

The Skeptic Zone
Show 357 - 23 August 2015



Michael Kruse

1
00:00:22,150 --> 00:00:09,100
welcome to the skeptic zone the podcast

2
00:00:28,190 --> 00:00:24,800
hello and welcome to the skeptics are an

3
00:00:31,609 --> 00:00:28,200
episode number 357 for the 23rd of

4
00:00:35,690 --> 00:00:31,619
August 2015 Richard Saunders here with

5
00:00:37,820 --> 00:00:35,700
Joe alavesa hello Joe hello Richard how

6
00:00:39,710 --> 00:00:37,830
are you today pretty good i'm still

7
00:00:41,720 --> 00:00:39,720
buzzing after last night because folks

8
00:00:44,900 --> 00:00:41,730
last night Joe and I went along to see

9
00:00:47,450 --> 00:00:44,910
Neil deGrasse Tyson I guess we could

10
00:00:50,030 --> 00:00:47,460
sort of say in concert really it was

11
00:00:52,580 --> 00:00:50,040
pretty rockin it was he was walking to

12
00:00:54,259 --> 00:00:52,590
it was a think ink event and thanks to

13
00:00:56,360 --> 00:00:54,269

thinking and the national geographic

14
00:00:59,660 --> 00:00:56,370
channel here in Sydney who helped us get

15
00:01:01,450 --> 00:00:59,670
some some tickets to the event yes Neil

16
00:01:06,170 --> 00:01:01,460
deGrasse Tyson for over two hours

17
00:01:08,000 --> 00:01:06,180
basically just just and living us coming

18
00:01:10,460 --> 00:01:08,010
up with science fact after science fact

19
00:01:12,680 --> 00:01:10,470
about Pluto about gravity answering

20
00:01:15,950 --> 00:01:12,690
questions are and the audience loved it

21
00:01:19,010 --> 00:01:15,960
they did indeed it was really vibrant so

22
00:01:20,780 --> 00:01:19,020
i think it was environment vibrant he's

23
00:01:23,810 --> 00:01:20,790
a good performers he is he seemed to

24
00:01:28,510 --> 00:01:23,820
really be enjoying himself actually two

25
00:01:32,300 --> 00:01:28,520
hours of being fairly excited he was and

26

00:01:34,970 --> 00:01:32,310

the host they had for the he was

27

00:01:37,760 --> 00:01:34,980

fantastic too it was it was Derek Miller

28

00:01:39,140 --> 00:01:37,770

who does the veritasium youtube channel

29

00:01:43,010 --> 00:01:39,150

and he's also been on television

30

00:01:45,680 --> 00:01:43,020

recently doing a documentary series

31

00:01:48,560 --> 00:01:45,690

which is produced by Sonia Pemberton who

32

00:01:50,840 --> 00:01:48,570

did jabbed about uranium that's correct

33

00:01:52,610 --> 00:01:50,850

yeah the taming the dragon hungover I

34

00:01:53,720 --> 00:01:52,620

think so people in Australia might have

35

00:01:54,980 --> 00:01:53,730

seen that one and I'm sure it'll be

36

00:01:57,620 --> 00:01:54,990

shown around the world cuz it's an

37

00:01:59,270 --> 00:01:57,630

excellent series about uranium and how

38

00:02:01,280 --> 00:01:59,280

it's changed our lives and how it works

39

00:02:03,800 --> 00:02:01,290

and the physics behind it and everything

40

00:02:05,690 --> 00:02:03,810

like that any last week you way into a

41

00:02:06,770 --> 00:02:05,700

bunker and all bunker in the United

42

00:02:07,930 --> 00:02:06,780

States and actually went through the

43

00:02:10,630 --> 00:02:07,940

process of food

44

00:02:13,480 --> 00:02:10,640

bookies and oh yeah it was a fascinating

45

00:02:15,520 --> 00:02:13,490

show anyway I'm digress Neil deGrasse

46

00:02:17,140 --> 00:02:15,530

Tyson fantastic show thanks again to

47

00:02:20,200 --> 00:02:17,150

National Geographic Channel and thinking

48

00:02:24,310 --> 00:02:20,210

and we look forward to future events and

49

00:02:26,200 --> 00:02:24,320

just as a reminder I was involved with

50

00:02:28,060 --> 00:02:26,210

the thinking people in December last

51
00:02:31,030 --> 00:02:28,070
year when we toured with the james randi

52
00:02:33,160 --> 00:02:31,040
anything changed rounded yes yes and you

53
00:02:36,630 --> 00:02:33,170
got to go along to that to Joe I did I

54
00:02:39,010 --> 00:02:36,640
felt incredibly lucky for that one yeah

55
00:02:40,630 --> 00:02:39,020
that was good that was great and just

56
00:02:42,880 --> 00:02:40,640
remind people that you can hear an

57
00:02:46,630 --> 00:02:42,890
interview that I conducted with neil

58
00:02:49,330 --> 00:02:46,640
degrasse tyson and andrea about the

59
00:02:52,630 --> 00:02:49,340
cosmos series that's a skeptic Zone

60
00:02:54,970 --> 00:02:52,640
episode number 27 9 which was in

61
00:02:57,340 --> 00:02:54,980
february2014 you can look that one up

62
00:02:59,080 --> 00:02:57,350
and how lucky were you to be able to get

63
00:03:04,510 --> 00:02:59,090

to do that that sounds like such an

64

00:03:08,200 --> 00:03:04,520

honor look well I'm not much hello can I

65

00:03:09,700 --> 00:03:08,210

look how dare you luck but what's coming

66

00:03:11,110 --> 00:03:09,710

up on the skipped exam this week we're

67

00:03:14,430 --> 00:03:11,120

going to kick off with an interview i

68

00:03:17,470 --> 00:03:14,440

did a little while ago with michael cruz

69

00:03:18,580 --> 00:03:17,480

from bad science watching canada he's

70

00:03:20,410 --> 00:03:18,590

going to be telling us about the

71

00:03:24,910 --> 00:03:20,420

government over there their crackdown on

72

00:03:27,790 --> 00:03:24,920

the wacky bizarre crazy loony toons one

73

00:03:29,830 --> 00:03:27,800

minute claims of homeopathy well I'm

74

00:03:31,540 --> 00:03:29,840

looking forward to that one did I put

75

00:03:33,550 --> 00:03:31,550

that succinctly Joe I think I didn't I

76

00:03:36,400 --> 00:03:33,560

don't think you can put it any better I

77

00:03:38,590 --> 00:03:36,410

think you're right after that it's the

78

00:03:40,509 --> 00:03:38,600

Ross get big report with Heidi Robertson

79

00:03:43,570 --> 00:03:40,519

now this is the first in a new series

80

00:03:45,640 --> 00:03:43,580

Heidi's doing about infectious diseases

81

00:03:47,290 --> 00:03:45,650

and the facts and the myths behind them

82

00:03:49,030 --> 00:03:47,300

it's really really interesting and this

83

00:03:51,400 --> 00:03:49,040

week she's going to start that series

84

00:03:53,199 --> 00:03:51,410

with a look at influenza and how serious

85

00:03:55,150 --> 00:03:53,209

it really is and she's going to be

86

00:03:57,820 --> 00:03:55,160

interviewing somebody who's lost family

87

00:04:00,250 --> 00:03:57,830

members to influenza goodness oh yeah

88

00:04:01,930 --> 00:04:00,260

serious stuff but really good

89

00:04:04,120 --> 00:04:01,940

information this week coming from Heidi

90

00:04:07,660 --> 00:04:04,130

Robinson then wiegand science from the

91

00:04:09,670 --> 00:04:07,670

royal institution offers through w WR I

92

00:04:12,790 --> 00:04:09,680

us WI you hello to all the wonderful

93

00:04:15,009 --> 00:04:12,800

people there and the round off the show

94

00:04:16,690 --> 00:04:15,019

a guest reporter Kevin Davies who's from

95

00:04:18,789 --> 00:04:16,700

the Canberra skeptics and aren't they an

96

00:04:21,229 --> 00:04:18,799

active group more about them later in

97

00:04:23,779 --> 00:04:21,239

the show actually Kevin chat stew

98

00:04:26,150 --> 00:04:23,789

Glenn Nagle the education and public

99

00:04:28,490 --> 00:04:26,160

outreach manager at the canberra deep

100

00:04:31,070 --> 00:04:28,500

space communications complex they are

101
00:04:32,839 --> 00:04:31,080
the people who send messages off to the

102
00:04:34,490 --> 00:04:32,849
Rovers on Mars and get messages from the

103
00:04:39,800 --> 00:04:34,500
program Pluto and all that sort of Oh

104
00:04:41,150 --> 00:04:39,810
fantastic Pluto you say Bluto is Neil

105
00:04:43,010 --> 00:04:41,160
deGrasse Tyson had a lot to say about

106
00:04:44,510 --> 00:04:43,020
Pluto last night indeed and a lot of

107
00:04:48,170 --> 00:04:44,520
people have a lot of strong feelings

108
00:04:49,610 --> 00:04:48,180
about Pluto oh it's heaps so it seems so

109
00:04:51,080 --> 00:04:49,620
that's what's coming up on the skeptic

110
00:04:53,749 --> 00:04:51,090
zone this week great to have you over

111
00:04:55,430 --> 00:04:53,759
here at skeptics own headquarters Joan

112
00:04:56,870 --> 00:04:55,440
glad you enjoyed last night and very

113
00:05:00,050 --> 00:04:56,880

happy to be here I think it's time that

114

00:05:01,879 --> 00:05:00,060

we both run downstairs making sure we

115

00:05:03,620 --> 00:05:01,889

don't trip over Fred the cat and he was

116

00:05:06,529 --> 00:05:03,630

just here a moment ago I don't know

117

00:05:08,600 --> 00:05:06,539

where he was just at our feet a moment

118

00:05:10,120 --> 00:05:08,610

ago making sure we don't trip over Fred

119

00:05:12,559 --> 00:05:10,130

to get we're going to run downstairs

120

00:05:15,010 --> 00:05:12,569

we're going to open the fridge open the

121

00:05:18,080 --> 00:05:15,020

pantry what are we going to find you I

122

00:05:21,680 --> 00:05:18,090

have no idea how about some pickled

123

00:05:26,899 --> 00:05:21,690

vegetables we can have with some Chinese

124

00:05:28,459 --> 00:05:26,909

duck are you cooking it I can try well

125

00:05:52,310 --> 00:05:28,469

while we attempt that cooking we hope

126

00:05:59,280 --> 00:05:55,770

joining me now from Canada Canada is

127

00:06:01,320 --> 00:05:59,290

Canada where I spent a few years when I

128

00:06:04,290 --> 00:06:01,330

was a very young boy indeed in

129

00:06:06,900 --> 00:06:04,300

Saskatchewan from bad science watch it's

130

00:06:07,980 --> 00:06:06,910

michael cruz hello Michael hello Richard

131

00:06:10,050 --> 00:06:07,990

it's great to be on the skeptic zone

132

00:06:12,300 --> 00:06:10,060

thank you it's been a while since you've

133

00:06:14,790 --> 00:06:12,310

been on the zone I think I think I think

134

00:06:16,650 --> 00:06:14,800

that according to skype I spoke to you

135

00:06:17,940 --> 00:06:16,660

may be elastic year ago perhaps or

136

00:06:20,640 --> 00:06:17,950

longer I don't know it's been a while

137

00:06:22,950 --> 00:06:20,650

anyways it's it has been a while now i

138

00:06:25,320 --> 00:06:22,960

thought i'd give you a cool catch up to

139

00:06:28,260 --> 00:06:25,330

find out how bad science which is going

140

00:06:29,700 --> 00:06:28,270

generally and also we can chat about a

141

00:06:32,160 --> 00:06:29,710

press release that came out on the

142

00:06:34,470 --> 00:06:32,170

fourth of august about homeopathic

143

00:06:39,300 --> 00:06:34,480

labeling but first of all how is bad

144

00:06:41,910 --> 00:06:39,310

signs watch going well if this is our

145

00:06:44,210 --> 00:06:41,920

third year I think maybe fourth years

146

00:06:46,500 --> 00:06:44,220

since we sort of launched back in 2012

147

00:06:48,090 --> 00:06:46,510

that would be three years I guess like

148

00:06:51,750 --> 00:06:48,100

you know math is of course a strong

149

00:06:53,700 --> 00:06:51,760

point um and I wear as a volunteer

150

00:06:55,290 --> 00:06:53,710

organization you always run the risk of

151
00:06:57,690 --> 00:06:55,300
you know burning yourselves out into a

152
00:06:59,400 --> 00:06:57,700
crisp doing all this work you know

153
00:07:01,620 --> 00:06:59,410
basically outside of a normal job but

154
00:07:03,690 --> 00:07:01,630
despite that fact our volunteers are

155
00:07:06,420 --> 00:07:03,700
working hard the board is stuck with us

156
00:07:08,310 --> 00:07:06,430
we're still you know raising month funds

157
00:07:11,840 --> 00:07:08,320
and doing work and talking to the press

158
00:07:14,280 --> 00:07:11,850
so all in all I'm pretty pleasantly

159
00:07:16,680 --> 00:07:14,290
surprised that we're continuing to do

160
00:07:18,840 --> 00:07:16,690
our work here in Canada and and things

161
00:07:20,520 --> 00:07:18,850
are going along rather swimmingly it's

162
00:07:22,860 --> 00:07:20,530
nice to hear now for the benefit of our

163
00:07:25,440 --> 00:07:22,870

listeners who may not know what is the

164

00:07:28,740 --> 00:07:25,450

general idea and the genesis of bad

165

00:07:31,650 --> 00:07:28,750

science watch such bad science watch is

166

00:07:33,420 --> 00:07:31,660

a grassroots organization in that we

167

00:07:36,540 --> 00:07:33,430

don't have any kind of parent company or

168

00:07:39,930 --> 00:07:36,550

didn't come from any sort of an offshoot

169

00:07:42,690 --> 00:07:39,940

