782

00:28:23,600 --> 00:28:20,900

the mother of a four month old boy with

783

00:28:26,210 --> 00:28:23,610

pertussis uploaded footage of her son

784

00:28:56,300 --> 00:28:26,220

coughing onto facebook with a passionate

785

00:28:58,760 --> 00:28:56,310

play for people to vaccinate Rebecca

786

00:29:01,040 --> 00:28:58,770

Harriman of Brisbane posted the video a

787

00:29:03,380 --> 00:29:01,050

week ago on the fourteenth of November

788

00:29:07,010 --> 00:29:03,390

alongside her thoughts as she cares for

789

00:29:09,440 --> 00:29:07,020

baby Austin it has since had over 1.5

790

00:29:11,840 --> 00:29:09,450

million views and thirty-two thousand

791

00:29:14,800 --> 00:29:11,850

shares with news stations and sites

792

00:29:17,210 --> 00:29:14,810

around the world picking up the story

793

00:29:20,030 --> 00:29:17,220

alongside hundreds of supportive

794

00:29:23,360 --> 00:29:20,040

messages Rebecca's also received many

795

00:29:25,370 --> 00:29:23,370

from anti-vaccination asst who on top of

796

00:29:27,110 --> 00:29:25,380

criticizing her support for vaccinations

797

00:29:29,240 --> 00:29:27,120

have been causing her trouble by

798

00:29:32,210 --> 00:29:29,250

reporting a family portrait on her

799

00:29:34,010 --> 00:29:32,220

Facebook page for nudity all this as

800

00:29:36,620 --> 00:29:34,020

baby Austin was being taken back to

801  
00:29:38,150 --> 00:29:36,630  
hospital she has since locked down her

802  
00:29:40,580 --> 00:29:38,160  
facebook page so that she can

803  
00:29:43,510 --> 00:29:40,590  
concentrate on her family son and his

804  
00:29:46,400 --> 00:29:43,520  
health the media coverage on this has

805  
00:29:48,500 --> 00:29:46,410  
fortunately been incredibly positive a

806  
00:29:51,770 --> 00:29:48,510  
huge contrast from the days of false

807  
00:29:53,510 --> 00:29:51,780  
balance on the topic of vaccination as a

808  
00:29:55,580 --> 00:29:53,520  
demonstration of the caliber of

809  
00:29:57,800 --> 00:29:55,590  
discourse in the media I'd like to play

810  
00:30:00,170 --> 00:29:57,810  
for you this segment from ABC's current

811  
00:30:02,300 --> 00:30:00,180  
affairs panel show the drum which played

812  
00:30:04,730 --> 00:30:02,310  
on the seventeenth of November and was

813  
00:30:08,030 --> 00:30:04,740

hosted by Julia bed featuring michael

814

00:30:10,580 --> 00:30:08,040

Cooney David miles and sunanda Cray with

815

00:30:12,980 --> 00:30:10,590

guests Leigh sales anti-vaccination

816

00:30:15,230 --> 00:30:12,990

activists have bombarded an Australian

817

00:30:17,420 --> 00:30:15,240

woman with messages and attacks after

818

00:30:20,120 --> 00:30:17,430

she posted a facebook video of her son

819

00:30:22,190 --> 00:30:20,130

suffering from whooping cough Rebecca

820

00:30:24,320 --> 00:30:22,200

Harriman from Brisbane wrote for those

821

00:30:26,630 --> 00:30:24,330

of you sitting on the fence on whether

822

00:30:28,799 --> 00:30:26,640

to vaccinate yourself and your kids or

823

00:30:31,649 --> 00:30:28,809

not maybe this video

824

00:30:34,049 --> 00:30:31,659

convince you the Clippers had over half

825

00:30:36,090 --> 00:30:34,059

a million hits in addition to supportive

826

00:30:38,340 --> 00:30:36,100

messages rebecca has received hundreds

827

00:30:40,499 --> 00:30:38,350

of abusive posts for criticizing

828

00:30:42,840 --> 00:30:40,509

anti-vaxxers and she's now set of

829

00:30:44,759 --> 00:30:42,850

Facebook settings to private to focus on

830

00:30:46,980 --> 00:30:44,769

her son's health who is now back in

831

00:30:48,090 --> 00:30:46,990

hospital the last time of writing what

832

00:30:50,279 --> 00:30:48,100

do you make of the power of such a

833

00:30:52,259 --> 00:30:50,289

personal stories and under in all of

834

00:30:54,450 --> 00:30:52,269

this well humans relate to personal

835

00:30:55,710 --> 00:30:54,460

stories don't be and you know scientists

836

00:30:58,499 --> 00:30:55,720

are normally very critical of what they

837

00:31:00,690 --> 00:30:58,509

call anecdotal which is you know my son

838

00:31:02,519 --> 00:31:00,700

did this or my father did that so

839

00:31:03,629 --> 00:31:02,529

therefore such and such and they say

840

00:31:06,720 --> 00:31:03,639

that you know we should look to the

841

00:31:08,580 --> 00:31:06,730

scientific findings and the research

842

00:31:12,029 --> 00:31:08,590

data but in this case the attic data

843

00:31:14,879 --> 00:31:12,039

derogatory to answer me I got it anak

844

00:31:16,560 --> 00:31:14,889

data is definitely but in this case the

845

00:31:18,210 --> 00:31:16,570

anecdotal is doing the work of the

846

00:31:20,249 --> 00:31:18,220

scientists it's convincing people that

847

00:31:22,950 --> 00:31:20,259

there is a problem here and that the the

848

00:31:24,690 --> 00:31:22,960

consequences are really serious hmm it's

849

00:31:26,730 --> 00:31:24,700

really fighting fire with fire as now I

850

00:31:29,220 --> 00:31:26,740

mean what you've got from anti-vaxxers

851  
00:31:31,080 --> 00:31:29,230  
over time is precisely kind of emotive

852  
00:31:32,489 --> 00:31:31,090  
rubbish designed to distract and disturb

853  
00:31:34,560 --> 00:31:32,499  
people and get them to do the wrong

854  
00:31:35,850 --> 00:31:34,570  
thing by their kids and here's a here's

855  
00:31:38,039 --> 00:31:35,860  
a case of someone fighting back

856  
00:31:40,200 --> 00:31:38,049  
essentially which is terrific and a bit

857  
00:31:42,119 --> 00:31:40,210  
to be applauded it's fantastic what do

858  
00:31:45,570 --> 00:31:42,129  
you think Lee of like of seeing this

859  
00:31:47,070 --> 00:31:45,580  
video of this kid almost choking and guy

860  
00:31:49,950 --> 00:31:47,080  
going blue with something that is

861  
00:31:51,330 --> 00:31:49,960  
preventable look it just it disturbs me

862  
00:31:53,369 --> 00:31:51,340  
when people put their faith in things

863  
00:31:56,190 --> 00:31:53,379

other than reason evidence and science

864

00:31:58,560 --> 00:31:56,200

and the anti-vaccination view is not

865

00:32:01,859 --> 00:31:58,570

supported by science so you know please

866

00:32:04,289 --> 00:32:01,869

people do not sign up to that nonsense I

867

00:32:05,700 --> 00:32:04,299

mean it's there's this correlate false

868

00:32:08,039 --> 00:32:05,710

correlations that they draw where they

869

00:32:09,899 --> 00:32:08,049

say well you know right to vaccinations

870

00:32:11,850 --> 00:32:09,909

vaccination of increased and so of rates

871

00:32:13,769 --> 00:32:11,860

of autism also of rates of breastfeeding

872

00:32:15,269 --> 00:32:13,779

so let's say it's breastfeeding that's

873

00:32:17,190 --> 00:32:15,279

causing autism like it's just nonsense

874

00:32:18,930 --> 00:32:17,200

number of motor vehicles on the road has