from anywhere we're a collection of you

170

00:07:45,480 --> 00:07:42,700

know computer programmers and doctors

171

00:07:48,180 --> 00:07:45,490

and I'm a paramedic myself and we are

172

00:07:51,930 --> 00:07:48,190

focused on promoting or advocating for

173

00:07:53,700 --> 00:07:51,940

good science in public policy we saw a

174

00:07:56,580 --> 00:07:53,710

few years ago when we started this sort

175

00:07:59,370 --> 00:07:56,590

of a deficit of a really focused voice

176
00:08:00,920 --> 00:07:59,380
that was speaking truth to power here in

177
00:08:04,610 --> 00:08:00,930
Canada

178
00:08:06,650 --> 00:08:04,620
specifically in there in the area of

179
00:08:08,450 --> 00:08:06,660
health policy regulation that's sort of

180
00:08:10,820 --> 00:08:08,460
where we've come down on and we've

181
00:08:13,760 --> 00:08:10,830
really focused on the approval of

182
00:08:15,560 --> 00:08:13,770
natural health products and chosen a

183
00:08:17,439 --> 00:08:15,570
couple specific areas to target on

184
00:08:19,939 --> 00:08:17,449
certainly homeopathy homeopathic

185
00:08:22,010 --> 00:08:19,949
products was a big push for us back in

186
00:08:25,129 --> 00:08:22,020
2013 with her stop know so it's project

187
00:08:27,830 --> 00:08:25,139
we've also tackled things like the myths

188
00:08:30,680 --> 00:08:27,840

surrounding Wi-Fi radiation there's a

189

00:08:33,589 --> 00:08:30,690

very motivated group here in Canada who

190

00:08:38,089 --> 00:08:33,599

are trying to force the government to

191

00:08:40,130 --> 00:08:38,099

lower or two to increase make more

192

00:08:42,019 --> 00:08:40,140

stringent the levels of radiation from

193

00:08:44,420 --> 00:08:42,029

wireless devices like cell phones that

194

00:08:45,949 --> 00:08:44,430

you can be exposed to really counter to

195

00:08:47,930 --> 00:08:45,959

the science as we know it and so we've

196

00:08:49,670 --> 00:08:47,940

been fighting that battle as well but

197

00:08:52,550 --> 00:08:49,680

we've really been focusing and we will

198

00:08:55,130 --> 00:08:52,560

continue to focus further down on health

199

00:08:57,680 --> 00:08:55,140

product regulation and you know the

200

00:08:59,840 --> 00:08:57,690

regulations surrounding the approval of

201
00:09:02,540 --> 00:08:59,850
nose oats and certainly in our future

202
00:09:04,550 --> 00:09:02,550
the anti-vaccination movement can't help

203
00:09:05,780 --> 00:09:04,560
but agree with you there and again for

204
00:09:09,829 --> 00:09:05,790
the benefit of the people who may not

205
00:09:12,380 --> 00:09:09,839
know this stop knows org which is the

206
00:09:15,230 --> 00:09:12,390
website what is that about specifically

207
00:09:18,829 --> 00:09:15,240
what is the nose ode well homeopathic no

208
00:09:22,160 --> 00:09:18,839
soda is a preparation that starts with a

209
00:09:24,980 --> 00:09:22,170
piece of disease to tissue like pus or

210
00:09:27,920 --> 00:09:24,990
sputum or blood or yeah it's really

211
00:09:29,900 --> 00:09:27,930
delicious and then of course that that

212
00:09:31,820 --> 00:09:29,910
that comes from an individual who's

213
00:09:35,060 --> 00:09:31,830

suffering from specific infectious

214

00:09:37,610 --> 00:09:35,070

disease measles or pertussis whooping

215

00:09:41,329 --> 00:09:37,620

cough tuberculosis things like that and

216

00:09:43,460 --> 00:09:41,339

then that material is diluted in the

217

00:09:45,890 --> 00:09:43,470

normal homeopathic manner so there's

218

00:09:48,980 --> 00:09:45,900

nothing left of it in fact the current

219

00:09:51,230 --> 00:09:48,990

standards ensure or insist that any

220

00:09:54,319 --> 00:09:51,240

product that is produced that's from a

221

00:09:56,240 --> 00:09:54,329

node is produced in such a way as to

222

00:09:58,490 --> 00:09:56,250

ensure that there is no original

223

00:10:00,829 --> 00:09:58,500

ingredient in it welfare and then this

224

00:10:03,440 --> 00:10:00,839

yeah and then this is this product is

225

00:10:05,389 --> 00:10:03,450

used by homeopaths and other alternative

226

00:10:08,060 --> 00:10:05,399

medicine providers like natural paths

227

00:10:12,920 --> 00:10:08,070

and chiropractors it is used as part of

228

00:10:16,290 --> 00:10:12,930

a larger program to replace

229

00:10:21,120 --> 00:10:16,300

vaccines so it's used as a vaccine quote

230

00:10:22,290 --> 00:10:21,130

vaccine alternative in the way there's a

231

00:10:23,730 --> 00:10:22,300

couple different programs there's a

232

00:10:25,019 --> 00:10:23,740

there's a gentleman and golden from

233

00:10:27,120 --> 00:10:25,029

Australia actually has there's only

234

00:10:28,439 --> 00:10:27,130

doctor gold room yes yes you guys

235

00:10:30,449 --> 00:10:28,449

probably know but I'm very well we have

236

00:10:32,189 --> 00:10:30,459

a an American named Kate birch who has a

237

00:10:34,980 --> 00:10:32,199

similar program out of the US has been

238

00:10:37,110 --> 00:10:34,990

training people in Canada somehow she

239

00:10:38,430 --> 00:10:37,120

gets away with that and these programs

240

00:10:40,230 --> 00:10:38,440

are meant to replace the childhood

241

00:10:42,749 --> 00:10:40,240

vaccination schedule so instead of

242

00:10:45,079 --> 00:10:42,759

getting your proven safe and effective

243

00:10:47,400 --> 00:10:45,089

you know measles mumps and rubella

244

00:10:50,009 --> 00:10:47,410

vaccine at appropriate ages you're

245

00:10:52,019 --> 00:10:50,019

getting sugar pills to your child and of

246

00:10:53,970 --> 00:10:52,029

course there's no evidence that these

247

00:10:57,150 --> 00:10:53,980

work at all there's a you know plenty of

248

00:10:59,759 --> 00:10:57,160

a priori evidence to say that how many

249

00:11:03,540 --> 00:10:59,769

pathak preparations shouldn't work and

250

00:11:06,900 --> 00:11:03,550

yet despite a lots these are actually

251
00:11:09,930 --> 00:11:06,910
approved by Health Canada for sale in

252
00:11:11,730 --> 00:11:09,940
our great country it's amazing until

253
00:11:13,439 --> 00:11:11,740
what the situation is there generally if

254
00:11:15,540 --> 00:11:13,449
you go into the chemist shop of the

255
00:11:18,480 --> 00:11:15,550
pharmacy can you find homeopathic

256
00:11:20,490 --> 00:11:18,490
products on the shelf yeah most from

257
00:11:23,340 --> 00:11:20,500
mainstream pharmacists carry a certain

258
00:11:26,040 --> 00:11:23,350
selection of homeopathic pills the kind

259
00:11:30,569 --> 00:11:26,050
of rack with the individual remedies

260
00:11:33,150 --> 00:11:30,579
like sold by borrow or boiron as they

261
00:11:35,610 --> 00:11:33,160
say in the US you know that you won't

262
00:11:38,069 --> 00:11:35,620
really find a rack like that in most

263
00:11:39,929 --> 00:11:38,079

pharmacy and most mainstream pharmacies

264

00:11:42,960 --> 00:11:39,939

you will certainly see the products

265

00:11:46,889 --> 00:11:42,970

actually more in insidiously placed

266

00:11:48,170 --> 00:11:46,899

beside the products that work the

267

00:11:50,429 --> 00:11:48,180

mainstream box at work so for example

268

00:11:54,300 --> 00:11:50,439

you know the cough cold and flu remedies

269

00:11:57,929 --> 00:11:54,310

will have inserted in them the Oslo

270

00:11:59,699 --> 00:11:57,939

coxcomb flu homeopathic flu remedies as

271

00:12:03,329 --> 00:11:59,709

if they were of the same standard and

272

00:12:04,679 --> 00:12:03,339

and level of efficacy so it's it's

273

00:12:06,350 --> 00:12:04,689

sometimes it's difficult for the

274

00:12:08,939 --> 00:12:06,360

consumer to actually tell the difference

275

00:12:10,429 --> 00:12:08,949

between those products we've certainly

276
00:12:12,929 --> 00:12:10,439
had another problem with cough cold

277
00:12:14,910 --> 00:12:12,939
medicines for children like cough

278
00:12:16,769 --> 00:12:14,920
medicines for children that up until

279
00:12:18,620 --> 00:12:16,779
this last iteration of the of the

280
00:12:22,740 --> 00:12:18,630
guidelines were actually able to be sold

281
00:12:25,819 --> 00:12:22,750
with an indication on them for cough and

282
00:12:27,390 --> 00:12:25,829
cold symptoms for children under 12 so

283
00:12:30,270 --> 00:12:27,400
instead of just being

284
00:12:33,150 --> 00:12:30,280
homeopathic preparation X they were you

285
00:12:36,540 --> 00:12:33,160
know cough medicine I'll me pathak cough

286
00:12:39,780 --> 00:12:36,550
medicine this was actually exposed by

287
00:12:41,700 --> 00:12:39,790
our CBC marketplace CBC's the Canadian

288
00:12:43,590 --> 00:12:41,710

Broadcasting Corporation our national

289

00:12:44,970 --> 00:12:43,600

broadcaster and they did they have a

290

00:12:46,710 --> 00:12:44,980

consumer protection show called

291

00:12:48,360 --> 00:12:46,720

marketplace that actually got one of

292

00:12:51,320 --> 00:12:48,370

these cough cold medicines approved a

293

00:12:55,530 --> 00:12:51,330

fake medicine approved by Health Canada

294

00:12:58,590 --> 00:12:55,540

for use for children for cough and cold

295

00:13:00,720 --> 00:12:58,600

so the process is very very easy to get

296

00:13:01,920 --> 00:13:00,730

through and not very stringent certainly

297

00:13:04,230 --> 00:13:01,930

so you can find these medications

298

00:13:05,910 --> 00:13:04,240

everywhere they're easy to get at you

299

00:13:08,550 --> 00:13:05,920

know the health food stores will have

300

00:13:10,080 --> 00:13:08,560

more of a advanced selection you'll be

301

00:13:12,150 --> 00:13:10,090

able to find the individual remedy so

302

00:13:14,220 --> 00:13:12,160

you can mix and match the availability

303

00:13:19,320 --> 00:13:14,230

of no sodes is a bit more difficult to

304

00:13:22,500 --> 00:13:19,330

pin down influenza gnam 9 c which is the

305

00:13:24,120 --> 00:13:22,510

flu no sewed becomes very popular

306

00:13:26,850 --> 00:13:24,130

obviously in the fall here when we have

307

00:13:29,310 --> 00:13:26,860

our flu season yeah and it certainly is

308

00:13:32,490 --> 00:13:29,320

sold as influence that I'm 9c by

309

00:13:35,790 --> 00:13:32,500

homeopaths and an pharmacists alike so

310

00:13:37,590 --> 00:13:35,800

it sounds very much like the situation

311

00:13:39,420 --> 00:13:37,600

here in Australia where sadly if you

312

00:13:41,640 --> 00:13:39,430

walk into your average chemist shop or

313

00:13:43,860 --> 00:13:41,650

pharmacy and you look around you will

314

00:13:46,950 --> 00:13:43,870

find homeopathic preparations for this

315

00:13:50,220 --> 00:13:46,960

and that are generally speaking in the

316

00:13:53,160 --> 00:13:50,230

Canadian society is homeopathy popular

317

00:13:56,220 --> 00:13:53,170

is it a little bit alternative as we

318

00:13:59,430 --> 00:13:56,230

might say is it accepted well there is

319

00:14:01,380 --> 00:13:59,440

certainly a staunch you know minority of

320

00:14:04,800 --> 00:14:01,390

the population that that's support these

321

00:14:07,440 --> 00:14:04,810

kind of therapies the use getting

322

00:14:11,670 --> 00:14:07,450

marketing data on who specifically uses

323

00:14:13,710 --> 00:14:11,680

homeopathy is a bit difficult in that it

324

00:14:15,720 --> 00:14:13,720

probably it would cost us several

325

00:14:17,430 --> 00:14:15,730

thousands of dollars to sort of find out

326

00:14:20,940 --> 00:14:17,440

because nobody's really reporting on the

327

00:14:23,760 --> 00:14:20,950

individual modality is openly run or in

328

00:14:25,860 --> 00:14:23,770

an open in an open sourced way but you

329

00:14:27,420 --> 00:14:25,870

know they're very popular you know

330

00:14:30,030 --> 00:14:27,430

natural remedies are certainly used by

331

00:14:33,560 --> 00:14:30,040

at one point by the majority of the

332

00:14:36,570 --> 00:14:33,570

population we at vitamins supplements

333

00:14:40,319 --> 00:14:36,580

and including homeopathy I would say

334

00:14:43,350 --> 00:14:40,329

that it's probably not as popular as

335

00:14:46,410 --> 00:14:43,360

more mainstream supplements but you know

336

00:14:48,840 --> 00:14:46,420

that being said in Ontario we have our

337

00:14:52,169 --> 00:14:48,850

brand new Lee a newly minted College of

338

00:14:56,789 --> 00:14:52,179

homeopaths he is registering people to

339

00:14:58,289 --> 00:14:56,799

to be homeopaths legally legally able to

340

00:15:01,350 --> 00:14:58,299

call themselves so many paths in Ontario

341

00:15:04,859 --> 00:15:01,360

and practice you know that was that was

342

00:15:08,280 --> 00:15:04,869

a recommendation to her in Ontario to

343

00:15:09,840 --> 00:15:08,290

our our regulator that the home be

344

00:15:11,429 --> 00:15:09,850

passed be regulated and then they've

345

00:15:12,960 --> 00:15:11,439

started taking registrants as of April

346

00:15:14,939 --> 00:15:12,970

first so this is not something it's

347

00:15:17,489 --> 00:15:14,949

going to go away and it's certainly well

348

00:15:21,689 --> 00:15:17,499

it may be a minority of the population

349

00:15:23,699 --> 00:15:21,699

that that ascribes to homeopathy it

350

00:15:25,799 --> 00:15:23,709

certainly is of a concern and even

351

00:15:27,509 --> 00:15:25,809

greater concern there is a the public

352

00:15:30,359 --> 00:15:27,519

health agency of Canada which is the

353

00:15:33,239 --> 00:15:30,369

arm's length promoter for the vaccine

354

00:15:36,179 --> 00:15:33,249

and for vaccines and immunization they

355

00:15:37,799 --> 00:15:36,189

have data that shows that upwards of

356

00:15:39,809 --> 00:15:37,809

five percent of the population believe

357

00:15:42,960 --> 00:15:39,819

that vaccines can be replaced by natural

358

00:15:46,100 --> 00:15:42,970

methods and will offer protection so

359

00:15:49,229 --> 00:15:46,110

that's not an insignificant number and

360

00:15:51,210 --> 00:15:49,239

you know the the aggressive kind of

361

00:15:53,309 --> 00:15:51,220

sales techniques for the things like the

362

00:15:55,919 --> 00:15:53,319

hustla [h__h] numb or the influenza them

363

00:15:57,389 --> 00:15:55,929

certainly concern us that's for sure you

364

00:16:01,319 --> 00:15:57,399

probably hear the same sort of things we

365

00:16:04,079 --> 00:16:01,329

do here it's all natural it's it's

366

00:16:07,049 --> 00:16:04,089

devoid of chemicals it's Nature's Way

367

00:16:10,139 --> 00:16:07,059

it's all this sort of flowery weasel

368

00:16:13,499 --> 00:16:10,149

words they use yeah certainly there

369

00:16:14,999 --> 00:16:13,509

there is a we do have a dress as far as

370

00:16:16,769 --> 00:16:15,009

regulation goes we do have a Directorate

371

00:16:18,479 --> 00:16:16,779

call to market at Health Products

372

00:16:21,030 --> 00:16:18,489

director which is supposed to sort of

373

00:16:23,340 --> 00:16:21,040

quash any kind of bad marketing but of

374

00:16:25,350 --> 00:16:23,350

course their complaint based they don't

375

00:16:29,429 --> 00:16:25,360

you know we don't they're going after

376

00:16:32,460 --> 00:16:29,439

the the big fish and you know if you're

377

00:16:35,669 --> 00:16:32,470

going to get some homeopathic bc who's

378

00:16:37,789 --> 00:16:35,679

promoting you know flu no sodes it's

379

00:16:40,590 --> 00:16:37,799

kind of difficult to get their attention

380

00:16:42,989 --> 00:16:40,600

but yeah that's that's the kind of you

381

00:16:46,530 --> 00:16:42,999

know a point of view that the that's a

382

00:16:49,409 --> 00:16:46,540

natural health community takes and

383

00:16:51,509 --> 00:16:49,419

there's certainly knit very well within

384

00:16:54,180 --> 00:16:51,519

the larger anti-vaccination community

385

00:16:56,880 --> 00:16:54,190

yes that are promoting all of the same

386

00:16:59,960 --> 00:16:56,890

I'm kind of memes that you know about

387

00:17:03,240 --> 00:16:59,970

the autism gamut is still alive you know

388

00:17:06,059 --> 00:17:03,250

and and they're still you know enough

389

00:17:07,530 --> 00:17:06,069

people that are choosing those those

390

00:17:10,679 --> 00:17:07,540

modalities that is to be worried about

391

00:17:12,059 --> 00:17:10,689

even more importantly we more

392

00:17:13,860 --> 00:17:12,069

convincingly we have a public health

393

00:17:16,020 --> 00:17:13,870

nurse that joined as a volunteer we're

394

00:17:17,340 --> 00:17:16,030

working on a specific project to to

395

00:17:19,920 --> 00:17:17,350

tackle the sanity back the larger

396

00:17:22,590 --> 00:17:19,930

question of anti-vaccination and she's

397

00:17:25,740 --> 00:17:22,600

from the Western Canada and the they

398

00:17:28,079 --> 00:17:25,750

have it's not uncommon for a public

399

00:17:30,390 --> 00:17:28,089

health nurse who in the western

400

00:17:33,180 --> 00:17:30,400

provinces takes care of vaccinations to

401
00:17:35,280 --> 00:17:33,190
have a parent come in in order to prove

402
00:17:36,630 --> 00:17:35,290
that their child is vaccinated to

403
00:17:37,800 --> 00:17:36,640
produce a note from their homeopath

404
00:17:40,020 --> 00:17:37,810
saying they've had all of their

405
00:17:42,150 --> 00:17:40,030
homeopathic vaccinations they're good to

406
00:17:44,430 --> 00:17:42,160
go they can go to school and it's the

407
00:17:47,490 --> 00:17:44,440
unfortunate yeah it's it's it's not

408
00:17:48,600 --> 00:17:47,500
uncommon and it's unfortunate ly down to

409
00:17:50,640 --> 00:17:48,610
the public health nurse to say you know

410
00:17:52,710 --> 00:17:50,650
what this is not real medicine you can't

411
00:17:55,080 --> 00:17:52,720
use this and of course that kind of

412
00:17:57,210 --> 00:17:55,090
relationship is not one that we're used

413
00:18:00,300 --> 00:17:57,220

to having where the where you have to

414

00:18:02,070 --> 00:18:00,310

sort of challenge somebody's oftentimes

415

00:18:05,130 --> 00:18:02,080

deeply held beliefs about the medicine

416

00:18:07,800 --> 00:18:05,140

they choose for the kids and that kind

417

00:18:09,300 --> 00:18:07,810

of interface between provider and parent

418

00:18:12,180 --> 00:18:09,310

is one that we're trying to target in

419

00:18:14,100 --> 00:18:12,190

our upcoming programs as well that's

420

00:18:16,200 --> 00:18:14,110

staggering that that's just amazing that

421

00:18:19,440 --> 00:18:16,210

the parents would front up with a note

422

00:18:20,790 --> 00:18:19,450

from their homeopaths attitude that to

423

00:18:22,860 --> 00:18:20,800

make that statements that's Wow

424

00:18:24,660 --> 00:18:22,870

sometimes my jaw hits the ground here

425

00:18:27,480 --> 00:18:24,670

folks when I'm interviewing people on

426

00:18:29,700 --> 00:18:27,490

the skeptics herded and that was one of

427

00:18:30,930 --> 00:18:29,710

them but I hope there's some good news

428

00:18:33,690 --> 00:18:30,940

and we can refer to the press release

429

00:18:38,040 --> 00:18:33,700

put out by bad science watch on August

430

00:18:43,320 --> 00:18:38,050

the 4th relating to possibly stronger

431

00:18:44,880 --> 00:18:43,330

warning labels yeah up thanks to not

432

00:18:47,970 --> 00:18:44,890

only I mean bad science watch brought

433

00:18:49,440 --> 00:18:47,980

this subject up into 2013 but after we

434

00:18:51,270 --> 00:18:49,450

started making allies in the public

435

00:18:52,620 --> 00:18:51,280

health community we found out that you

436

00:18:54,330 --> 00:18:52,630

know we weren't the first ones to bring

437

00:18:55,800 --> 00:18:54,340

this up we may be in the first ones

438

00:18:57,540 --> 00:18:55,810

targeting the public and trying to make

439

00:18:59,490 --> 00:18:57,550

noise about this but certainly Alberta

440

00:19:01,320 --> 00:18:59,500

Public Health bc Centers for Disease

441

00:19:02,840 --> 00:19:01,330

Control and the West because they had

442

00:19:05,760 --> 00:19:02,850

dealt with this issue as i said before

443

00:19:08,010 --> 00:19:05,770

had reported their their concern to

444

00:19:10,140 --> 00:19:08,020

health canada to say look these no sodes

445

00:19:13,770 --> 00:19:10,150

are being used as vaccine placements and

446

00:19:16,200 --> 00:19:13,780

they are you know ineffective dangerous

447

00:19:18,180 --> 00:19:16,210

please pull them from the shelves and so

448

00:19:20,580 --> 00:19:18,190

we made the same argument and and had a

449

00:19:23,310 --> 00:19:20,590

bit of movement they ended up putting a

450

00:19:24,930 --> 00:19:23,320

label in 2013 on the or or the

451
00:19:27,270 --> 00:19:24,940
regulation said that labels had to have

452
00:19:29,130 --> 00:19:27,280
the the wording quote this product is

453
00:19:31,470 --> 00:19:29,140
neither a vaccine or and an alternative

454
00:19:34,380 --> 00:19:31,480
to vaccination that of course is you

455
00:19:37,500 --> 00:19:34,390
know was a big was a six was a success

456
00:19:39,080 --> 00:19:37,510
for us in that the they'll it was the

457
00:19:41,430 --> 00:19:39,090
first time that Health Canada kind of

458
00:19:43,500 --> 00:19:41,440
admitted that these products should not

459
00:19:44,940 --> 00:19:43,510
be used for these these purposes but of

460
00:19:47,280 --> 00:19:44,950
course they didn't pull them from the

461
00:19:50,190 --> 00:19:47,290
shelves now subsequent to that period

462
00:19:52,230 --> 00:19:50,200
there been op-eds in the canadian

463
00:19:54,530 --> 00:19:52,240

medical association journal and this

464

00:19:56,880 --> 00:19:54,540

spring there was a very strongly worded

465

00:20:00,900 --> 00:19:56,890

position paper by the canadian theatric

466

00:20:03,180 --> 00:20:00,910

society saying look no so it should not

467

00:20:04,800 --> 00:20:03,190

be used we you know we have great

468

00:20:06,150 --> 00:20:04,810

reservations about them there's no

469

00:20:08,280 --> 00:20:06,160

evidence they work please do not

470

00:20:09,890 --> 00:20:08,290

vaccinate your children with no suits

471

00:20:12,720 --> 00:20:09,900

they don't work there unprotected and

472

00:20:14,640 --> 00:20:12,730

that in concert with the cbc marketplace

473

00:20:16,380 --> 00:20:14,650

who's done a couple programs now they

474

00:20:19,050 --> 00:20:16,390

actually did a hidden camera thing last

475

00:20:22,140 --> 00:20:19,060

fall where they actually had a parent go

476

00:20:26,040 --> 00:20:22,150

into homeopath and they were given

477

00:20:29,100 --> 00:20:26,050

information by the homeopath that was

478

00:20:30,990 --> 00:20:29,110

anti backs and you know suggested that

479

00:20:35,250 --> 00:20:31,000

no suits could be used to treat your

480

00:20:38,550 --> 00:20:35,260

child and that combined with our work I

481

00:20:41,280 --> 00:20:38,560

think you know pushed Health Canada to

482

00:20:43,560 --> 00:20:41,290

the limits this year now they didn't

483

00:20:47,910 --> 00:20:43,570

unfortunately pull the products from the

484

00:20:49,680 --> 00:20:47,920

shelves this this is a very thorny issue

485

00:20:53,340 --> 00:20:49,690

what after you've after the products are

486

00:20:54,780 --> 00:20:53,350

out there you know you can the the

487

00:20:55,980 --> 00:20:54,790

producers can come back to health canada

488

00:20:58,610 --> 00:20:55,990

said well you approved us before what

489

00:21:00,390 --> 00:20:58,620

now like you know we gave you our

490

00:21:02,160 --> 00:21:00,400

paragraph from the homeopathic

491

00:21:05,130 --> 00:21:02,170

pharmacopoeia which is all you need to

492

00:21:07,470 --> 00:21:05,140

get approval right under the traditional

493

00:21:08,880 --> 00:21:07,480

use guidelines not any evidence and so

494

00:21:11,040 --> 00:21:08,890

we can sell these products so why don't

495

00:21:12,630 --> 00:21:11,050

you let us sell them so what they did in

496

00:21:13,950 --> 00:21:12,640

fact this April was that the health

497

00:21:15,690 --> 00:21:13,960

minister or the Minister of Health Rona

498

00:21:17,810 --> 00:21:15,700

Ambrose put out a statement saying that

499

00:21:20,280 --> 00:21:17,820

the new labels will be the following now

500

00:21:21,410 --> 00:21:20,290

imagine getting this onto a small tube

501
00:21:24,080 --> 00:21:21,420
of sugar pills but just

502
00:21:26,180 --> 00:21:24,090
with me for one second it says quote

503
00:21:28,490 --> 00:21:26,190
this product is neither a vaccine nor an

504
00:21:30,050 --> 00:21:28,500
alternative to vaccination and it goes

505
00:21:31,850 --> 00:21:30,060
on this product has not been proven to