875

00:32:19,919 --> 00:32:18,940

increased dramatically over the years

876

00:32:22,470 --> 00:32:19,929

and I don't think that's linked to

877

00:32:24,869 --> 00:32:22,480

autism either and in fact vaccinations

878

00:32:27,659 --> 00:32:24,879

and autism has been disproved that's it

879

00:32:29,669 --> 00:32:27,669

so many times now that people keep

880

00:32:31,499 --> 00:32:29,679

saying it from one study that was

881

00:32:32,940 --> 00:32:31,509

discredited and the person was did you

882

00:32:34,769 --> 00:32:32,950

know was removed from any medical

883

00:32:36,480 --> 00:32:34,779

register as well so what sort of person

884

00:32:38,549 --> 00:32:36,490

even if you disagree with their views

885

00:32:40,139 --> 00:32:38,559

sends an abusive message to a woman

886

00:32:41,180 --> 00:32:40,149

whose child has whooping cough like I

887

00:32:43,580 --> 00:32:41,190

don't care what you actually

888

00:32:45,500 --> 00:32:43,590

think about her views her child has

889

00:32:47,030 --> 00:32:45,510

whooping cough like just leave it alone

890

00:32:48,200 --> 00:32:47,040

she hasn't slept for three weeks she's

891

00:32:50,240 --> 00:32:48,210

sitting up or not I mean that kind of

892

00:32:52,820 --> 00:32:50,250

anxiety another good honor for putting

893

00:32:54,260 --> 00:32:52,830

it up there it is an example of what

894

00:32:57,260 --> 00:32:54,270

happens when people don't vaccinate

895

00:32:58,640 --> 00:32:57,270

their kids so it is very very clear what

896

00:33:00,500 --> 00:32:58,650

happens and you know I've said it before

897

00:33:02,140 --> 00:33:00,510

I'll say it again a failure to vaccinate

898

00:33:05,390 --> 00:33:02,150

your kids is a form of child abuse

899

00:33:07,160 --> 00:33:05,400

vaccinate your kids shooting illegal

900

00:33:09,050 --> 00:33:07,170

don't you yeah I mean I think

901  
00:33:10,790 --> 00:33:09,060  
vaccination is a very very sensible

902  
00:33:12,350 --> 00:33:10,800  
thing to do we flew on it you know put

903  
00:33:14,720 --> 00:33:12,360  
fluoride in the water we've got very

904  
00:33:16,190 --> 00:33:14,730  
good reasons for doing so vaccine we're

905  
00:33:17,180 --> 00:33:16,200  
doing everything that we can or

906  
00:33:18,500 --> 00:33:17,190  
governments are doing everything they

907  
00:33:20,900 --> 00:33:18,510  
can to try and make sure people

908  
00:33:22,610 --> 00:33:20,910  
vaccinate their kids there's no job no

909  
00:33:25,400 --> 00:33:22,620  
pay now the things that's got Morrison

910  
00:33:26,710 --> 00:33:25,410  
did as minister to remove religious

911  
00:33:29,600 --> 00:33:26,720  
exemptions i think is fantastic

912  
00:33:31,490 --> 00:33:29,610  
conscientious objection is gone it's

913  
00:33:33,730 --> 00:33:31,500

only medical reasons are the only reason

914

00:33:36,080 --> 00:33:33,740

you don't can avoid a vaccination

915

00:33:38,060 --> 00:33:36,090

legally right and so they probably hate

916

00:33:39,200 --> 00:33:38,070

the former other government abbott

917

00:33:40,610 --> 00:33:39,210

government for in their view they would

918

00:33:41,930 --> 00:33:40,620

see it as denying the climate change

919

00:33:43,850 --> 00:33:41,940

evidence so I'm sorry kind of it both

920

00:33:45,020 --> 00:33:43,860

ways so if you believe the science on

921

00:33:46,940 --> 00:33:45,030

climate change then you need to believe

922

00:33:48,380 --> 00:33:46,950

the science on vaccination as well so

923

00:33:50,150 --> 00:33:48,390

well and I wonder if it also hit a nerve

924

00:33:51,920 --> 00:33:50,160

because there has been so much a pink

925

00:33:54,560 --> 00:33:51,930

off yeah I mean what do you need

926  
00:33:56,630 --> 00:33:54,570  
something like 92 or 95% vaccination

927  
00:33:59,060 --> 00:33:56,640  
rates to get hurt immunity and in some

928  
00:34:01,550 --> 00:33:59,070  
areas of Sydney you know it's down

929  
00:34:04,970 --> 00:34:01,560  
around 85 it's lower in other areas the

930  
00:34:07,550 --> 00:34:04,980  
far north coast there's quite scary low

931  
00:34:09,440 --> 00:34:07,560  
vaccination rates so babies aren't

932  
00:34:12,410 --> 00:34:09,450  
provoked it is of course they talk about

933  
00:34:15,590 --> 00:34:12,420  
whooping cough season you know if that

934  
00:34:16,910 --> 00:34:15,600  
is not abuse of children I do not know

935  
00:34:18,980 --> 00:34:16,920  
what is ok we're going to leave it on

936  
00:34:20,120 --> 00:34:18,990  
that strong note here David that's it

937  
00:34:21,950 --> 00:34:20,130  
for the drone thanks to our panel

938  
00:34:24,650 --> 00:34:21,960

Michael Cooney David miles and sunanda

939

00:34:28,670 --> 00:34:24,660

cray and a special guest lease sales our

940

00:34:30,230 --> 00:34:28,680

website has more as always ABCD a view /

941

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

the drum we back again tomorrow night

942

00:34:36,770 --> 00:34:34,250

we'll see you then this is fantastic

943

00:34:38,690 --> 00:34:36,780

primetime television is featuring

944

00:34:40,850 --> 00:34:38,700

conversations on the importance of

945

00:34:43,160 --> 00:34:40,860

making evidence-based health decisions

946

00:34:45,950 --> 00:34:43,170

correlation not being equal to causation

947

00:34:47,960 --> 00:34:45,960

herd immunity the cherry picking nature

948

00:34:49,580 --> 00:34:47,970

of some anti-vaccination campaigners

949

00:34:51,410 --> 00:34:49,590

accepting the science on climate change

950

00:34:54,050 --> 00:34:51,420

but not the science supporting

951  
00:34:54,889 --> 00:34:54,060  
vaccination not a second is being given

952  
00:34:56,299 --> 00:34:54,899  
to hearing the

953  
00:34:58,940 --> 00:34:56,309  
false claims of anti-vaccination

954  
00:35:02,750 --> 00:34:58,950  
advocates only condemnation of their

955  
00:35:04,250 --> 00:35:02,760  
views and their behavior five days ago a

956  
00:35:06,740 --> 00:35:04,260  
whooping cough alert was issued for

957  
00:35:09,740 --> 00:35:06,750  
Brisbane following a spike in reported

958  
00:35:11,930 --> 00:35:09,750  
cases there is also an alert in Ipswich

959  
00:35:14,859 --> 00:35:11,940  
with for infections confirmed in young

960  
00:35:17,630 --> 00:35:14,869  
children some babies in the past month

961  
00:35:19,940 --> 00:35:17,640  
just to reminder that pregnant mothers

962  
00:35:22,010 --> 00:35:19,950  
are recommended to receive pertussis

963  
00:35:24,289 --> 00:35:22,020

boosters in their third trimester which

964

00:35:26,299 --> 00:35:24,299

can help protect newborns by a conferred

965

00:35:28,460 --> 00:35:26,309

immunity during those first few months

966

00:35:29,900 --> 00:35:28,470

of life when a baby is too young to have

967

00:35:32,120 --> 00:35:29,910

received the full three doses of

968