506
00:21:33,350 --> 00:21:31,860
prevent infection Health Canada does not

507
00:21:34,940 --> 00:21:33,360
recommend its using children and advice

508
00:21:36,650 --> 00:21:34,950
is that you try to receive all routine

509
00:21:41,300 --> 00:21:36,660
vaccinations so that's pretty strong

510
00:21:43,310 --> 00:21:41,310
wording so we're happy about that uh you

511
00:21:46,370 --> 00:21:43,320
know this is that you couldn't really

512
00:21:49,250 --> 00:21:46,380
put stronger warning on it they also at

513
00:21:52,700 --> 00:21:49,260

the same time put out which is a bizarre

514

00:21:55,870 --> 00:21:52,710

kind of admission that the process for

515

00:21:59,480 --> 00:21:55,880

approving these products is quite silly

516

00:22:00,620 --> 00:21:59,490

that they also put a statement saying

517

00:22:02,620 --> 00:22:00,630

that the Health Canada will no longer

518

00:22:05,090 --> 00:22:02,630

approve specific health claims on

519

00:22:08,450 --> 00:22:05,100

homeopathic products for cough cold and

520

00:22:10,340 --> 00:22:08,460

flu for children 12 and under now

521

00:22:12,530 --> 00:22:10,350

there's about believe it or not there's

522

00:22:14,210 --> 00:22:12,540

a hundred and thirty-nine products that

523

00:22:16,790 --> 00:22:14,220

they have approved for cough cold and

524

00:22:18,440 --> 00:22:16,800

flu for children under 12 what I was a

525

00:22:19,850 --> 00:22:18,450

bit staggered by as well I go that's a

526

00:22:20,960 --> 00:22:19,860

lot of products to be you know you can

527

00:22:22,730 --> 00:22:20,970

imagine how many products you have in

528

00:22:24,710 --> 00:22:22,740

your cough and cold you have in your in

529

00:22:26,210 --> 00:22:24,720

your super in your pharmacy there's 139

530

00:22:28,130 --> 00:22:26,220

of them homeopathic that are proved

531

00:22:29,480 --> 00:22:28,140

anyways so they basically said oh well

532

00:22:30,860 --> 00:22:29,490

you know we're not going to prove these

533

00:22:34,610 --> 00:22:30,870

products for specific health claims for

534

00:22:36,250 --> 00:22:34,620

that the unstated premise of course is

535

00:22:40,370 --> 00:22:36,260

that they are going to improve for other

536

00:22:43,880 --> 00:22:40,380

categories specific health claims like

537

00:22:46,400 --> 00:22:43,890

the the process for approval is really

538

00:22:48,980 --> 00:22:46,410

just silly it's they use what's called

539

00:22:52,130 --> 00:22:48,990

risk based assessments so if your claim

540

00:22:54,410 --> 00:22:52,140

is very low risk then the evidence you

541

00:22:57,020 --> 00:22:54,420

have to supply for it is also low risk

542

00:22:58,280 --> 00:22:57,030

to get approval for homeopathic product

543

00:23:00,950 --> 00:22:58,290

all you really have to show is that it's

544

00:23:02,930 --> 00:23:00,960

is calling his name which is not

545

00:23:06,980 --> 00:23:02,940

included in the claim so I can call

546

00:23:08,780 --> 00:23:06,990

something / tussin which is whooping

547

00:23:11,560 --> 00:23:08,790

cough but I don't have to make any

548

00:23:15,290 --> 00:23:11,570

claims well the calling it / tussin is

549

00:23:17,690 --> 00:23:15,300

the claim right it sounds like you're

550

00:23:20,180 --> 00:23:17,700

using it to prevent pertussis which is

551
00:23:23,420 --> 00:23:20,190
whooping cough and the same thing goes

552
00:23:26,630 --> 00:23:23,430
for you know influencing them and other

553
00:23:29,240 --> 00:23:26,640
another nose oats so the process is

554
00:23:31,550 --> 00:23:29,250
really just is it a bit of a joke you

555
00:23:32,900 --> 00:23:31,560
can get approval and under tend in as

556
00:23:34,200 --> 00:23:32,910
little as 10 days for any kind of

557
00:23:35,940 --> 00:23:34,210
product that you want

558
00:23:37,650 --> 00:23:35,950
so it really is just a rubber stamping

559
00:23:40,260 --> 00:23:37,660
so well we're very happy that they put

560
00:23:43,950 --> 00:23:40,270
this labeling on the department really

561
00:23:46,050 --> 00:23:43,960
needs to look inwardly and and realize

562
00:23:48,750 --> 00:23:46,060
that they are approving things without

563
00:23:52,140 --> 00:23:48,760

any kind of scientific evidence it does

564

00:23:54,510 --> 00:23:52,150

really sound sadly similar to the story

565

00:23:57,720 --> 00:23:54,520

here in Australia where to get a product

566

00:24:00,180 --> 00:23:57,730

listed as they call it in our system you

567

00:24:02,250 --> 00:24:00,190

really don't have to supply decent

568

00:24:03,300 --> 00:24:02,260

evidence at all you can supply evidence

569

00:24:05,130 --> 00:24:03,310

to the effect at all it's been

570

00:24:07,200 --> 00:24:05,140

traditionally used by people for

571

00:24:09,900 --> 00:24:07,210

thousands of years and here it is in

572

00:24:13,680 --> 00:24:09,910

this book in that book so I'm sad to say

573

00:24:15,600 --> 00:24:13,690

the situations are sadly similar but at

574

00:24:17,460 --> 00:24:15,610

least there's this health warning that's

575

00:24:19,770 --> 00:24:17,470

gone out and that that must be a step in

576

00:24:22,620 --> 00:24:19,780

the right direction and hold me up at

577

00:24:26,250 --> 00:24:22,630

the always strikes me is probably the

578

00:24:29,450 --> 00:24:26,260

classic case of people being completely

579

00:24:31,950 --> 00:24:29,460

deluded into thinking something is real

580

00:24:35,310 --> 00:24:31,960

there's been a slow watering down of

581

00:24:37,230 --> 00:24:35,320

what was originally a bit more of a

582

00:24:38,820 --> 00:24:37,240

robust system that I had you know

583

00:24:39,870 --> 00:24:38,830

high-level scientists working for them

584

00:24:41,250 --> 00:24:39,880

one of the scientists that used to work

585

00:24:43,170 --> 00:24:41,260

for Health Canada is one of our advisors

586

00:24:46,650 --> 00:24:43,180

dr. Brian Foster and he's a medical

587

00:24:49,280 --> 00:24:46,660

chemist and is used to one of his

588

00:24:52,410 --> 00:24:49,290

specialties is understanding how

589

00:24:53,670 --> 00:24:52,420

different herbal and organic compounds

590

00:24:56,000 --> 00:24:53,680

interact with the liver and kidneys and

591

00:24:58,230 --> 00:24:56,010

and and that threats they pose to

592

00:25:00,660 --> 00:24:58,240

entering doing analysis to see if they

593

00:25:04,590 --> 00:25:00,670

pose a threat and you know they they

594

00:25:06,240 --> 00:25:04,600

basically let go retired all of theirs

595

00:25:07,890 --> 00:25:06,250

of many of their senior scientists at

596

00:25:09,420 --> 00:25:07,900

Health Canada and we know that they

597

00:25:12,840 --> 00:25:09,430

replace them with people like homie oh

598

00:25:15,330 --> 00:25:12,850

sorry naturopaths who may have a you

599

00:25:16,860 --> 00:25:15,340

know undergrad in a bachelor science but

600

00:25:18,480 --> 00:25:16,870

they also have a naturopathic doctor

601
00:25:21,290 --> 00:25:18,490
specialty which means they are certainly

602
00:25:24,360 --> 00:25:21,300
coming from a certain point of view and

603
00:25:25,830 --> 00:25:24,370
you know that when you think about what

604
00:25:28,980 --> 00:25:25,840
the products are that they're proving

605
00:25:31,200 --> 00:25:28,990
it's not surprising that the natural

606
00:25:32,550 --> 00:25:31,210
paths are being used to help you know

607
00:25:34,110 --> 00:25:32,560
prove them because they are the ones who

608
00:25:36,090 --> 00:25:34,120
are going to evaluate if these products

609
00:25:37,950 --> 00:25:36,100
are traditionally used but I don't think

610
00:25:39,960 --> 00:25:37,960
we've ever like a natural path has ever

611
00:25:43,230 --> 00:25:39,970
met a remedy they don't like but they'll

612
00:25:44,460 --> 00:25:43,240
use anything if you look at their scope

613
00:25:46,260 --> 00:25:44,470

of practice they'll use traditional

614

00:25:47,690 --> 00:25:46,270

chinese medicine homeopathy water

615

00:25:51,680 --> 00:25:47,700

therapy occupy

616

00:25:55,279 --> 00:25:51,690

sure you know and anything else herbal

617

00:25:57,470 --> 00:25:55,289

remedies and energy reiki like they'll

618

00:26:00,799 --> 00:25:57,480

use anything so those are not the people

619

00:26:02,060 --> 00:26:00,809

we want in charge but certainly so we're

620

00:26:03,680 --> 00:26:02,070

going to continue fighting for this and

621

00:26:05,840 --> 00:26:03,690

hopefully Health Canada you know through

622

00:26:07,940 --> 00:26:05,850

this constant pressure will will over

623

00:26:10,310 --> 00:26:07,950

time make make their their process

624

00:26:12,399 --> 00:26:10,320

rigorous certainly we're not going to

625

00:26:14,600 --> 00:26:12,409

give up just with this one small victory

626

00:26:16,100 --> 00:26:14,610

excellent that's that's good news I'm

627

00:26:18,409 --> 00:26:16,110

glad you're not going to give up because

628

00:26:21,590 --> 00:26:18,419

we kept none of us can afford to give up

629

00:26:23,149 --> 00:26:21,600

there so much well what can we say

630

00:26:27,230 --> 00:26:23,159

there's so many interesting things out

631

00:26:29,720 --> 00:26:27,240

there for us to confront not only in

632

00:26:33,710 --> 00:26:29,730

Australia but in Canada as well folks

633

00:26:37,340 --> 00:26:33,720

the website to visit is ww bad science

634

00:26:41,629 --> 00:26:37,350

watch see a CA for canada or where you

635

00:26:46,009 --> 00:26:41,639

can check out w WP no suits that's stop

636

00:26:48,019 --> 00:26:46,019

then in Oso des org to find out more

637

00:26:50,060 --> 00:26:48,029

information michael cruz thank you very

638

00:26:52,009 --> 00:26:50,070

much thank you for doing what you're

639

00:26:55,159 --> 00:26:52,019

doing in canada it's all part of a

640

00:26:57,230 --> 00:26:55,169

worldwide effort and who knows maybe in

641

00:26:59,210 --> 00:26:57,240

60 years when I'm interviewing you we

642

00:27:02,539 --> 00:26:59,220

can talk about how homeopathy is now in

643

00:27:04,430 --> 00:27:02,549

the history books ah yes one can only

644

00:27:15,789 --> 00:27:04,440

hope thanks Richard we really hope thank

645

00:27:21,769 --> 00:27:18,620

the skeptic magazine the journal from

646

00:27:23,990 --> 00:27:21,779

Australian skeptics subscribe online to

647

00:27:29,299 --> 00:27:24,000

the world's second oldest skeptical

648

00:27:32,060 --> 00:27:29,309

magazine visit w WC apx com au and click

649

00:27:36,019 --> 00:27:32,070

the publication's League you can also

650

00:27:39,350 --> 00:27:36,029

find their over 30 years on back issues

651
00:27:58,159 --> 00:27:39,360
free to download the skeptic magazine

652
00:28:07,570 --> 00:27:58,169
from Australian skeptics it's the raw

653
00:28:13,639 --> 00:28:11,120
hello everyone over the coming months

654
00:28:16,639 --> 00:28:13,649
I'll be talking about various infectious

655
00:28:19,430 --> 00:28:16,649
diseases and the vaccines designed to

656
00:28:22,399 --> 00:28:19,440
protect us against them I'll cover the

657
00:28:24,049 --> 00:28:22,409
facts the myths and include some

658
00:28:27,799 --> 00:28:24,059
interviews with people who have been

659
00:28:30,340 --> 00:28:27,809
directly affected by these diseases this

660
00:28:32,930 --> 00:28:30,350
week I'll be talking about influenza and

661
00:28:35,120 --> 00:28:32,940
interviewing Kelly a member of our

662
00:28:39,049 --> 00:28:35,130
Northern Rivers vaccination supporters

663
00:28:41,960 --> 00:28:39,059

group the information in this podcast is

664

00:28:43,880 --> 00:28:41,970

all available on our website the

665

00:28:51,860 --> 00:28:43,890

Northern Rivers vaccination supporters

666

00:28:54,490 --> 00:28:51,870

at ww nrvs info it was written by our

667

00:28:58,669 --> 00:28:54,500

very own dr. Rachel heap and

668

00:29:00,850 --> 00:28:58,679

fact-checked by Professor boy at NCI RS

669

00:29:04,090 --> 00:29:00,860

that's the National Center for

670

00:29:06,980 --> 00:29:04,100

immunization research and surveillance

671

00:29:11,180 --> 00:29:06,990

let's start with some facts about the

672

00:29:14,180 --> 00:29:11,190

influenza disease influenza is a

673

00:29:18,049 --> 00:29:14,190

contagious viral disease it is estimated

674

00:29:19,820 --> 00:29:18,059

that there are an average of over 13 and

675

00:29:22,700 --> 00:29:19,830

a half thousand hospitals

676

00:29:25,850 --> 00:29:22,710

realizations due to influenza per year

677

00:29:28,460 --> 00:29:25,860

in Australia and over 3,000 deaths per

678

00:29:31,940 --> 00:29:28,470

year in australians aged over 50 years

679

00:29:34,549 --> 00:29:31,950

old more severe disease commonly occurs

680

00:29:38,149 --> 00:29:34,559

in those with underlying diseases such

681

00:29:42,139 --> 00:29:38,159

as asthma emphysema obesity heart

682

00:29:44,000 --> 00:29:42,149

disease diabetes the elderly and in

683

00:29:46,840 --> 00:29:44,010

those of Aboriginal and Torres Strait

684

00:29:50,480 --> 00:29:46,850

island heritage and in pregnant women

685

00:29:53,149 --> 00:29:50,490

however influenza can be fatal even in

686

00:29:56,139 --> 00:29:53,159

the young fit and healthy with no

687

00:29:58,970 --> 00:29:56,149

underlying medical problems the virus

688

00:30:01,850 --> 00:29:58,980

there are various types of influenza

689

00:30:05,779 --> 00:30:01,860

virus broadly they are classified in two

690

00:30:09,470 --> 00:30:05,789

types A and B with A and B more

691

00:30:13,009 --> 00:30:09,480

commonly involved in human disease both

692

00:30:15,049 --> 00:30:13,019

influenza A and B viruses undergo

693

00:30:17,690 --> 00:30:15,059

frequent changes in their surface

694

00:30:20,840 --> 00:30:17,700

antigens this results in a phenomenon

695

00:30:22,669 --> 00:30:20,850

known as antigenic drift which means

696

00:30:26,000 --> 00:30:22,679

that from year to year the influenza

697

00:30:28,340 --> 00:30:26,010

virus is subtly different it is because

698

00:30:30,830 --> 00:30:28,350

of this change in antigenic appearance

699

00:30:33,080 --> 00:30:30,840

that the virus can evade an immune

700

00:30:36,350 --> 00:30:33,090

system that has been previously exposed

701
00:30:38,210 --> 00:30:36,360
through disease or vaccination it is for

702
00:30:40,700 --> 00:30:38,220
this reason that the flu vaccine is

703
00:30:43,070 --> 00:30:40,710
subtly different every year and it is

704
00:30:44,930 --> 00:30:43,080
for this reason that yearly vaccinations

705
00:30:48,080 --> 00:30:44,940
are advocated under the right

706
00:30:51,019 --> 00:30:48,090
circumstances a new subtype of influenza

707
00:30:53,600 --> 00:30:51,029
can emerge when this type of major

708
00:30:57,740 --> 00:30:53,610
change in the influenza virus occurs it

709
00:30:59,990 --> 00:30:57,750
is known as antigenic shift because the

710
00:31:02,539 --> 00:31:00,000
immune system has never been exposed to

711
00:31:05,299 --> 00:31:02,549
viruses of this new subtype before and

712
00:31:08,360 --> 00:31:05,309
has no ability to recognize it and

713
00:31:10,549 --> 00:31:08,370

combat it the virus tends to cause very

714

00:31:14,149 --> 00:31:10,559

severe infections with a high mortality

715

00:31:19,090 --> 00:31:14,159

rate this kind of change can lead to

716

00:31:22,519 --> 00:31:19,100

influenza pandemics how contagious is it

717

00:31:25,159 --> 00:31:22,529

the severity of flu seasons vary from

718

00:31:28,100 --> 00:31:25,169

year to year depending on the

719

00:31:31,639 --> 00:31:28,110

circulating virus and the susceptibility

720

00:31:33,410 --> 00:31:31,649

of the population for example there are

721

00:31:36,580 --> 00:31:33,420

over 10,000 cases

722

00:31:41,210 --> 00:31:36,590

in Australia in the first half of 2011

723

00:31:46,310 --> 00:31:41,220

compared with approximately 1574 the

724

00:31:48,920 --> 00:31:46,320

same period in 2010 during regular

725

00:31:51,170 --> 00:31:48,930

seasonal influenza the attack rate

726

00:31:54,380 --> 00:31:51,180

within the community is generally five

727

00:31:56,420 --> 00:31:54,390

to ten percent that is five to ten

728

00:31:59,990 --> 00:31:56,430

percent of the population catch it when

729

00:32:02,750 --> 00:32:00,000

it is going around during pandemic years

730

00:32:05,540 --> 00:32:02,760

the attack rate can be as high as twenty

731

00:32:07,640 --> 00:32:05,550

to twenty-five percent and will be two

732

00:32:10,760 --> 00:32:07,650

to three times higher for clothes

733

00:32:15,110 --> 00:32:10,770

household contacts the influenza

734

00:32:17,870 --> 00:32:15,120

pandemic of 1918 to 1919 killed more

735

00:32:19,970 --> 00:32:17,880

people than World War one it is not

736

00:32:23,240 --> 00:32:19,980

certain how many people died but

737

00:32:26,000 --> 00:32:23,250

estimates are as high as 50 to 100

738

00:32:28,130 --> 00:32:26,010

million people it is thought that about

739

00:32:32,900 --> 00:32:28,140

twenty-five percent of the world's

740

00:32:36,080 --> 00:32:32,910

population was infected now to the

741

00:32:38,390 --> 00:32:36,090

vaccine the composition of vaccines for

742

00:32:40,730 --> 00:32:38,400

use in Australia is determined annually

743

00:32:44,150 --> 00:32:40,740

by the Australian influenza vaccine

744

00:32:46,340 --> 00:32:44,160

committee influenza vaccines normally

745

00:32:49,420 --> 00:32:46,350

contain three recommended strains of

746

00:32:52,640 --> 00:32:49,430

virus to influenza a subtypes and

747

00:32:56,150 --> 00:32:52,650

influenza B representing currently

748

00:32:58,340 --> 00:32:56,160

circulating viruses the effectiveness of

749

00:33:01,460 --> 00:32:58,350

the influenza vaccine varies from year

750

00:33:03,230 --> 00:33:01,470

to year depending on how closely matched

751

00:33:06,110 --> 00:33:03,240

the vaccine is to the circulating

752

00:33:08,930 --> 00:33:06,120

strains how virulent the circulating

753

00:33:10,970 --> 00:33:08,940

strain is and of course the immuno

754

00:33:14,360 --> 00:33:10,980

competence of the person receiving the

755

00:33:16,490 --> 00:33:14,370

vaccine on average however the influenza

756

00:33:19,520 --> 00:33:16,500

vaccine is sixty to eighty five percent

757

00:33:21,830 --> 00:33:19,530

effective at preventing disease in young

758

00:33:26,090 --> 00:33:21,840

children and about sixty percent

759

00:33:28,370 --> 00:33:26,100

effective in adults influenza vaccines

760

00:33:30,800 --> 00:33:28,380

are recommended for all people over the

761

00:33:35,210 --> 00:33:30,810

age of six months who wish to reduce

762

00:33:36,920 --> 00:33:35,220

their risk of contracting influenza even

763

00:33:38,420 --> 00:33:36,930

more importantly there are certain

764

00:33:41,450 --> 00:33:38,430

people who really should be vaccinated

765

00:33:45,680 --> 00:33:41,460

each year this includes the following

766

00:33:46,760 --> 00:33:45,690

groups adults aged greater than or equal

767

00:33:50,000 --> 00:33:46,770

to 65

768

00:33:53,060 --> 00:33:50,010

is Aboriginal and Torres Strait Islander

769

00:33:56,380 --> 00:33:53,070

people aged greater than or equal to 15

770

00:34:00,440 --> 00:33:56,390

years pregnant women immunocompromised

771

00:34:02,960 --> 00:34:00,450

persons individuals aged greater than or

772

00:34:04,850 --> 00:34:02,970

equal to six months with specified

773

00:34:06,560 --> 00:34:04,860

medical conditions that put them at

774

00:34:10,100 --> 00:34:06,570

increased risk of influenza

775

00:34:13,010 --> 00:34:10,110

complications high risk background

776

00:34:15,230 --> 00:34:13,020

medical conditions include chronic

777

00:34:17,290 --> 00:34:15,240

respiratory and cardiac disease such as

778

00:34:20,000 --> 00:34:17,300

asthma or coronary artery disease

779

00:34:22,820 --> 00:34:20,010

chronic neurological conditions such as

780

00:34:26,389 --> 00:34:22,830

spinal cord injury or multiple sclerosis

781

00:34:27,980 --> 00:34:26,399

and diabetes it is also important for

782

00:34:30,440 --> 00:34:27,990

the following groups to receive the

783

00:34:32,680 --> 00:34:30,450

vaccine all healthcare providers

784

00:34:36,139 --> 00:34:32,690

particularly those of immunocompromised

785

00:34:38,240 --> 00:34:36,149

patients staff or volunteers working in

786

00:34:41,020 --> 00:34:38,250

nursing homes staff or volunteers

787

00:34:43,930 --> 00:34:41,030

working in long-term care facilities

788

00:34:47,210 --> 00:34:43,940

household contacts including children

789

00:34:49,909 --> 00:34:47,220

greater than six months of age of those

790

00:34:52,909 --> 00:34:49,919

in high-risk groups staff working in

791

00:34:54,950 --> 00:34:52,919

early childhood education and care staff

792

00:34:58,490 --> 00:34:54,960

or volunteers providing care to homeless

793

00:35:01,940 --> 00:34:58,500

people adverse effects to any

794

00:35:03,770 --> 00:35:01,950

vaccinations can and do occur however

795

00:35:07,040 --> 00:35:03,780

these are usually very minor or

796

00:35:10,130 --> 00:35:07,050

extremely rare one to ten percent of

797

00:35:13,820 --> 00:35:10,140

people suffer from some fever malaise

798

00:35:15,890 --> 00:35:13,830

and myalgia which may mimic influenza

799

00:35:18,950 --> 00:35:15,900

infection but this is mild and

800

00:35:20,930 --> 00:35:18,960

short-lived in children less than five

801
00:35:23,990 --> 00:35:20,940
years of age these side effects may be

802
00:35:26,000 --> 00:35:24,000
more pronounced a sore arm with redness

803
00:35:29,030 --> 00:35:26,010
and swelling can occur at the injection

804
00:35:31,220 --> 00:35:29,040
site however most patients report that

805
00:35:34,690 --> 00:35:31,230
these events are transient and resolved

806
00:35:37,670 --> 00:35:34,700
fully within a few days in 2010 an

807
00:35:40,550 --> 00:35:37,680
excess of fever and febrile convulsions

808
00:35:43,040 --> 00:35:40,560
following influenza vaccination was

809
00:35:45,440 --> 00:35:43,050
reported in children aged less than five

810
00:35:47,930 --> 00:35:45,450
years particularly children aged less

811
00:35:51,020 --> 00:35:47,940
than three years this was associated

812
00:35:54,770 --> 00:35:51,030
only with one manufacturers vaccine flu

813
00:35:57,740 --> 00:35:54,780

vax and flu vax jr. by CSL limited and

814

00:35:59,859 --> 00:35:57,750

this vaccine is no longer registered for

815

00:36:01,690 --> 00:35:59,869

use in children aged less than five

816

00:36:04,059 --> 00:36:01,700

is and is not recommended for

817

00:36:08,230 --> 00:36:04,069

administration in children aged less

818

00:36:11,920 --> 00:36:08,240

than 10 years immediate adverse events

819

00:36:14,230 --> 00:36:11,930

such as hives are a rare consequence of

820

00:36:16,420 --> 00:36:14,240

influenza vaccination and probably

821

00:36:19,329 --> 00:36:16,430

represent an allergic response to the

822

00:36:21,989 --> 00:36:19,339

egg protein however even a history of

823

00:36:24,609 --> 00:36:21,999

anaphylaxis with eggs is not an absolute

824

00:36:27,039 --> 00:36:24,619

contraindication to the vaccination but

825

00:36:30,730 --> 00:36:27,049

should be done in consultation with a

826

00:36:33,430 --> 00:36:30,740

medical provider a small increased risk

827

00:36:36,190 --> 00:36:33,440

of guillain-barre syndrome which is

828

00:36:38,589 --> 00:36:36,200

transient paralysis was associated

829

00:36:42,640 --> 00:36:38,599

historically with one influenza vaccine

830

00:36:45,180 --> 00:36:42,650

in the United States in 1976 but since

831

00:36:47,829 --> 00:36:45,190

then close surveillance has shown that

832

00:36:50,829 --> 00:36:47,839

guillain-barre syndrome occurs at a very

833

00:36:53,589 --> 00:36:50,839

low rate of up to 1 in 1,000,000 doses

834

00:36:57,700 --> 00:36:53,599

of influenza vaccine and is more common

835

00:37:00,940 --> 00:36:57,710

after the influenza disease itself one

836

00:37:03,549 --> 00:37:00,950

of the most common myths you hear from

837

00:37:05,499 --> 00:37:03,559

people who have received the influenza

838

00:37:07,509 --> 00:37:05,509

vaccine in the past is that they will

839

00:37:12,430 --> 00:37:07,519

never get it again because it actually

840

00:37:16,109 --> 00:37:12,440

caused them to get influenza now this is

841

00:37:19,690 --> 00:37:16,119

actually impossible and I'm quoting

842

00:37:22,479 --> 00:37:19,700

straight from a meme again that dr.