00:35:34,099 --> 00:35:32,130

pertussis vaccine it's also worth

969

00:35:35,710 --> 00:35:34,109

chatting with your GP and seeing whether

970

00:35:37,579 --> 00:35:35,720

you're due for a booster vaccine

971

00:35:39,650 --> 00:35:37,589

especially if you're welcoming a new

972

00:35:41,950 --> 00:35:39,660

addition to your family or are likely to

973

00:35:44,359 --> 00:35:41,960

be around any precious newborns our

974

00:35:46,519 --> 00:35:44,369

thoughts are with the harriman family

975

00:35:49,400 --> 00:35:46,529

and we hope that baby austin's recovery

976  
00:35:52,370 --> 00:35:49,410  
is going well for more evidence please

977  
00:35:55,549 --> 00:35:52,380  
visit my blog at evidence players dotnet

978  
00:36:09,840 --> 00:35:55,559  
or catch up with me on twitter at joe

979  
00:36:14,530 --> 00:36:12,610  
welcome to weaken science from RI oz

980  
00:36:17,440 --> 00:36:14,540  
bringing you the science you need

981  
00:36:19,810 --> 00:36:17,450  
tonight Sahir Khan Jimmy Anderson and

982  
00:36:21,700 --> 00:36:19,820  
Damien Fleming a masters of swinging a

983  
00:36:23,740 --> 00:36:21,710  
cricket ball in the air and I've got the

984  
00:36:25,300 --> 00:36:23,750  
differences between smooth and turbulent

985  
00:36:33,970 --> 00:36:25,310  
airflow to thank for their prodigious

986  
00:36:36,070 --> 00:36:33,980  
abilities when traveling through the air

987  
00:36:37,720 --> 00:36:36,080  
a cricket ball want to move towards the

988  
00:36:40,810 --> 00:36:37,730

side which has the more turbulent

989

00:36:42,910 --> 00:36:40,820

airflow let me explain why to swing your

990

00:36:45,250 --> 00:36:42,920

cricket ball conventionally the seam is

991

00:36:47,380 --> 00:36:45,260

angled to one side meaning that as the

992

00:36:49,380 --> 00:36:47,390

ball flies through the air the smooth

993

00:36:52,390 --> 00:36:49,390

side of the ball causes smooth airflow

994

00:36:54,460 --> 00:36:52,400

but the same trips up the air and causes

995

00:36:56,680 --> 00:36:54,470

turbulence on the other side the

996

00:36:58,900 --> 00:36:56,690

turbulent air stays closed or attached

997

00:37:01,570 --> 00:36:58,910

to the ball for longer than the smooth

998

00:37:03,400 --> 00:37:01,580

laminar flying side this causes a

999

00:37:04,960 --> 00:37:03,410

difference in pressure on each side of

1000

00:37:07,120 --> 00:37:04,970

the ball with less pressure on the

1001

00:37:09,820 --> 00:37:07,130

turbulent side making the ball move

1002

00:37:11,830 --> 00:37:09,830

towards the same the maximum amounts of

1003

00:37:14,800 --> 00:37:11,840

side force is generated at a ball and

1004

00:37:16,690 --> 00:37:14,810

speed of around 70 miles per hour what

1005

00:37:21,460 --> 00:37:16,700

happens above that well that's when we

1006

00:37:23,500 --> 00:37:21,470

start getting reverse swing above 85

1007

00:37:25,600 --> 00:37:23,510

miles an hour the air doesn't need

1008

00:37:28,000 --> 00:37:25,610

interference to start becoming turbulent

1009

00:37:29,830 --> 00:37:28,010

on the surface of the ball in this case

1010

00:37:32,950 --> 00:37:29,840

the seam of the ball makes that already

1011

00:37:34,840 --> 00:37:32,960

turbulent air even Messier this extra

1012

00:37:36,700 --> 00:37:34,850

messy air will actually detach from the

1013

00:37:38,830 --> 00:37:36,710

surface quicker than the modelling

1014

00:37:40,600 --> 00:37:38,840

turbulent air on the other side causing

1015

00:37:43,000 --> 00:37:40,610

the low air pressure to be on the

1016

00:37:45,370 --> 00:37:43,010

opposite side and the ball swinging away

1017

00:37:47,530 --> 00:37:45,380

from the same and if the ball is being

1018

00:37:49,750 --> 00:37:47,540

bowled with the same straight the same

1019

00:37:51,790 --> 00:37:49,760

forces are in play but using the smooth

1020

00:37:54,850 --> 00:37:51,800

and rough sides of the ball to create

1021

00:37:56,770 --> 00:37:54,860

different air flows on each side and now

1022

00:37:59,320 --> 00:37:56,780

for fast facts about the science of

1023

00:38:03,700 --> 00:38:01,960

this is a slightly different effect two

1024

00:38:05,980 --> 00:38:03,710

swinging a soccer ball where the

1025

00:38:07,630 --> 00:38:05,990

horizontal rotation of the ball creates

1026

00:38:10,060 --> 00:38:07,640

differences in air resistance and

1027

00:38:11,950 --> 00:38:10,070

attachment on each side baseball

1028

00:38:13,990 --> 00:38:11,960

pitchers curved the same way to a soccer

1029

00:38:16,150 --> 00:38:14,000

ball the rotation of the ball in one

1030

00:38:18,640 --> 00:38:16,160

direction causes the difference in air

1031

00:38:20,560 --> 00:38:18,650

attachment facing a fast bowler a

1032

00:38:22,900 --> 00:38:20,570

batsman has around half a second to

1033

00:38:25,540 --> 00:38:22,910

assess the trajectory of a ball choose a

1034

00:38:27,790 --> 00:38:25,550

shot and play it and if you're as sick

1035

00:38:30,160 --> 00:38:27,800

as me seeing a bowler ball repeated no

1036

00:38:31,960 --> 00:38:30,170

balls if they move their foot 15

1037

00:38:34,150 --> 00:38:31,970

centimeters backward to remove the

1038

00:38:35,890 --> 00:38:34,160

chance of a no-ball their apparent

1039

00:38:38,710 --> 00:38:35,900

speeds of the batsman would drop by

1040

00:38:40,810 --> 00:38:38,720

around one kilometer per hour that's it

1041

00:38:43,090 --> 00:38:40,820

for this week in science for more

1042

00:38:47,910 --> 00:38:43,100

information on the science of cricket go

1043

00:38:51,190 --> 00:38:47,920

to the Arias website RI aus org a you

1044

00:38:53,620 --> 00:38:51,200

follow us on twitter at ra oz and like

1045

00:39:11,920 --> 00:38:53,630

us on facebook I'm Ben Lawson will catch

1046

00:39:17,930 --> 00:39:14,960

hello Richard and all the listeners of

1047

00:39:20,840 --> 00:39:17,940

skeptic zone my name is Ron levy and I'm

1048

00:39:23,300 --> 00:39:20,850

the producer and co-host of curious mind

1049

00:39:29,660 --> 00:39:23,310

it's a podcast about science technology

1050

00:39:31,880 --> 00:39:29,670

and history at wwc em-pod cmp LD dot net

1051

00:39:34,130 --> 00:39:31,890

each episode will bring you interesting

1052

00:39:37,190 --> 00:39:34,140

stories from a wide range of subjects

1053

00:39:39,650 --> 00:39:37,200

from physics astronomy and medicine from

1054

00:39:41,480 --> 00:39:39,660

arts to science fiction we strive for

1055

00:39:43,850 --> 00:39:41,490

the highest production values both in

1056

00:39:46,580 --> 00:39:43,860

content and in delivery we already have

1057

00:39:49,100 --> 00:39:46,590

on the air episodes about German u-boats

1058

00:39:52,160 --> 00:39:49,110

in Second World War about the history of

1059

00:39:56,260 --> 00:39:52,170

x-rays and the war of currents between

1060

00:40:10,690 --> 00:39:56,270

Tesla and Edison come and have a listen

1061

00:40:19,499 --> 00:40:15,410

here's my not spooky action at a

1062

00:40:24,999 --> 00:40:22,479

he is a skeptic zone favourites jobin

1063

00:40:26,739 --> 00:40:25,009

whom it without her Joe are you joking I

1064

00:40:29,140 --> 00:40:26,749

made out how you pretty good how's your

1065

00:40:31,059 --> 00:40:29,150

of your sexy research been going in

1066

00:40:32,499 --> 00:40:31,069

Melbourne but you just gotta go will

1067

00:40:34,239 --> 00:40:32,509

you're working in a really interesting

1068

00:40:37,150 --> 00:40:34,249

side of signs of the man well i'm

1069

00:40:39,039 --> 00:40:37,160

working in radiation oncology and

1070

00:40:40,989 --> 00:40:39,049

specifically i'm running trials in well

1071

00:40:42,909 --> 00:40:40,999

predominantly trials and take hands up

1072

00:40:44,229 --> 00:40:42,919

all right which you know well I just

1073

00:40:45,729 --> 00:40:44,239

said sexy in the term is like it's

1074

00:40:47,319 --> 00:40:45,739

something that's really relevant and

1075

00:40:48,400 --> 00:40:47,329

really important and did you think

1076

00:40:50,739 --> 00:40:48,410

there's enough work gets done in that

1077

00:40:52,929 --> 00:40:50,749

area or not well i mean i think that to

1078

00:40:56,140 --> 00:40:52,939

one of the two areas that get a huge

1079

00:40:57,880 --> 00:40:56,150

amount of attention in research in well

1080

00:41:00,130 --> 00:40:57,890

generally in oncology are breast cancer

1081

00:41:02,349 --> 00:41:00,140

and prostate cancer hmm and typically in

1082

00:41:05,559 --> 00:41:02,359

the past i think prostate cancer less so

1083

00:41:07,539 --> 00:41:05,569

because I think breast cancer being you

1084

00:41:08,859 --> 00:41:07,549

know predominantly suffered by women it

1085

00:41:10,630 --> 00:41:08,869

had a lot more attention through a lot

1086

00:41:14,069 --> 00:41:10,640

of the the breast cancer advocacy groups

1087

00:41:16,599 --> 00:41:14,079

but nowadays with groups like movember

1088

00:41:19,120 --> 00:41:16,609

prostate cancer and men's issues I think

1089

00:41:20,709 --> 00:41:19,130

are becoming much well it also means

1090

00:41:23,859 --> 00:41:20,719

that every november there's guys getting

1091

00:41:26,649 --> 00:41:23,869

around in a bad porn film looks like you

1092

00:41:29,409 --> 00:41:26,659

know out of it out of a porn media mixer

1093

00:41:31,659 --> 00:41:29,419

actor oh yeah it's good wrestler yeah

1094

00:41:33,370 --> 00:41:31,669

yeah i know that's the only downside of

1095

00:41:35,109 --> 00:41:33,380

it now i'm gonna get into the

1096

00:41:37,539 --> 00:41:35,119

controversial factor of the PSI rating

1097

00:41:40,029 --> 00:41:37,549

because it good yeah PSA really sorry

1098

00:41:41,649 --> 00:41:40,039

yeah i'm now there's been conflict over

1099

00:41:42,669 --> 00:41:41,659

whether you should pay attention to the

1100

00:41:44,289 --> 00:41:42,679

menorah whether you should get one early

1101

00:41:45,969 --> 00:41:44,299

and get a base rate what's the

1102

00:41:47,529 --> 00:41:45,979

scientific thinking on the PSA at the

1103

00:41:49,059 --> 00:41:47,539

moment okay well i mean i can't i can't

1104

00:41:51,099 --> 00:41:49,069

make recommendations because I'm not a

1105

00:41:53,140 --> 00:41:51,109

doctor not a doctor so don't listen too

1106

00:41:54,789 --> 00:41:53,150

closely but I can't tell you yes there

1107

00:41:57,999 --> 00:41:54,799

is a lot of controversy around PSA

1108

00:42:00,009 --> 00:41:58,009

testing and in fact really the way I

1109

00:42:01,299 --> 00:42:00,019

think people should look at PSA and

1110

00:42:03,069 --> 00:42:01,309

incapable for people who don't know what

1111

00:42:06,789 --> 00:42:03,079

it is PSA is prostate specific antigen

1112

00:42:09,189 --> 00:42:06,799

it's a it's a biomarker that can be

1113

00:42:11,409 --> 00:42:09,199

tested in a blood test and if a PSA is

1114

00:42:13,149 --> 00:42:11,419

elevated it can be an indication that

1115

00:42:14,409 --> 00:42:13,159

someone has prostate cancer does that

1116

00:42:17,199 --> 00:42:14,419

mean you have to go right prostate out

1117

00:42:19,779 --> 00:42:17,209

not necessarily know the thing is that

1118

00:42:21,189 --> 00:42:19,789

it's also the PSA can also be raised if

1119

00:42:23,109 --> 00:42:21,199

you have something called benign

1120

00:42:24,969 --> 00:42:23,119

prostatic hypertrophy which is where a

1121

00:42:26,579 --> 00:42:24,979

man gets an a very enlarged prostate or

1122

00:42:28,620 --> 00:42:26,589

if you had a

1123

00:42:32,219 --> 00:42:28,630

re tract infection so there can be lots

1124

00:42:34,979 --> 00:42:32,229

of other pathophysiological conditions

1125

00:42:37,650 --> 00:42:34,989

that can result in PSA being raised so

1126

00:42:40,019 --> 00:42:37,660

that's simply having a high PSA doesn't

1127

00:42:42,660 --> 00:42:40,029

mean you've got prostate cancer but it's

1128

00:42:44,309 --> 00:42:42,670

a good marker for the fact that all the

1129

00:42:45,630 --> 00:42:44,319

PSA is up we need to have a look at

1130

00:42:47,099 --> 00:42:45,640

what's going on we have we've got

1131

00:42:49,620 --> 00:42:47,109

something better than PSA on the horizon

1132

00:42:51,450 --> 00:42:49,630

we do actually funny you should say that

1133

00:42:54,450 --> 00:42:51,460

because that's what I was asking yes so

1134

00:42:55,799 --> 00:42:54,460

anyways I've got a prostate yes well and

1135

00:42:57,299 --> 00:42:55,809

a lot of men don't anymore if they've

1136

00:43:00,329 --> 00:42:57,309

been through the whole rigmarole I did

1137

00:43:02,009 --> 00:43:00,339

as a cancer treatment well but there's a

1138

00:43:05,549 --> 00:43:02,019

new test that's come out recently called

1139

00:43:08,249 --> 00:43:05,559

the PSM a PET scan now this actually is

1140

00:43:11,249 --> 00:43:08,259

more for men who have been diagnosed

1141

00:43:13,440 --> 00:43:11,259

with prostate cancer or where where

1142

00:43:16,349 --> 00:43:13,450

there's well let me just take a step

1143

00:43:17,309 --> 00:43:16,359

back so PSMA is caught is refers to

1144

00:43:20,910 --> 00:43:17,319

something called prostate specific

1145

00:43:24,420 --> 00:43:20,920

membrane antigen and it's found on the

1146

00:43:26,940 --> 00:43:24,430

cells of prostate cancer and and it's a

1147

00:43:28,759 --> 00:43:26,950

it's a can be picked up in a PET scan

1148

00:43:30,809 --> 00:43:28,769

which is a nuclear medicine scan

1149

00:43:32,549 --> 00:43:30,819

previously a lot of the imaging tests

1150

00:43:34,109 --> 00:43:32,559

that we use to look at how we're

1151

00:43:37,109 --> 00:43:34,119

prostate cancer has spread to in the

1152

00:43:40,829 --> 00:43:37,119

body we're not very accurate so MRIs and