843

00:37:27,279 --> 00:37:22,489

Rachel heap has written and which is

844

00:37:31,390 --> 00:37:27,289

available on our website and it reads as

845

00:37:33,729 --> 00:37:31,400

follows after a flu vaccine you may feel

846

00:37:36,160 --> 00:37:33,739

a little unwell for a short time with

847

00:37:40,259 --> 00:37:36,170

symptoms such as a temporary mud fever

848

00:37:42,849 --> 00:37:40,269

and fatigue this is not influenza

849

00:37:45,759 --> 00:37:42,859

influenza is an illness that lasts for

850

00:37:48,849 --> 00:37:45,769

weeks and can lead to persistent high

851
00:37:51,970 --> 00:37:48,859
fevers prolonged muscle pain headache

852
00:37:55,450 --> 00:37:51,980
respiratory failure cardiac failure and

853
00:37:57,640 --> 00:37:55,460
death the reasons why you might have

854
00:38:01,390 --> 00:37:57,650
flu-like symptoms after the influenza

855
00:38:03,489 --> 00:38:01,400
vaccine one you mount an excellent

856
00:38:05,470 --> 00:38:03,499
immune response to the vaccine which can

857
00:38:09,729 --> 00:38:05,480
make you feel mildly unwell for a short

858
00:38:12,190 --> 00:38:09,739
time to you caught influenza before the

859
00:38:13,640 --> 00:38:12,200
vaccine had a chance to work it takes

860
00:38:17,480 --> 00:38:13,650
two weeks for it to

861
00:38:19,730 --> 00:38:17,490
maximum effectiveness three you caught a

862
00:38:22,579 --> 00:38:19,740
strain of influenza not covered by the

863
00:38:24,529 --> 00:38:22,589

vaccine the vaccine covers the strains

864

00:38:26,720 --> 00:38:24,539

expected to be the most common and most

865

00:38:30,920 --> 00:38:26,730

dangerous for the season but there are

866

00:38:37,940 --> 00:38:30,930

others and for you might just have a

867

00:38:40,220 --> 00:38:37,950

nasty cold so i'm here with kelly one of

868

00:38:42,319 --> 00:38:40,230

the members of our northern rivers

869

00:38:45,140 --> 00:38:42,329

vaccination supporters group how are you

870

00:38:47,450 --> 00:38:45,150

today Kelly I'm good thanks ID that's

871

00:38:50,260 --> 00:38:47,460

good thanks for joining us as you know

872

00:38:52,870 --> 00:38:50,270

where we're having a bit of a series on

873

00:38:55,760 --> 00:38:52,880

vaccine-preventable diseases and

874

00:38:57,920 --> 00:38:55,770

vaccinations and I wanted to interview

875

00:39:00,769 --> 00:38:57,930

people that had been personally affected

876

00:39:02,890 --> 00:39:00,779

by some of these diseases and you've got

877

00:39:05,930 --> 00:39:02,900

quite a story to tell us about your

878

00:39:07,940 --> 00:39:05,940

experiences with the influenza virus in

879

00:39:10,430 --> 00:39:07,950

particular Kelly would you mind by

880

00:39:12,529 --> 00:39:10,440

starting to tell us a bit about what

881

00:39:15,920 --> 00:39:12,539

happened when you were a very small baby

882

00:39:18,950 --> 00:39:15,930

with influenza yeah sure definitely I

883

00:39:22,510 --> 00:39:18,960

was one and ten months of age and my

884

00:39:26,150 --> 00:39:22,520

mother passed away from influenza she

885

00:39:28,849 --> 00:39:26,160

was sick for a few days prior and had a

886

00:39:31,279 --> 00:39:28,859

bit of a nasty cough she went to visit

887

00:39:33,859 --> 00:39:31,289

her own mother a lot wrong with me and

888

00:39:35,510 --> 00:39:33,869

her mom did say who you know Leslie you

889

00:39:38,450 --> 00:39:35,520

put a bad coffee she's going to the

890

00:39:41,029 --> 00:39:38,460

doctor and she replied with I'm okay the

891

00:39:43,700 --> 00:39:41,039

big g's and look after me she never made

892

00:39:46,339 --> 00:39:43,710

the doctor's visit and three days later

893

00:39:47,599 --> 00:39:46,349

she had passed away in her bedroom which

894

00:39:50,059 --> 00:39:47,609

was actually their dream that I'd share

895

00:39:51,950 --> 00:39:50,069

as an infant in a cot next to her that's

896

00:39:55,420 --> 00:39:51,960

the information that I've been told from

897

00:39:58,370 --> 00:39:55,430

her mum yeah that must have been a

898

00:40:01,099 --> 00:39:58,380

dreadful a growing up without a mother

899

00:40:03,559 --> 00:40:01,109

and and B also knowing that your mother

900

00:40:06,799 --> 00:40:03,569

passed away in the same room as you when

901
00:40:09,559 --> 00:40:06,809
you were just very young yeah for wonder

902
00:40:11,990 --> 00:40:09,569
what what I was thinking and how long I

903
00:40:14,539 --> 00:40:12,000
may have even there for and those are

904
00:40:17,480 --> 00:40:14,549
things without anybody knowing but yeah

905
00:40:19,670 --> 00:40:17,490
I have gone into much of that detail but

906
00:40:22,549 --> 00:40:19,680
yeah I of wondering about that situation

907
00:40:23,960 --> 00:40:22,559
and you know now knowing it's you know

908
00:40:25,640 --> 00:40:23,970
you do a bit more about those sorts of

909
00:40:27,380 --> 00:40:25,650
things or maybe she should have gone and

910
00:40:29,750 --> 00:40:27,390
seen the doctor but

911
00:40:32,359 --> 00:40:29,760
perhaps looking after a child children

912
00:40:34,970 --> 00:40:32,369
always become a priority yeah you can

913
00:40:37,609 --> 00:40:34,980

certainly understand i mean ourselves as

914

00:40:39,890 --> 00:40:37,619

mothers we always do tend to put our

915

00:40:43,309 --> 00:40:39,900

children before ourselves don't we and

916

00:40:45,740 --> 00:40:43,319

it's incredible how fast influenza can

917

00:40:47,900 --> 00:40:45,750

can affect people and she she clearly

918

00:40:50,240 --> 00:40:47,910

went downhill go very quickly have you

919

00:40:52,370 --> 00:40:50,250

shared that story with many of your

920

00:40:53,720 --> 00:40:52,380

friends or colleagues and what any and

921

00:40:56,089 --> 00:40:53,730

if you have what sort of been their

922

00:40:57,829 --> 00:40:56,099

reaction to it over the years I have

923

00:41:00,440 --> 00:40:57,839

probably had a bit of a chat to a few

924

00:41:03,200 --> 00:41:00,450

friends and you know you can instantly

925

00:41:04,819 --> 00:41:03,210

see the look on their face thanks I

926

00:41:06,859 --> 00:41:04,829

think you know this sort of their jaw

927

00:41:08,750 --> 00:41:06,869

drops a little bit I've grown up knowing

928

00:41:09,950 --> 00:41:08,760

what I've known and I've become quite

929

00:41:11,870 --> 00:41:09,960

used to it so it's something I don't

930

00:41:13,880 --> 00:41:11,880

really talk about a great deal because

931

00:41:15,230 --> 00:41:13,890

now I'm an adult but as a young child I

932

00:41:18,589 --> 00:41:15,240

used to think you know everyone's got a

933

00:41:19,880 --> 00:41:18,599

parent and was what family and the

934

00:41:20,960 --> 00:41:19,890

things they deal with their brothers

935

00:41:23,420 --> 00:41:20,970

sisters and all those sorts of things

936

00:41:25,670 --> 00:41:23,430

and am I missing out on something you

937

00:41:28,190 --> 00:41:25,680

also had your your your own very close

938

00:41:29,329 --> 00:41:28,200

call with influenza I can you lead us

939

00:41:33,410 --> 00:41:29,339

through the story about what happened

940

00:41:35,539 --> 00:41:33,420

with that yeah I was auntie and I am

941

00:41:38,390 --> 00:41:35,549

just finished one of my semesters at you

942

00:41:41,359 --> 00:41:38,400

the nursing and about three days later I

943

00:41:43,789 --> 00:41:41,369

just collapsed on the floor at home and

944

00:41:47,329 --> 00:41:43,799

I was taken off to a local hospital John

945

00:41:48,920 --> 00:41:47,339

Flynn's in a week they're just done

946

00:41:51,200 --> 00:41:48,930

monitoring me actually just add I

947

00:41:54,680 --> 00:41:51,210

basically that the bug went up through

948

00:41:55,910 --> 00:41:54,690

my vagus nerve and went straight to when

949

00:41:57,740 --> 00:41:55,920

my brand each making sort of you know

950

00:41:59,450 --> 00:41:57,750

she'll pass out and then I was just um

951
00:42:01,309 --> 00:41:59,460
was sort of probably unconscious for a

952
00:42:02,630 --> 00:42:01,319
few days it just immature open whatever

953
00:42:04,160 --> 00:42:02,640
they could do but and I suppose that

954
00:42:06,680 --> 00:42:04,170
point you do sort of feel like it was

955
00:42:09,319 --> 00:42:06,690
given me death experience I think that I

956
00:42:11,779 --> 00:42:09,329
should do have the influenza I'm shot

957
00:42:13,130 --> 00:42:11,789
every so that was you know the wake-up

958
00:42:15,980 --> 00:42:13,140
call ER so hey look you know maybe you

959
00:42:18,109 --> 00:42:15,990
do need to keep have this result every

960
00:42:20,059 --> 00:42:18,119
year I'll get it I have a son who has SI

961
00:42:22,279 --> 00:42:20,069
so make sure he gets me a cheer so you

962
00:42:24,799 --> 00:42:22,289
actually ended up with a complication

963
00:42:26,990 --> 00:42:24,809

from influenza called pericarditis is

964

00:42:28,849 --> 00:42:27,000

that right that's correct that's an

965

00:42:30,890 --> 00:42:28,859

inflammation around the heart so that

966

00:42:32,749 --> 00:42:30,900

the virus actually traveled to your

967

00:42:36,529 --> 00:42:32,759

heart as well can you tell us how that

968

00:42:38,390 --> 00:42:36,539

sort of impacts on your on your life and

969

00:42:41,720 --> 00:42:38,400

your career choices and sort of your day

970

00:42:44,450 --> 00:42:41,730

to day activities yeah but

971

00:42:46,130 --> 00:42:44,460

definitely says 6-8 months I didn't have

972

00:42:48,950 --> 00:42:46,140

much energy I couldn't hardly watch the

973

00:42:52,099 --> 00:42:48,960

letterbox because it was physically

974

00:42:53,300 --> 00:42:52,109

exhausting to do that and then if I did

975

00:42:56,000 --> 00:42:53,310

something that was a little bit too much

976
00:42:58,060 --> 00:42:56,010
one day then I would be up for the next

977
00:43:00,500 --> 00:42:58,070
three and it just took forever so

978
00:43:02,450 --> 00:43:00,510
basically I ended up going back to Ellen

979
00:43:03,970 --> 00:43:02,460
another hospital allamanda had to find

980
00:43:07,160 --> 00:43:03,980
somebody could sort of hobby out and

981
00:43:08,540 --> 00:43:07,170
they discovered that I had suffered the

982
00:43:10,460 --> 00:43:08,550
three months with some fluid and

983
00:43:13,310 --> 00:43:10,470
inflammation and the heart I just put me

984
00:43:15,109 --> 00:43:13,320
on some medication to reduce their about

985
00:43:17,870 --> 00:43:15,119
twice a year I might actually have to go

986
00:43:20,000 --> 00:43:17,880
on a dose again just to because it's

987
00:43:21,349 --> 00:43:20,010
either a flu or causes more just being

988
00:43:23,240 --> 00:43:21,359

tired and running around it's sort of

989

00:43:25,160 --> 00:43:23,250

maybe perhaps builds up again then I

990

00:43:27,260 --> 00:43:25,170

just get the the pain and exhaustion

991

00:43:29,359 --> 00:43:27,270

around the heart again and then I just

992

00:43:31,970 --> 00:43:29,369

want to medication so and that's like 30

993

00:43:33,920 --> 00:43:31,980

now so it can stay with you for quite a

994

00:43:35,990 --> 00:43:33,930

long time I'm hoping you'll go away

995

00:43:37,400 --> 00:43:36,000

someday but yeah I'm surprised it's

996

00:43:39,560 --> 00:43:37,410

still around this long and so that's

997

00:43:41,180 --> 00:43:39,570

what I now have to live with is the fact

998

00:43:43,700 --> 00:43:41,190

that I am do you get this pain around

999

00:43:46,460 --> 00:43:43,710

the harsh and and and catching up cold

1000

00:43:48,859 --> 00:43:46,470

would certainly you know make it all

1001

00:43:51,109 --> 00:43:48,869

worse yes it must be quite frightening

1002

00:43:54,530 --> 00:43:51,119

to get that pain around the heart I

1003

00:43:56,060 --> 00:43:54,540

guess you know you can identify now what

1004

00:43:57,530 --> 00:43:56,070

it is and what's causing it but it must

1005

00:43:59,420 --> 00:43:57,540

still be quite frightening thing to

1006

00:44:01,340 --> 00:43:59,430

experience it does feel like you're

1007

00:44:03,620 --> 00:44:01,350

having a heart attack there's like a a

1008

00:44:05,180 --> 00:44:03,630

stabbing pain and then in the back and

1009

00:44:06,710 --> 00:44:05,190

the shoulder arms down the left arm in

1010

00:44:09,109 --> 00:44:06,720

jaw so you're getting all those similar

1011

00:44:10,430 --> 00:44:09,119

sensations but it's some information of

1012

00:44:11,510 --> 00:44:10,440

the heart trying to make sure that you

1013

00:44:14,599 --> 00:44:11,520

know you put yourself at ease at hey

1014

00:44:16,310 --> 00:44:14,609

look I'm not going to die I'm okay let

1015

00:44:18,140 --> 00:44:16,320

have you had a check but you just be

1016

00:44:20,660 --> 00:44:18,150

aware that and particular when things

1017

00:44:22,040 --> 00:44:20,670

get get tired so and I've actually

1018

00:44:23,840 --> 00:44:22,050

become a member to a couple of

1019

00:44:25,010 --> 00:44:23,850

pericarditis groups which are found on

1020

00:44:26,660 --> 00:44:25,020

facebook and they've been very helpful

1021

00:44:28,550 --> 00:44:26,670

with resources because there's only a

1022

00:44:30,080 --> 00:44:28,560

lot of information out there but of how

1023

00:44:31,550 --> 00:44:30,090

to deal with it and some of the things

1024

00:44:32,750 --> 00:44:31,560

I've found that work really well is

1025

00:44:35,990 --> 00:44:32,760

actually sleeping on my chest where I'm

1026
00:44:37,700 --> 00:44:36,000
having a week or so and attack whether

1027
00:44:39,590 --> 00:44:37,710
it just puts the fluid into another part

1028
00:44:41,180 --> 00:44:39,600
and helps the body to absorb but I don't

1029
00:44:44,540 --> 00:44:41,190
know it but it's just the friction and

1030
00:44:46,940 --> 00:44:44,550
the pericarditis actually correct me if

1031
00:44:49,910 --> 00:44:46,950
I'm wrong but it actually restricted

1032
00:44:51,620 --> 00:44:49,920
your made you think twice about a career

1033
00:44:54,830 --> 00:44:51,630
in nursing as well is that right that's

1034
00:44:57,590 --> 00:44:54,840
correct I'm now more susceptible when I

1035
00:44:59,060 --> 00:44:57,600
for having an attack and I'll worry

1036
00:45:00,980 --> 00:44:59,070
about what would the next attack

1037
00:45:03,140 --> 00:45:00,990
actually do to my heart because some

1038
00:45:04,790 --> 00:45:03,150

outcomes up very good so yes

1039

00:45:06,350 --> 00:45:04,800

unfortunately I stopped doing those

1040

00:45:08,150 --> 00:45:06,360

infants the book would have had to have

1041

00:45:09,320 --> 00:45:08,160

gone on placement and being places where

1042

00:45:11,600 --> 00:45:09,330

there's lots of bacterias and viruses

1043

00:45:13,670 --> 00:45:11,610

and then I would have been susceptible

1044

00:45:17,810 --> 00:45:13,680

and probably beginning sick again so I

1045

00:45:19,760 --> 00:45:17,820

my head taken career change mmm yeah yes

1046

00:45:23,150 --> 00:45:19,770

had to reassess pretty much everything

1047

00:45:26,360 --> 00:45:23,160

it's amazing what an effect influencer

1048

00:45:28,720 --> 00:45:26,370

has had first of all with with losing

1049

00:45:32,090 --> 00:45:28,730

your mother at such a young age and then

1050

00:45:34,640 --> 00:45:32,100

impacting on yourself and your career

1051
00:45:36,940 --> 00:45:34,650