1153

00:43:43,380 --> 00:43:40,839

a lot of other imaging scans you know we

1154

00:43:44,339 --> 00:43:43,390

might know that the PSA was up and if

1155

00:43:46,140 --> 00:43:44,349

you've been diagnosed with prostate

1156

00:43:48,660 --> 00:43:46,150

cancer previously then we would be able

1157

00:43:49,920 --> 00:43:48,670

to say PSA is up that can tell us that

1158

00:43:51,779 --> 00:43:49,930

you know there's a likelihood that your

1159

00:43:54,120 --> 00:43:51,789

prostate cancer has come back but if we

1160

00:43:56,160 --> 00:43:54,130

were to do any imaging yeah we might see

1161

00:43:58,170 --> 00:43:56,170

signs of wear the prostate cancer is but

1162

00:44:00,329 --> 00:43:58,180

they're not as accurate as we would have

1163

00:44:02,160 --> 00:44:00,339

liked them to be so there's a new test

1164

00:44:04,109 --> 00:44:02,170

that's been around in Australia for a

1165

00:44:06,599 --> 00:44:04,119

couple of years now called psma testing

1166

00:44:08,789 --> 00:44:06,609

and as I said it's a PET scan the older

1167

00:44:10,950 --> 00:44:08,799

styles of PET scans were not fantastic

1168

00:44:13,289 --> 00:44:10,960

for this is all modern non-invasive to

1169

00:44:15,299 --> 00:44:13,299

know well it's mildly invasive in that

1170

00:44:19,950 --> 00:44:15,309

you have to have a radioactive isotope

1171

00:44:21,029 --> 00:44:19,960

injected into a vein and and that

1172

00:44:22,499 --> 00:44:21,039

travels around the body and gets

1173

00:44:25,109 --> 00:44:22,509

absorbed it gets taken up by the

1174

00:44:26,549 --> 00:44:25,119

prostate cancer cells and it lights up

1175

00:44:29,039 --> 00:44:26,559

on the scan and it tells us where

1176

00:44:30,299 --> 00:44:29,049

prostate cancer has traveled to so for a

1177

00:44:31,190 --> 00:44:30,309

man for example let's say you know

1178

00:44:32,990 --> 00:44:31,200

you've got a

1179

00:44:35,930 --> 00:44:33,000

who was diagnosed with prostate cancer

1180

00:44:38,599 --> 00:44:35,940

ten years ago and if you had your

1181

00:44:40,339 --> 00:44:38,609

prostate removed then the best sign of

1182

00:44:42,170 --> 00:44:40,349

whether your prostate cancer has come

1183

00:44:45,650 --> 00:44:42,180

back is that your PSA is starting to

1184

00:44:47,300 --> 00:44:45,660

rise again so the what then happens is

1185

00:44:51,319 --> 00:44:47,310

we can now send you off to have this

1186

00:44:53,120 --> 00:44:51,329

PSMA PET scan and it can very reliably

1187

00:44:54,500 --> 00:44:53,130

show us where the prostate cancer has

1188

00:44:56,839 --> 00:44:54,510

returned and the reason we want to know

1189

00:44:59,000 --> 00:44:56,849

that is that for men who have never had

1190

00:45:00,230 --> 00:44:59,010

radiotherapy on it so there are number

1191

00:45:02,150 --> 00:45:00,240

of different treatment recommendations

1192

00:45:04,130 --> 00:45:02,160

for prostate cancer you can have your

1193

00:45:05,210 --> 00:45:04,140

prostate removed and have to be honest

1194

00:45:07,160 --> 00:45:05,220

because I don't work on the surgical

1195

00:45:09,109 --> 00:45:07,170

side of things and I'm not an expert in

1196

00:45:10,910 --> 00:45:09,119

radiation radiation oncology either i'm

1197

00:45:13,310 --> 00:45:10,920

at a clinical trial coordinator so my

1198

00:45:14,720 --> 00:45:13,320

knowledge is somewhat limited but you

1199

00:45:17,420 --> 00:45:14,730

can have your prostate removed you could

1200

00:45:19,130 --> 00:45:17,430

have radiotherapy those are the main

1201

00:45:21,410 --> 00:45:19,140

treatments as well as also hormone

1202

00:45:25,099 --> 00:45:21,420

therapy hormone therapy sometimes

1203

00:45:26,780 --> 00:45:25,109

recommended because the hormone in the

1204

00:45:28,300 --> 00:45:26,790

body that actually encourages the growth

1205

00:45:31,220 --> 00:45:28,310

of prostate cancer is testosterone

1206

00:45:33,170 --> 00:45:31,230

alright so for men who have prostate

1207

00:45:35,300 --> 00:45:33,180

cancer it's often recommended that they

1208

00:45:36,740 --> 00:45:35,310

have course of hormone therapy or it can

1209

00:45:38,480 --> 00:45:36,750

be a lengthy course of hormone therapy

1210

00:45:40,130 --> 00:45:38,490

and the side effects of hormone therapy

1211

00:45:42,710 --> 00:45:40,140

are pretty unpleasant they can cause

1212

00:45:45,470 --> 00:45:42,720

depression but people can put on a lot

1213

00:45:46,640 --> 00:45:45,480

of weight you know it really can have a

1214

00:45:48,770 --> 00:45:46,650

significant effect on people's quality

1215

00:45:50,300 --> 00:45:48,780

of life so we want to try and avoid

1216

00:45:52,190 --> 00:45:50,310

those things where we can and we also

1217

00:45:54,710 --> 00:45:52,200

want to avoid giving radiation therapy

1218

00:45:56,599 --> 00:45:54,720

unnecessarily if we don't have to do so

1219

00:45:58,670 --> 00:45:56,609

if a man has had their prostate removed

1220

00:46:00,589 --> 00:45:58,680

and has never had radiation therapy for

1221

00:46:02,900 --> 00:46:00,599

example and they say their PSA goes up

1222

00:46:04,940 --> 00:46:02,910

we know that only thing the body that

1223

00:46:06,800 --> 00:46:04,950

gives off PSA if your process being

1224

00:46:08,599 --> 00:46:06,810

removed must be prostate cancer cells so

1225

00:46:10,390 --> 00:46:08,609

it's a good indication that the prostate

1226

00:46:13,269 --> 00:46:10,400

cancers come back

1227

00:46:14,799 --> 00:46:13,279

and we can look at different ways of

1228

00:46:16,329 --> 00:46:14,809

treating that but for example we may

1229

00:46:17,829 --> 00:46:16,339

want to avoid giving hormone therapy

1230

00:46:19,569 --> 00:46:17,839

unnecessarily or we may want to avoid

1231

00:46:21,519 --> 00:46:19,579

giving radiation therapy to the prostate

1232

00:46:23,950 --> 00:46:21,529

bed because that has side effects it can

1233

00:46:26,319 --> 00:46:23,960

affect erectile function it can affect

1234

00:46:27,579 --> 00:46:26,329

bladder function of bowel function so

1235

00:46:30,220 --> 00:46:27,589

it's really important to be able to

1236

00:46:32,200 --> 00:46:30,230

determine where the cancer is and this

1237

00:46:33,670 --> 00:46:32,210

new PSMA test can really help us

1238

00:46:35,740 --> 00:46:33,680

determine whether the cancer has come

1239

00:46:37,180 --> 00:46:35,750

back outside of where the prostate used

1240

00:46:39,460 --> 00:46:37,190

to be or whether it's come back where

1241

00:46:41,349 --> 00:46:39,470

the prostate used to be and there are

1242

00:46:42,970 --> 00:46:41,359

different ways of treating that and it's

1243

00:46:44,769 --> 00:46:42,980

one of the really important things for

1244

00:46:46,180 --> 00:46:44,779

men is being able to make the best

1245

00:46:48,220 --> 00:46:46,190

decision for themselves about their

1246

00:46:50,230 --> 00:46:48,230

treatment if they had prostate cancer

1247

00:46:52,480 --> 00:46:50,240

and whether or not they may want to go

1248

00:46:53,799 --> 00:46:52,490

on to have a therapy which is going to

1249

00:46:56,170 --> 00:46:53,809

have side effects which are not going to

1250

00:46:57,700 --> 00:46:56,180

actually result in a treatment that is

1251

00:46:59,380 --> 00:46:57,710

going to be beneficial to them so you

1252

00:47:00,940 --> 00:46:59,390

don't want to have radiation therapy if

1253

00:47:03,970 --> 00:47:00,950

you don't actually have any cancer in

1254

00:47:07,180 --> 00:47:03,980

your cross a bed for example now with

1255

00:47:09,099 --> 00:47:07,190

issues like Alzheimer's some issues with

1256

00:47:10,480 --> 00:47:09,109

the eyes and some issues with prostate

1257

00:47:12,220 --> 00:47:10,490

cancer are these things that are showing

1258

00:47:13,420 --> 00:47:12,230

up because we're living longer is that

1259

00:47:15,190 --> 00:47:13,430

part of the thing these are some of the

1260

00:47:16,720 --> 00:47:15,200

things that will come on eventually just

1261

00:47:18,519 --> 00:47:16,730

to be living really long one of them are

1262

00:47:19,779 --> 00:47:18,529

diseases of aging I mean cancer

1263

00:47:21,400 --> 00:47:19,789

Alzheimer's and those sort of things

1264

00:47:23,829 --> 00:47:21,410

we've got an aging population and they

1265

00:47:25,990 --> 00:47:23,839

are diseases of aging so you know you

1266

00:47:27,849 --> 00:47:26,000

get a lot of people who promote a lot of

1267

00:47:30,010 --> 00:47:27,859

the alternative therapies and and so on

1268

00:47:31,480 --> 00:47:30,020

who kind of jump up and down and tell

1269

00:47:32,559 --> 00:47:31,490

you know all the diseases we're

1270

00:47:34,329 --> 00:47:32,569

experiencing it's because of our

1271

00:47:35,740 --> 00:47:34,339

terrible diet and lifestyle and so on

1272

00:47:37,269 --> 00:47:35,750

and does some extent there is you know

1273

00:47:39,309 --> 00:47:37,279

some truth in there we are much more

1274

00:47:41,019 --> 00:47:39,319

sedentary than we used to be but overall

1275

00:47:42,309 --> 00:47:41,029

we have much better nutrition we're

1276  
00:47:44,019 --> 00:47:42,319  
living longer because of that you know

1277  
00:47:45,210 --> 00:47:44,029  
you look at the Paleo diet for example

1278  
00:47:47,589 --> 00:47:45,220  
you know if you look back at the

1279  
00:47:49,240 --> 00:47:47,599  
Paleolithic man they did not exactly

1280  
00:47:50,890 --> 00:47:49,250  
have a very long life span nor did they

1281  
00:47:52,269 --> 00:47:50,900  
not suffer from disease it's just they

1282  
00:47:53,920 --> 00:47:52,279  
didn't live long enough to suffer from

1283  
00:47:56,079 --> 00:47:53,930  
the diseases that we now see in humans

1284  
00:47:57,670 --> 00:47:56,089  
my goodness could they danced my

1285  
00:47:59,589 --> 00:47:57,680  
goodness could they ever I mean really

1286  
00:48:02,640 --> 00:47:59,599  
I'm a [h\_\_h] is relative in 230 you're

1287  
00:48:05,470 --> 00:48:02,650  
gonna really cut around oh I think you

1288  
00:48:07,750 --> 00:48:05,480

not like about I have seen some people

1289

00:48:09,400 --> 00:48:07,760

in their 90's who can really hit the

1290

00:48:10,870 --> 00:48:09,410

dance floor I just want to go back to

1291

00:48:13,000 --> 00:48:10,880

one thing botas that I missed about the

1292

00:48:14,799 --> 00:48:13,010

PSA test which you actually asked me the

1293

00:48:16,900 --> 00:48:14,809

most important thing about PSA testing

1294

00:48:18,769 --> 00:48:16,910

and that's where the controversy lies is

1295

00:48:21,679 --> 00:48:18,779

that a lot of people are concerned that

1296

00:48:24,079 --> 00:48:21,689

PSA testing is done too much and that

1297

00:48:26,809 --> 00:48:24,089

men who so prostate cancer generally is

1298

00:48:28,429 --> 00:48:26,819

a fairly slow growing cancer my dad has

1299

00:48:31,009 --> 00:48:28,439

a hobby one of them is going to aldi the

1300

00:48:32,689 --> 00:48:31,019

other one is going to the doctor I think

1301

00:48:35,959 --> 00:48:32,699

a lot of elderly people who are like

1302

00:48:36,919 --> 00:48:35,969

that that is not unusual but you know

1303

00:48:38,599 --> 00:48:36,929

there are men who are in different

1304

00:48:40,009 --> 00:48:38,609

groups so that you can have a very

1305

00:48:42,799 --> 00:48:40,019

strong family history of prostate cancer

1306

00:48:45,349 --> 00:48:42,809

and some who don't and a lot of it is

1307

00:48:46,880 --> 00:48:45,359

about identifying risk and ensuring that

1308

00:48:48,709 --> 00:48:46,890

you have a conversation with your doctor

1309

00:48:51,079 --> 00:48:48,719

about where you fit into that risk group

1310

00:48:53,509 --> 00:48:51,089

so it's worth testing your PSA at the

1311

00:48:55,219 --> 00:48:53,519

age of 85 when you have no risk factors

1312

00:48:56,479 --> 00:48:55,229

and then going on to have treatments

1313

00:48:58,549 --> 00:48:56,489

that are going to you know cause you

1314

00:49:00,409 --> 00:48:58,559

problems where you might be diagnosed

1315

00:49:01,999 --> 00:49:00,419

with prostate cancer that will you know

1316

00:49:03,829 --> 00:49:02,009

you'll die long before it would ever

1317

00:49:05,029 --> 00:49:03,839

have caused you any problems so that's

1318

00:49:07,519 --> 00:49:05,039

where the conversation and the

1319

00:49:10,189 --> 00:49:07,529

controversy years around screening using

1320

00:49:11,329 --> 00:49:10,199

PSA testing so what I'd should you give

1321

00:49:13,339 --> 00:49:11,339

me I mean would someone in their 20s

1322

00:49:16,039 --> 00:49:13,349

bother getting a PSA testing in our

1323

00:49:17,689 --> 00:49:16,049

chinese is very very early I mean look

1324

00:49:19,880 --> 00:49:17,699

you know that I'm actually to be honest

1325

00:49:22,009 --> 00:49:19,890

I actually cannot remember at what age

1326

00:49:24,289 --> 00:49:22,019

they do recommend starting it that is it

1327

00:49:26,779 --> 00:49:24,299

like 50 with the bell look I mean the

1328

00:49:30,049 --> 00:49:26,789

thing is it would be 50 60 s probably

1329

00:49:31,699 --> 00:49:30,059

for fees would be about the age and in

1330

00:49:33,289 --> 00:49:31,709

fact most of the the patients I see

1331

00:49:35,390 --> 00:49:33,299

coming through an hour on the clinical

1332

00:49:38,299 --> 00:49:35,400

trials I'm involved in you know anywhere

1333

00:49:40,399 --> 00:49:38,309

between 50 s up to 80 s it's pretty

1334

00:49:43,279 --> 00:49:40,409

unusual I very unusual to see anyone

1335

00:49:45,559 --> 00:49:43,289

over the age of 50 but it does happen so

1336

00:49:47,390 --> 00:49:45,569

you know really it's all about risk

1337