and one great thing that has come out of

1052
00:45:39,710 --> 00:45:36,950
it is that you're now a proud

1053
00:45:42,890 --> 00:45:39,720
vaccination advocate and supporter and

1054
00:45:44,660 --> 00:45:42,900
in sharing your story I think it's going

1055
00:45:47,330 --> 00:45:44,670
to be really enlightening and really

1056
00:45:49,490 --> 00:45:47,340
helpful for other people who who don't

1057
00:45:51,830 --> 00:45:49,500
realize perhaps until hearing your story

1058
00:45:55,220 --> 00:45:51,840
about just how important it is to get

1059
00:45:58,160 --> 00:45:55,230
your annual influenza vaccine so thank

1060
00:46:00,050 --> 00:45:58,170
you so much for sharing your story what

1061
00:46:03,050 --> 00:46:00,060
would you say to two people that are

1062
00:46:05,720 --> 00:46:03,060
still have doubts about having their

1063
00:46:08,300 --> 00:46:05,730

annual influenza vaccine it is truly

1064

00:46:10,580 --> 00:46:08,310

truly important because it can just take

1065

00:46:12,080 --> 00:46:10,590

somebody walking past you it's going to

1066

00:46:14,360 --> 00:46:12,090

have a little cough and those little

1067

00:46:16,760 --> 00:46:14,370

tiny airborne droplets you'll get very

1068

00:46:17,900 --> 00:46:16,770

very sick and you may not have time to

1069

00:46:21,140 --> 00:46:17,910

say goodbye to someone that you love

1070

00:46:22,760 --> 00:46:21,150

because they came for you mmm well thank

1071

00:46:24,620 --> 00:46:22,770

you kelly thank you very much for your

1072

00:46:27,350 --> 00:46:24,630

time that's right Thank you Thank You

1073

00:46:29,450 --> 00:46:27,360

Heidi all the information as I said

1074

00:46:33,260 --> 00:46:29,460

given in these podcasts can be found on

1075

00:46:36,380 --> 00:46:33,270

our website and rvs dot info and we're

1076

00:46:48,650 --> 00:46:36,390

also on Facebook and Twitter thanks

1077

00:46:53,550 --> 00:46:51,330

welcome to weaken science from our oz

1078

00:46:56,700 --> 00:46:53,560

bringing you the signs you need to know

1079

00:46:59,010 --> 00:46:56,710

our obsession with cake is never ending

1080

00:47:06,180 --> 00:46:59,020

but did you know how much science is

1081

00:47:07,860 --> 00:47:06,190

involved in every piece firstly let's

1082

00:47:09,510 --> 00:47:07,870

look at the role of each ingredients in

1083

00:47:12,210 --> 00:47:09,520

making your piece of cake like and

1084

00:47:14,340 --> 00:47:12,220

fluffy starting with sugar when you

1085

00:47:15,960 --> 00:47:14,350

cream butter and sugar together air gets

1086

00:47:18,240 --> 00:47:15,970

trapped on the rough surface of the

1087

00:47:20,580 --> 00:47:18,250

sugar crystals giving you a foamy better

1088

00:47:22,470 --> 00:47:20,590

the fat in the busser coats these air

1089

00:47:25,200 --> 00:47:22,480

bubbles helping to hold them in the

1090

00:47:27,480 --> 00:47:25,210

mixture however when they heat up these

1091

00:47:29,940 --> 00:47:27,490

bubbles pop leave me with a flat and

1092

00:47:32,610 --> 00:47:29,950

dense cake but that's where eggs come in

1093

00:47:34,740 --> 00:47:32,620

the proteins also coat these air bubbles

1094

00:47:37,110 --> 00:47:34,750

when these proteins are heated they

1095

00:47:38,850 --> 00:47:37,120

Harden stopping the bubble from popping

1096

00:47:41,370 --> 00:47:38,860

and trapping the air inside the cake

1097

00:47:43,890 --> 00:47:41,380

baking powder is the last ingredient in

1098

00:47:46,080 --> 00:47:43,900

making your cake lyson fluffy it's as a

1099

00:47:48,750 --> 00:47:46,090

mixture of bicarbonate of soda and cream

1100

00:47:50,970 --> 00:47:48,760

of tartar an alkali in an acid which

1101
00:47:53,370 --> 00:47:50,980
react with heat and water to form carbon

1102
00:47:55,140 --> 00:47:53,380
dioxide this helps expand those air

1103
00:47:57,140 --> 00:47:55,150
bubbles adding yet another level of

1104
00:48:00,480 --> 00:47:57,150
fluffiness

1105
00:48:02,880 --> 00:48:00,490
so what role does flour have then well

1106
00:48:04,770 --> 00:48:02,890
flour proteins combine to form gluten

1107
00:48:07,109 --> 00:48:04,780
which forms a stretchy web structure

1108
00:48:09,180 --> 00:48:07,119
through the cake as the air bubbles are

1109
00:48:11,520 --> 00:48:09,190
expanding the gluten stretches to

1110
00:48:14,580 --> 00:48:11,530
contain them when the gluten reaches

1111
00:48:16,200 --> 00:48:14,590
about 80 degrees it hardens preventing

1112
00:48:18,780 --> 00:48:16,210
the cake from collapsing inwards and

1113
00:48:21,510 --> 00:48:18,790

maintaining its expanded shape leaving

1114

00:48:23,970 --> 00:48:21,520

you with a light fluffy cake the second

1115

00:48:25,830 --> 00:48:23,980

role of flowers to provide starch this

1116

00:48:28,349 --> 00:48:25,840

helps the egg proteins stay strong and

1117

00:48:31,050 --> 00:48:28,359

trap those air bubbles inside and form

1118

00:48:35,820 --> 00:48:31,060

the final texture of the cake and now

1119

00:48:37,620 --> 00:48:35,830

for fast facts about cakes cakes as we

1120

00:48:40,080 --> 00:48:37,630

know them probably only came about in

1121

00:48:42,450 --> 00:48:40,090

the 18th or 19th century with the advent

1122

00:48:45,180 --> 00:48:42,460

of baking powders replacing yeast as the

1123

00:48:48,570 --> 00:48:45,190

leavening agent some people add Sultan's

1124

00:48:50,630 --> 00:48:48,580

cakes salt in sweet what but it does

1125

00:48:53,220 --> 00:48:50,640

help strengthen that gluten structure

1126

00:48:55,440 --> 00:48:53,230

despite saying that gluten is vital for

1127

00:48:57,210 --> 00:48:55,450

creating the structure of the cake too

1128

00:48:59,609 --> 00:48:57,220

much gluten can result in a heavy

1129

00:49:02,550 --> 00:48:59,619

texture the amount of butter helps

1130

00:49:04,830 --> 00:49:02,560

control that reaction and sugar also

1131

00:49:07,109 --> 00:49:04,840

helps the caramelization reaction called

1132

00:49:09,420 --> 00:49:07,119

my yard reaction giving that golden

1133

00:49:11,970 --> 00:49:09,430

surface on top that's it for this week

1134

00:49:14,010 --> 00:49:11,980

in science for more information on the

1135

00:49:18,330 --> 00:49:14,020

science of baking sink your sweet tooth

1136

00:49:21,359 --> 00:49:18,340

into the RLS websites are I aus org a

1137

00:49:24,300 --> 00:49:21,369

you follow us on twitter at ra oz and

1138

00:49:42,670 --> 00:49:24,310

like us on facebook i'm ben lewis and

1139

00:49:48,260 --> 00:49:46,250

I'm Gregoire and I'm Dan beeston and

1140

00:49:50,750 --> 00:49:48,270

we're from smart enough to know better a

1141

00:49:53,510 --> 00:49:50,760

podcast of science comedy and ignorant

1142

00:49:56,569 --> 00:49:53,520

and we're inviting you to our 100th

1143

00:49:58,910 --> 00:49:56,579

episode live show it takes place in the

1144

00:50:00,980 --> 00:49:58,920

first of September at seven p.m. at the

1145

00:50:03,680 --> 00:50:00,990

brisbane powerhouse theatre and guess

1146

00:50:06,049 --> 00:50:03,690

what it's free it's a game show where

1147

00:50:08,329 --> 00:50:06,059

you get to win fabulous prizes just by

1148

00:50:11,180 --> 00:50:08,339

sharing your own stories of science

1149

00:50:14,420 --> 00:50:11,190

first of September 7 p.m. at the

1150

00:50:41,799 --> 00:50:14,430

brisbane powerhouse free free free check

1151

00:50:47,569 --> 00:50:44,690

well i'm here at King o'malley's irish

1152

00:50:50,120 --> 00:50:47,579

club in civic in Canberra and who do I

1153

00:50:52,759 --> 00:50:50,130

have with me here tonight so I'm gonna

1154

00:50:54,950 --> 00:50:52,769

go from the SRO Canberra deep space

1155

00:50:58,099 --> 00:50:54,960

communication complex part of NASA's

1156

00:50:59,180 --> 00:50:58,109

Deep Space Network and what brings you

1157

00:51:01,700 --> 00:50:59,190

here tonight what have you been

1158

00:51:03,620 --> 00:51:01,710

presenting to us too yes tonight we've

1159

00:51:06,019 --> 00:51:03,630

been doing a science in the pub looking

1160

00:51:09,309 --> 00:51:06,029

at Pluto and the encounter with that

1161

00:51:13,479 --> 00:51:09,319

dwarf world just a few weeks ago in July

1162

00:51:15,589 --> 00:51:13,489

myself and with two amazing speakers

1163

00:51:19,160 --> 00:51:15,599

Nobel Prize winner Professor Brian

1164

00:51:23,019 --> 00:51:19,170

Schmidt and dr. alan duffy an astronomer

1165

00:51:27,140 --> 00:51:23,029

from Swinburne University so what was

1166

00:51:29,269 --> 00:51:27,150

CSIRO's role in all of this okay so our

1167

00:51:31,339 --> 00:51:29,279

role is as part of NASA's Deep Space

1168

00:51:33,709 --> 00:51:31,349

Network so the CSR actually manages the

1169

00:51:36,049 --> 00:51:33,719

tracking station at it to develop now

1170

00:51:37,489 --> 00:51:36,059

job is to provide communications to all

1171

00:51:39,440 --> 00:51:37,499

the spacecraft out across the solar

1172

00:51:41,029 --> 00:51:39,450

system so uplinking commands the

1173

00:51:42,799 --> 00:51:41,039

spacecraft only got where to go what to

1174

00:51:46,039 --> 00:51:42,809

do every day what much pressure into

1175

00:51:47,809 --> 00:51:46,049

this one what information to collect and

1176
00:51:49,459 --> 00:51:47,819
then send back home we get that

1177
00:51:51,410 --> 00:51:49,469
information we process at eliminating

1178
00:51:53,630 --> 00:51:51,420
all the random noise of the universe and

1179
00:51:55,880 --> 00:51:53,640
just send the cleaned up signal off to

1180
00:51:58,459 --> 00:51:55,890
the Jet Propulsion labs on California

1181
00:52:01,019 --> 00:51:58,469
JPL and then they distribute it out to

1182
00:52:02,789 --> 00:52:01,029
the science team so then you know

1183
00:52:05,699 --> 00:52:02,799
make the discoveries and tell us what

1184
00:52:08,370 --> 00:52:05,709
they find so was it really nine years

1185
00:52:11,249 --> 00:52:08,380
between the launch and the first singles

1186
00:52:13,999 --> 00:52:11,259
yes oh the spacecraft launched in on the

1187
00:52:16,259 --> 00:52:14,009
19th of January 2006 so the journey was

1188
00:52:18,659 --> 00:52:16,269

5.3 billion kilometers nine and a half

1189

00:52:21,329 --> 00:52:18,669

years to get all the way to Pluto an

1190

00:52:22,649 --> 00:52:21,339

amazing rocket and you consider this is

1191

00:52:26,120 --> 00:52:22,659

the master powerful rocket they put at

1192

00:52:29,279 --> 00:52:26,130

the time at launch from Cape Canaveral

1193

00:52:31,709 --> 00:52:29,289

it past the orbit of the moon just nine

1194

00:52:33,209 --> 00:52:31,719

hours after Lufthansa it was really

1195

00:52:35,939 --> 00:52:33,219

moving on the Apollo missions took four

1196

00:52:38,939 --> 00:52:35,949

days to get invested in in just 29 hours

1197

00:52:41,189 --> 00:52:38,949

and then it headed off to Jupiter for

1198

00:52:43,559 --> 00:52:41,199

rendezvous there just 13 months after

1199

00:52:45,749 --> 00:52:43,569

the launch normally that's a two-year

1200

00:52:47,669 --> 00:52:45,759

journey I got a gravitational kick from

1201
00:52:49,319 --> 00:52:47,679
Jupiter headed on now but we we had to

1202
00:52:51,989 --> 00:52:49,329
contact with it at various times every

1203
00:52:54,120 --> 00:52:51,999
monday if phone home was a little beacon

1204
00:52:56,339 --> 00:52:54,130
call to say absolutely everything's okay

1205
00:52:58,409 --> 00:52:56,349
you know is anything want me to do and

1206
00:53:00,029 --> 00:52:58,419
that's you know it may occasionally did

1207
00:53:01,979 --> 00:53:00,039
seem various bits of science and lost

1208
00:53:05,069 --> 00:53:01,989
patience with some test runs at the

1209
00:53:09,679 --> 00:53:05,079
counter probably bad really the the big

1210
00:53:14,459 --> 00:53:09,689
moment was you know sort of a 1430 like

1211
00:53:20,069 --> 00:53:14,469
2015 and 949 and 57 seconds his base map

1212
00:53:22,319 --> 00:53:20,079
made its closest approach and what was

1213
00:53:23,669 --> 00:53:22,329

it like being in the room we're just

1214

00:53:25,319 --> 00:53:23,679

waiting for that signal it must've been

1215

00:53:28,019 --> 00:53:25,329

really really tense

1216

00:53:31,079 --> 00:53:28,029

yeah we actually the thing that we call

1217

00:53:33,420 --> 00:53:31,089

professional excitement we've got a job

1218

00:53:36,359 --> 00:53:33,430

to do the tension really is for the

1219

00:53:38,190 --> 00:53:36,369

science team you know over at the Johns

1220

00:53:40,559 --> 00:53:38,200

Hopkins University are all crowded

1221

00:53:42,449 --> 00:53:40,569

around their screens and waiting for

1222

00:53:44,729 --> 00:53:42,459

particularly the phone home signal

1223

00:53:46,799 --> 00:53:44,739

because New Horizons were actually out

1224

00:53:49,769 --> 00:53:46,809

of contact with us during its entire

1225

00:53:51,390 --> 00:53:49,779

encounter with blue about 14 hours we

1226
00:53:56,039 --> 00:53:51,400
had the last contact here in Canberra

1227
00:53:58,680 --> 00:53:56,049
with it at about 9pm and so 49 minutes

1228
00:54:00,749 --> 00:53:58,690
and 57 seconds later the spacecraft was

1229
00:54:03,329 --> 00:54:00,759
busy doing its encounter turning its

1230
00:54:04,859 --> 00:54:03,339
instruments to look at the planet look

1231
00:54:07,229 --> 00:54:04,869
at the moons and learn everything you

1232
00:54:09,479 --> 00:54:07,239
can about it and whizzing past 55

1233
00:54:10,799 --> 00:54:09,489
thousand kilometres per hour and then

1234
00:54:13,109 --> 00:54:10,809
we're all waiting for this phone home

1235
00:54:16,709 --> 00:54:13,119
signal which was coming the next morning

1236
00:54:19,019 --> 00:54:16,719
you know after the encounter and yeah

1237
00:54:20,910 --> 00:54:19,029
there was a lot of tension fortunately

1238
00:54:22,620 --> 00:54:20,920

in Canberra we were cut off the hook it

1239

00:54:24,329 --> 00:54:22,630

was our station over in Spain who was

1240

00:54:27,870 --> 00:54:24,339

responsible for it we've handed it over

1241

00:54:29,670 --> 00:54:27,880

to them and watching the science team

1242

00:54:32,219 --> 00:54:29,680

world cuddle watching on screens at have

1243

00:54:34,439 --> 00:54:32,229

been a long night for us so we would i

1244

00:54:36,539 --> 00:54:34,449

but we were really just waiting has it

1245

00:54:37,589 --> 00:54:36,549

all work we had the last contact we're

1246

00:54:40,229 --> 00:54:37,599

gonna have another contact through the

1247

00:54:43,370 --> 00:54:40,239

network the science team we happy bong

1248

00:54:45,779 --> 00:54:43,380

behold signal came in exactly on time

1249

00:54:48,630 --> 00:54:45,789

since straight of JPL straight in the

1250

00:54:51,479 --> 00:54:48,640

science team the cheers that erupted not

1251
00:54:53,849 --> 00:54:51,489
only at the Mission Control Center JPL

1252
00:54:57,480 --> 00:54:53,859
of course here in Canberra we were just

1253
00:55:00,160 --> 00:54:57,490
elated being part of history once again

1254
00:55:03,940 --> 00:55:00,170
so what was the first image that you saw

1255
00:55:06,370 --> 00:55:03,950
little piece of data so there was a

1256
00:55:10,030 --> 00:55:06,380
couple there was a couple of images one

1257
00:55:11,200 --> 00:55:10,040
was the sort of the full face of Pluto

1258
00:55:14,050 --> 00:55:11,210