00:49:50,179 --> 00:49:47,400

assessment and and having a conversation

1338

00:49:51,799 --> 00:49:50,189

with your doctor and you know just just

1339

00:49:53,029 --> 00:49:51,809

being well informed and Joe what's it

1340

00:49:54,109 --> 00:49:53,039

like to hang with the skeptics here in

1341

00:49:56,509 --> 00:49:54,119

Brisbane this time around you're a

1342

00:49:57,979 --> 00:49:56,519

veteran of many conference you've

1343

00:49:59,539 --> 00:49:57,989

embarrassed yourself you've been thrown

1344

00:50:01,309 --> 00:49:59,549

and Ben bet you're not allowed back get

1345

00:50:03,799 --> 00:50:01,319

it back in purple Adelaide you know that

1346

00:50:06,349 --> 00:50:03,809

never oh look I have to say it's been so

1347

00:50:08,839 --> 00:50:06,359

lovely seeing the baton handed on to the

1348

00:50:11,419 --> 00:50:08,849

Brisbane skeptics this year I could

1349

00:50:13,549 --> 00:50:11,429

drink like a drink that yeah I have seen

1350

00:50:15,859 --> 00:50:13,559

I was at the world coming last night so

1351

00:50:18,060 --> 00:50:15,869

yes and they've really done a fabulous

1352

00:50:19,860 --> 00:50:18,070

job really great speakers and

1353

00:50:22,620 --> 00:50:19,870

venue and it's so lovely being up in

1354

00:50:24,510 --> 00:50:22,630

sunny Brisbane so no it's look it's

1355

00:50:26,790 --> 00:50:24,520

always wonderful hanging out with with a

1356

00:50:28,830 --> 00:50:26,800

bunch of people who sort of like minded

1357

00:50:30,870 --> 00:50:28,840

so any any of the skeptics inventive is

1358

00:50:33,150 --> 00:50:30,880

fantastic and just reminding people that

1359

00:50:34,500 --> 00:50:33,160

just go shoot as a career as a nurse you

1360

00:50:36,180 --> 00:50:34,510

can get into all sorts of things you

1361

00:50:37,800 --> 00:50:36,190

don't end up having to work and all you

1362

00:50:38,880 --> 00:50:37,810

don't have to end up working an award or

1363

00:50:40,800 --> 00:50:38,890

there's nothing wrong with that you can

1364

00:50:41,970 --> 00:50:40,810

do lots of different things see nothing

1365

00:50:43,620 --> 00:50:41,980

wrong with working in award and in fact

1366

00:50:45,960 --> 00:50:43,630

some of my most satisfying experiences

1367

00:50:48,420 --> 00:50:45,970

as a nurse we're working on the wards I

1368

00:50:49,770 --> 00:50:48,430

absolutely loved it but I moved on to

1369

00:50:51,330 --> 00:50:49,780

other things the reason I would imagine

1370

00:50:52,860 --> 00:50:51,340

it would be grueling it's not because of

1371

00:50:54,660 --> 00:50:52,870

the physical thing it was a bad job but

1372

00:50:56,190 --> 00:50:54,670

because you're seeing a lot of sadness

1373

00:50:58,230 --> 00:50:56,200

with people and that would be wearing on

1374

00:51:00,240 --> 00:50:58,240

a person emotionally look at a lot of it

1375

00:51:02,430 --> 00:51:00,250

is unfortunately because you know

1376

00:51:05,100 --> 00:51:02,440

nursing as in a lot of healthcare is

1377

00:51:07,620 --> 00:51:05,110

very very under-resourced you know we

1378

00:51:09,900 --> 00:51:07,630

don't have nurses I you know I wouldn't

1379

00:51:11,700 --> 00:51:09,910

say that our pay is is grotesque but I

1380

00:51:13,440 --> 00:51:11,710

certainly don't think nursing pays what

1381

00:51:15,330 --> 00:51:13,450

it should be and there's huge

1382

00:51:17,070 --> 00:51:15,340

disparities between for example you look

1383

00:51:19,080 --> 00:51:17,080

at aged care nurses who work in aged

1384

00:51:21,810 --> 00:51:19,090

care homes to do an amazing job looking

1385

00:51:23,730 --> 00:51:21,820

looking after our vulnerable elderly and

1386

00:51:25,800 --> 00:51:23,740

that's my manual to that job very manual

1387

00:51:27,330 --> 00:51:25,810

very exhausting work and they are they

1388

00:51:30,390 --> 00:51:27,340

are paid a lot less than nurses who work

1389

00:51:31,680 --> 00:51:30,400

in hospitals but you know that this is

1390

00:51:35,610 --> 00:51:31,690

the thing about nursing is that it is

1391

00:51:36,840 --> 00:51:35,620

such a vast career and a profession

1392

00:51:39,300 --> 00:51:36,850

which opens up so many opportunities

1393

00:51:41,220 --> 00:51:39,310

from you know working in a nursing home

1394

00:51:42,630 --> 00:51:41,230

to working on a war to you know doing

1395

00:51:44,370 --> 00:51:42,640

things like what I've done working in an

1396

00:51:46,680 --> 00:51:44,380

endoscopy and then going on to work and

1397

00:51:48,390 --> 00:51:46,690

research you know working in academia

1398

00:51:49,920 --> 00:51:48,400

and in fact what's really interesting

1399

00:51:51,420 --> 00:51:49,930

about nursing is if you actually look at

1400

00:51:56,010 --> 00:51:51,430

some of the work that's been done in

1401  
00:51:58,260 --> 00:51:56,020  
research some of the the great intensive

1402  
00:52:00,600 --> 00:51:58,270  
care work a lot of that's been done by

1403  
00:52:03,210 --> 00:52:00,610  
nurses there's been some really a lot of

1404  
00:52:04,380 --> 00:52:03,220  
innovation a lot of interesting ideas I

1405  
00:52:06,930 --> 00:52:04,390  
mean look you know I've had I've had

1406  
00:52:08,280 --> 00:52:06,940  
some criticism of my own profession in

1407  
00:52:09,780 --> 00:52:08,290  
the past I won't say that you know

1408  
00:52:12,030 --> 00:52:09,790  
everything is absolutely fabulous I you

1409  
00:52:15,000 --> 00:52:12,040  
know I'm known to speak up about the

1410  
00:52:16,890 --> 00:52:15,010  
fact that there is I will there is a lot

1411  
00:52:19,290 --> 00:52:16,900  
of woo and some elements of Nursing and

1412  
00:52:21,030 --> 00:52:19,300  
Midwifery as well you know that it's

1413  
00:52:24,300 --> 00:52:21,040

disappointing when you see nurses who

1414

00:52:26,520 --> 00:52:24,310

who have NT wax use or who believe in

1415

00:52:28,110 --> 00:52:26,530

things like therapeutic touch where

1416

00:52:29,870 --> 00:52:28,120

no the nursing profession is a

1417

00:52:31,800 --> 00:52:29,880

science-based profession and

1418

00:52:33,210 --> 00:52:31,810

unfortunately I think some of them some

1419

00:52:35,850 --> 00:52:33,220

of the critical thinking skills that

1420

00:52:38,520 --> 00:52:35,860

should inform what we do don't seem to

1421

00:52:40,980 --> 00:52:38,530

always translate into practice okay but

1422

00:52:43,980 --> 00:52:40,990

there are you know the nursing

1423

00:52:46,050 --> 00:52:43,990

profession is massive in any country and

1424

00:52:50,010 --> 00:52:46,060

there's a huge workforce out there with

1425

00:52:52,230 --> 00:52:50,020

very vast reliefs and and backgrounds so

1426

00:52:54,150 --> 00:52:52,240

it's not entirely surprising something

1427

00:52:56,880 --> 00:52:54,160

and it's a very nimble nimble profession

1428

00:52:59,340 --> 00:52:56,890

to tell me can you on your own flip a

1429

00:53:00,930 --> 00:52:59,350

king-size mattress oh well no log I

1430

00:53:02,430 --> 00:53:00,940

can't flip a king-size mattress however

1431

00:53:04,050 --> 00:53:02,440

I know really handy because that's a car

1432

00:53:05,970 --> 00:53:04,060

thing you have to do as a nurse yeah but

1433

00:53:09,150 --> 00:53:05,980

I can make a bed with someone in it

1434

00:53:12,360 --> 00:53:09,160

which my husband will attest to yes yes

1435

00:53:13,770 --> 00:53:12,370

yes and and what's more is I have taught

1436

00:53:15,630 --> 00:53:13,780

my husband to do Hospital corners

1437

00:53:17,340 --> 00:53:15,640

because I'm sorry if you're going to

1438

00:53:19,500 --> 00:53:17,350

live in my home the bed will have

1439

00:53:21,300 --> 00:53:19,510

Hospital corners not now define that

1440

00:53:22,950 --> 00:53:21,310

again that's the same as I do them in

1441

00:53:25,440 --> 00:53:22,960

hotels isn't it that is the same which

1442

00:53:29,580 --> 00:53:25,450

is walls which well look it's very hard

1443

00:53:31,410 --> 00:53:29,590

to acquire a and a video you rather than

1444

00:53:33,150 --> 00:53:31,420

rather than sound but it's just a very

1445

00:53:35,040 --> 00:53:33,160

welcome to a guy here who just puts the

1446

00:53:37,050 --> 00:53:35,050

fitted sheet on and and and it goes on

1447

00:53:39,000 --> 00:53:37,060

top well no real Hospital corners

1448

00:53:40,710 --> 00:53:39,010

involves in fact you know who would be

1449

00:53:42,630 --> 00:53:40,720

really good at them Richard Richard

1450

00:53:44,940 --> 00:53:42,640

Saunders which is such a anal agenda on

1451  
00:53:47,580 --> 00:53:44,950  
is it would be really got at them

1452  
00:53:50,100 --> 00:53:47,590  
because of his origami skills I reckon

1453  
00:53:52,020 --> 00:53:50,110  
Richard could do fantastic or I get

1454  
00:53:54,360 --> 00:53:52,030  
Richard Saunders origami skills he could

1455  
00:53:56,040 --> 00:53:54,370  
yes he could think they can make a mean

1456  
00:53:57,090 --> 00:53:56,050  
bed thank you for talking to us and by

1457  
00:53:59,880 --> 00:53:57,100  
the way for the visual people she's

1458  
00:54:02,220 --> 00:53:59,890  
wearing a Betty Page t-shirt and yes I

1459  
00:54:03,360 --> 00:54:02,230  
am thank you very much thanks Joe and

1460  
00:54:16,099 --> 00:54:03,370  
we'll have to have you back on his own

1461  
00:54:20,670 --> 00:54:18,690  
how much truth is there to claims of

1462  
00:54:23,040 --> 00:54:20,680  
risk caused by the treatment of beef

1463  
00:54:24,870 --> 00:54:23,050

cattle with antibiotics I'm Tamra

1464

00:54:30,809 --> 00:54:24,880

Robertson and you're hooked up to the

1465

00:54:32,970 --> 00:54:30,819

feeding to the feeding tube is the web

1466

00:54:36,089 --> 00:54:32,980

video series that brings you the real

1467

00:54:38,550 --> 00:54:36,099

facts behind popular food myths food

1468

00:54:40,920 --> 00:54:38,560

whoo is the most pervasive pop

1469

00:54:43,410 --> 00:54:40,930

pseudoscience out there right now and it

1470

00:54:45,390 --> 00:54:43,420

desperately needs debunking each three

1471

00:54:48,180 --> 00:54:45,400

minute episode is suitable for general

1472

00:54:51,300 --> 00:54:48,190

audience and is produced by scientists

1473

00:55:08,569 --> 00:54:51,310

for everyone the feeding tube check it

1474

00:55:12,299 --> 00:55:10,890

thank you for listening to the skeptic

1475

00:55:13,979 --> 00:55:12,309

zone and if you ever invite Jolla

1476  
00:55:15,839 --> 00:55:13,989  
bastard to your place for a party make

1477  
00:55:21,210 --> 00:55:15,849  
sure she brings some peanut butter slice

1478  
00:55:22,849 --> 00:55:21,220  
oh I'm still recovering in a nice way of

1479  
00:55:25,259 --> 00:55:22,859  
course in a very nice way of course

1480  
00:55:27,930 --> 00:55:25,269  
coming up on next week's show another

1481  
00:55:30,059 --> 00:55:27,940  
Maynard interview maynard's going to be

1482  
00:55:31,529 --> 00:55:30,069  
speaking to dr. Mel Thompson who gave a

1483  
00:55:34,680 --> 00:55:31,539  
wonderful talk at the Australian

1484  
00:55:36,930 --> 00:55:34,690  
skeptics convention a passionate

1485  
00:55:39,809 --> 00:55:36,940  
supporter of science and reason and the

1486  
00:55:42,089 --> 00:55:39,819  
health fears I think you'll want to tune

1487  
00:55:43,769 --> 00:55:42,099  
in do you tune in to a podcast or do you

1488  
00:55:46,229 --> 00:55:43,779

just download it I think you'll want to

1489

00:55:48,420 --> 00:55:46,239

download it and tune in for next week's

1490

00:55:50,309 --> 00:55:48,430

episode with them a not speaking to dr.

1491

00:55:51,690 --> 00:55:50,319

Mel Thompson thank you to those people

1492

00:55:54,779 --> 00:55:51,700

who have been supporting the skeptic

1493

00:55:58,380 --> 00:55:54,789

zone by buying some mr. Katz origami

1494

00:55:59,819 --> 00:55:58,390

jewelry ww skeptics on TV there's a link

1495

00:56:01,859 --> 00:55:59,829

there if you scroll down a little bit

1496

00:56:06,539 --> 00:56:01,869

and thank you to those people who send

1497

00:56:20,359 --> 00:56:06,549

letters to Fred the cat Fred the cat let

1498

00:56:26,849 --> 00:56:23,609

there is he's just walking beside me so

1499

00:56:30,809 --> 00:56:26,859

no he's gone round bed Fred you want to

1500

00:56:33,839 --> 00:56:30,819

say hello to the skeptics own fans yes

1501  
00:56:37,849 --> 00:56:33,849  
he is a cat um I think he's going to

1502  
00:56:44,120 --> 00:56:41,089  
he's sitting on the floor under a chair

1503  
00:56:47,459 --> 00:56:44,130  
looking at me as if I've lost my marbles

1504  
00:56:48,989 --> 00:56:47,469  
he might be right oh well for this week

1505  
00:56:55,200 --> 00:56:48,999  
this is Richard Saunders and Fred the

1506  
00:57:00,940 --> 00:56:57,640  
you've been listening to the skeptics

1507  
00:57:04,330 --> 00:57:00,950  
own podcast visit our website at wwc

1508  
00:57:07,750 --> 00:57:04,340  
aiptek zoomtv for contacts and archive

1509  
00:57:10,480 --> 00:57:07,760  
of all episodes since 2008 and our

1510  
00:57:12,390 --> 00:57:10,490  
online store please support the skeptic

1511  
00:57:15,550 --> 00:57:12,400  
zone by following us on twitter at

1512  
00:57:19,180 --> 00:57:15,560  
skeptic zone liking us on facebook and

1513  
00:57:21,340 --> 00:57:19,190

leaving a review on iTunes you can also

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00:57:24,540 --> 00:57:21,350

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00:57:27,310 --> 00:57:24,550

paypal for as little as 99 cents a week

1516

00:57:28,930 --> 00:57:27,320

the skeptic zone is an independent

1517

00:57:31,360 --> 00:57:28,940

productions the views and opinions

1518

00:57:33,580 --> 00:57:31,370

expressed on the skeptic zone and not