and this was actually a shot was

1259
00:55:15,339 --> 00:55:14,060
actually taken before the closest

1260
00:55:17,670 --> 00:55:15,349
approach to the you can I was taking on

1261
00:55:20,230 --> 00:55:17,680
about 70,000 kilometers from the planet

1262
00:55:22,030 --> 00:55:20,240
but necessary held that back because I

1263
00:55:24,400 --> 00:55:22,040

wanted to release it at the time when

1264

00:55:26,200 --> 00:55:24,410

the space Vipers flying past would you

1265

00:55:27,580 --> 00:55:26,210

know so when we're out of contact people

1266

00:55:29,290 --> 00:55:27,590

are sort of going what's happening to

1267

00:55:30,910 --> 00:55:29,300

the mark that moment they show that call

1268

00:55:32,380 --> 00:55:30,920

hemisphere view and that that will be

1269

00:55:34,900 --> 00:55:32,390

that the sort of shot will be in the

1270

00:55:39,010 --> 00:55:34,910

textbooks for the next 100 years or more

1271

00:55:42,460 --> 00:55:39,020

until we get new shots and then the next

1272

00:55:44,740 --> 00:55:42,470

shot to come back was the close-ups

1273

00:55:46,750 --> 00:55:44,750

surface shots and they all received in

1274

00:55:48,220 --> 00:55:46,760

camera and the closest some of the

1275

00:55:50,490 --> 00:55:48,230

closest to use of the surface there's

1276

00:55:54,040 --> 00:55:50,500

still only a resolution of about sort of

1277

00:55:55,839 --> 00:55:54,050

1.3 kilometers per pixel we're going to

1278

00:55:58,180 --> 00:55:55,849

get much better stuff back these were

1279

00:56:01,089 --> 00:55:58,190

just quick snapshots that we've got you

1280

00:56:02,349 --> 00:56:01,099

know sort of Kodak moments we've got

1281

00:56:04,359 --> 00:56:02,359

much higher resolution stuff that's

1282

00:56:06,010 --> 00:56:04,369

coming down starting in September and

1283

00:56:07,570 --> 00:56:06,020

they will be getting down to about a

1284

00:56:09,820 --> 00:56:07,580

hundred meters per pixel resolution

1285

00:56:11,349 --> 00:56:09,830

across some parts of Pluto so it's a lot

1286

00:56:13,890 --> 00:56:11,359

more to come but seeing those first

1287

00:56:16,599 --> 00:56:13,900

images he took everybody's breath away

1288

00:56:18,579 --> 00:56:16,609

as we said tonight at the torque alan

1289

00:56:20,770 --> 00:56:18,589

duffy was saying that whoever thought

1290

00:56:22,420 --> 00:56:20,780

was just gonna be this frozen ball very

1291

00:56:25,950 --> 00:56:22,430

uninteresting but this thing had

1292

00:56:28,440 --> 00:56:25,960

mountains and then that is a nice classy

1293

00:56:32,160 --> 00:56:28,450

surface it's full of surprises this

1294

00:56:33,960 --> 00:56:32,170

woman and we're all just stunned so how

1295

00:56:35,730 --> 00:56:33,970

did you say it was going we're gonna

1296

00:56:37,950 --> 00:56:35,740

keep getting data from it was about 16

1297

00:56:39,359 --> 00:56:37,960

months I believe yeah so the spacecraft

1298

00:56:41,760 --> 00:56:39,369

starting in the September this year will

1299

00:56:46,410 --> 00:56:41,770

actually start down linking all of its

1300

00:56:48,870 --> 00:56:46,420

data on board and the the data rate is

1301
00:56:51,270 --> 00:56:48,880
only about one the two kilobits one or

1302
00:56:53,250 --> 00:56:51,280
two kilobits a second so it's a fairly

1303
00:56:54,750 --> 00:56:53,260
low data rate we think we can up that a

1304
00:56:57,270 --> 00:56:54,760
little bit too maybe four to six

1305
00:57:00,690 --> 00:56:57,280
kilobits a second a poor and that will

1306
00:57:05,070 --> 00:57:00,700
still take around about 12 to 16 months

1307
00:57:09,030 --> 00:57:05,080
to downlink all the data and what's up

1308
00:57:11,940 --> 00:57:09,040
for you and for CSIRO in this regard in

1309
00:57:14,790 --> 00:57:11,950
the future what's next after the data is

1310
00:57:17,099 --> 00:57:14,800
downloaded what are the future plans

1311
00:57:19,050 --> 00:57:17,109
what do you rise in us will continue on

1312
00:57:20,940 --> 00:57:19,060
and we could have time to tackle it for

1313
00:57:23,730 --> 00:57:20,950

at least another 30 years maybe a couple

1314

00:57:25,230 --> 00:57:23,740

of more encounters in late too late part

1315

00:57:27,630 --> 00:57:25,240

of this decade and in the middle of the

1316

00:57:28,890 --> 00:57:27,640

next decade with some of the Kuiper belt

1317

00:57:31,410 --> 00:57:28,900

objects out there but of course we're

1318

00:57:32,599 --> 00:57:31,420

busy every single day we have over 40

1319

00:57:34,530 --> 00:57:32,609

missions out across the solar system

1320

00:57:35,700 --> 00:57:34,540

representing 22 different countries

1321

00:57:38,760 --> 00:57:35,710

around the world that explore or

1322

00:57:40,320 --> 00:57:38,770

exploring so we've got plenty you know

1323

00:57:42,000 --> 00:57:40,330

we've got seven missions at Mars at the

1324

00:57:44,880 --> 00:57:42,010

moment it's the traffic jam of the solar

1325

00:57:47,940 --> 00:57:44,890

system and we've got a new mission

1326

00:57:49,980 --> 00:57:47,950

launching to Mars in March the insight

1327

00:57:52,349 --> 00:57:49,990

mission which is a mission to study

1328

00:57:53,670 --> 00:57:52,359

through seismological studies of mass

1329

00:57:56,130 --> 00:57:53,680

and what about the interior of the

1330

00:57:57,900 --> 00:57:56,140

payment Europeans next year also wanting

1331

00:58:00,480 --> 00:57:57,910

the exomars mission a row their first

1332

00:58:02,640 --> 00:58:00,490

Rover to go to Mars december this year

1333

00:58:06,780 --> 00:58:02,650

we've got the japanese mission Akkad

1334

00:58:09,150 --> 00:58:06,790

Suki hopefully arriving at Venus there's

1335

00:58:11,550 --> 00:58:09,160

another missions going off to asteroids

1336

00:58:12,970 --> 00:58:11,560

got rosetta mission that's still ongoing

1337

00:58:15,150 --> 00:58:12,980

in orbit

1338

00:58:17,440 --> 00:58:15,160

the comet childermass gotta Semenko

1339

00:58:19,930 --> 00:58:17,450

there's so much happening there we've

1340

00:58:21,520 --> 00:58:19,940

never a dull moment we're 24-7 talking

1341

00:58:24,010 --> 00:58:21,530

to space bar early thank you for all

1342

00:58:26,770 --> 00:58:24,020

that CSIRO has done thank you very much

1343

00:58:43,080 --> 00:58:26,780

ok Nagel hope to talk to you again

1344

00:58:47,710 --> 00:58:45,760

our friends from the Canberra skeptics

1345

00:58:50,859 --> 00:58:47,720

would like you to know they are holding

1346

00:58:53,320 --> 00:58:50,869

an evening with joe nickell on thursday

1347

00:58:56,590 --> 00:58:53,330

the twenty seconds of October 2015 at

1348

00:58:59,980 --> 00:58:56,600

six pm at the Copeland theatre building

1349

00:59:02,620 --> 00:58:59,990

25 kingsley street at amu now this is

1350

00:59:05,140 --> 00:59:02,630

free for members but only five dollars

1351
00:59:07,570 --> 00:59:05,150
for non-members canberra skeptics is

1352
00:59:09,190 --> 00:59:07,580
delighted to present a Q&A with one of

1353
00:59:12,010 --> 00:59:09,200
the leading figures in the skeptical

1354
00:59:14,050 --> 00:59:12,020
movement John Nichol Joe is being called

1355
00:59:16,690 --> 00:59:14,060
the modern sherlock holmes and the real

1356
00:59:19,240 --> 00:59:16,700
life Scully Joe has spent his life being

1357
00:59:21,790 --> 00:59:19,250
an investigator of historical paranormal

1358
00:59:24,480 --> 00:59:21,800
and forensic mysteries myths and hoaxes

1359
00:59:48,240 --> 00:59:24,490
for further information please visit

1360
00:59:51,970 --> 00:59:50,349
thank you for listening to the skeptic

1361
00:59:53,440 --> 00:59:51,980
zone and I'm sorry Joe that the Chinese

1362
00:59:55,900 --> 00:59:53,450
duck with the pickled vegetables didn't

1363
00:59:57,160 --> 00:59:55,910

quite work out this planned and I'm

1364

00:59:58,539 --> 00:59:57,170

sorry you're going to have to work out

1365

01:00:01,870 --> 00:59:58,549

how to clean the ceiling in your kitchen

1366

01:00:03,970 --> 01:00:01,880

and the floor and the cabin but the

1367

01:00:06,190 --> 01:00:03,980

peanut mochi balls are pretty good they

1368

01:00:07,480 --> 01:00:06,200

are fantastic how fantastic gets one of

1369

01:00:08,470 --> 01:00:07,490

the benefits of living in Sydney we have

1370

01:00:12,069 --> 01:00:08,480

access to all this wonderful

1371

01:00:13,529 --> 01:00:12,079

international food hmm that must be we

1372

01:00:17,049 --> 01:00:13,539

should have another podcast for that

1373

01:00:19,359 --> 01:00:17,059

food podcast what an idea the skeptical

1374

01:00:21,759 --> 01:00:19,369

foodie podcast or something where we can

1375

01:00:23,650 --> 01:00:21,769

eat all of the msg that we want no no we

1376

01:00:27,539 --> 01:00:23,660

no ill effects because we know that it's

1377

01:00:29,829 --> 01:00:27,549

not harmful and gluten everything ah

1378

01:00:32,440 --> 01:00:29,839

could you imagine how that podcast would

1379

01:00:35,499 --> 01:00:32,450

work would be said rogan forum podcast

1380

01:00:37,870 --> 01:00:35,509

and awe Oh hot that one wrong and it'd

1381

01:00:39,970 --> 01:00:37,880

be all like that and be disgusting yeah

1382

01:00:41,980 --> 01:00:39,980

I don't think that that's a great idea I

1383

01:00:44,529 --> 01:00:41,990

think that's a great idea now get me up

1384

01:00:46,539 --> 01:00:44,539

on this camping so next week uh we have

1385

01:00:49,059 --> 01:00:46,549

an evidence please with you oh I'm

1386

01:00:50,349 --> 01:00:49,069

getting topped in and what's what can

1387

01:00:54,249 --> 01:00:50,359

people look forward to on the next show

1388

01:00:57,069 --> 01:00:54,259

oh I'm probably I imagine going to be

1389

01:00:59,480 --> 01:00:57,079

talking about Michael leunig the

1390

01:01:04,880 --> 01:00:59,490

cartoonist

1391

01:01:07,040 --> 01:01:04,890

yes he is um he's been publishing well

1392

01:01:10,640 --> 01:01:07,050

he's done several books but he gets a

1393

01:01:13,310 --> 01:01:10,650

daily I think it's daily comic in the

1394

01:01:18,020 --> 01:01:13,320

Age newspaper at the moment and he did

1395

01:01:20,540 --> 01:01:18,030

one last week that wasn't really so

1396

01:01:23,810 --> 01:01:20,550

great not so great it was basically a

1397

01:01:25,340 --> 01:01:23,820

very big antibac statement which is a

1398

01:01:26,690 --> 01:01:25,350

lot a lot of people worried a lot of

1399

01:01:28,670 --> 01:01:26,700

people dismayed that their favorite

1400

01:01:30,859 --> 01:01:28,680

cartoonist turns out to be an auntie vac

1401

01:01:32,930 --> 01:01:30,869

said anyway you go yeah he's got a

1402

01:01:35,300 --> 01:01:32,940

little bit of form there in the past he

1403

01:01:39,620 --> 01:01:35,310

has done it before but never quite this

1404

01:01:41,840 --> 01:01:39,630

blatant and yeah it's sad to see it's

1405

01:01:43,730 --> 01:01:41,850

very disappointing anyway more about

1406

01:01:45,500 --> 01:01:43,740

that next week hopefully some more from

1407

01:01:48,080 --> 01:01:45,510

may not he's on assignment at the moment

1408

01:01:50,390 --> 01:01:48,090

actually he's worries down in Victoria

1409

01:01:51,859 --> 01:01:50,400

working on a movie hope it will helping

1410

01:01:53,000 --> 01:01:51,869

doing interviews on a movie so that's

1411

01:01:55,340 --> 01:01:53,010

very exciting don't believe that's

1412

01:01:57,560 --> 01:01:55,350

actually with Tim Tim Ferguson yeah and

1413

01:01:59,870 --> 01:01:57,570

don't forget folks to go to Maynard calm

1414

01:02:01,700 --> 01:01:59,880

today you for all of maynards crazy

1415

01:02:03,740 --> 01:02:01,710

podcasts like bunga bunga it's quite a

1416

01:02:06,050 --> 01:02:03,750

lot of fun it is it's a lot of fun hello

1417

01:02:07,910 --> 01:02:06,060

domain out if you're listening alright

1418

01:02:10,099 --> 01:02:07,920

so that's all from this week Joe again

1419

01:02:11,390 --> 01:02:10,109

thank you very much and thank you think

1420

01:02:13,340 --> 01:02:11,400

ink in the national geographic channel

1421

01:02:15,890 --> 01:02:13,350

here in Australia for helping us get to

1422

01:02:17,570 --> 01:02:15,900

see the fabulous neil degrasse tyson and

1423

01:02:20,540 --> 01:02:17,580

Joe I've got some interesting news for

1424

01:02:24,080 --> 01:02:20,550

people living in Sydney if you want to

1425

01:02:27,230 --> 01:02:24,090

hear me talk about how I produce the

1426

01:02:30,290 --> 01:02:27,240

skeptic zone I'm giving a lecture a talk

1427

01:02:34,370 --> 01:02:30,300

at the Sydney podcasters meetup group

1428

01:02:37,160 --> 01:02:34,380

now that's at meetup com / podcasting

1429

01:02:39,470 --> 01:02:37,170

hyphen Sydney or Google Sydney

1430

01:02:43,030 --> 01:02:39,480

podcasters and meet up ah this is on

1431

01:02:47,000 --> 01:02:43,040

Monday the 31st of august so pretty soon

1432

01:02:48,620 --> 01:02:47,010

630pm at the Chippendale hotel and you

1433

01:02:52,250 --> 01:02:48,630

just head downstairs at the Chippendale

1434

01:02:55,160 --> 01:02:52,260

held hotel and that's at 87 Abercrombie

1435

01:02:56,630 --> 01:02:55,170

street in Chip and Dale so yeah if you

1436

01:02:59,150 --> 01:02:56,640

want to come along join that meetup

1437

01:03:00,890 --> 01:02:59,160

group will just come along I hope to

1438

01:03:03,890 --> 01:03:00,900

give an interesting talk about how I

1439

01:03:06,830 --> 01:03:03,900

make the skeptics on each wing you often

1440

01:03:08,420 --> 01:03:06,840

wonder don't you Joe I do indeed well I

1441

01:03:09,980 --> 01:03:08,430

think I'm ready for a good lie down Joe

1442

01:03:12,530 --> 01:03:09,990

it's been a big couple of days and thank

1443

01:03:13,280 --> 01:03:12,540

you again but for this week this is

1444

01:03:16,100 --> 01:03:13,290

Richard saw

1445

01:03:22,310 --> 01:03:16,110

and Joe alabaster signing off from

1446

01:03:24,800 --> 01:03:22,320

Sydney Australia you've been listening

1447

01:03:28,340 --> 01:03:24,810

to the skeptics own podcast visit our

1448

01:03:30,590 --> 01:03:28,350

website at wwc a petting zoo TV for

1449

01:03:35,000 --> 01:03:30,600

contacts an archive of all episodes

1450

01:03:37,130 --> 01:03:35,010

since 2008 and our online store please

1451

01:03:40,460 --> 01:03:37,140

support the skeptic zone by following us

1452

01:03:43,450 --> 01:03:40,470

on twitter at skeptic zone liking us on

1453

01:03:45,830 --> 01:03:43,460

facebook and leaving a review on iTunes

1454

01:03:48,470 --> 01:03:45,840

you can also show your support by

1455

01:03:52,220 --> 01:03:48,480

subscribing via paypal for as little as

1456

01:03:54,260 --> 01:03:52,230

99 cents a week the skeptic zone is an

1457

01:03:56,360 --> 01:03:54,270

independent production the views and

1458

01:03:58,550 --> 01:03:56,370

opinions expressed on the skeptic zone

1459

01:04:01,430 --> 01:03:58,560

and not necessarily those of Australian

1460

01:04:16,630 --> 01:04:01,440

skeptically or any other skeptical

1461

01:04:24,560 --> 01:04:20,150

derp derp derp that should be than you

1462

01:04:26,150 --> 01:04:24,570

think hello and welcome to the skeptics

1463

01:04:30,890 --> 01:04:26,160

are an episode number three hundred and

1464

01:04:32,450 --> 01:04:30,900

slow little hollow home hahaha there's