

WEBVTT

NOTE duration:"00:56:54"

NOTE recognizability:0.790

NOTE language:en-us

NOTE Confidence: 0.781784112

00:00:00.000 --> 00:00:04.160 And thank you also John, can people see,

NOTE Confidence: 0.781784112

00:00:04.160 --> 00:00:06.866 see my slides can you put. Yes. Good.

NOTE Confidence: 0.781784112

00:00:06.866 --> 00:00:10.970 So it's a it's a pleasure and indeed

NOTE Confidence: 0.781784112

00:00:11.084 --> 00:00:14.906 an honour to be invited to contribute

NOTE Confidence: 0.781784112

00:00:14.906 --> 00:00:17.002 to your grand rounds particularly

NOTE Confidence: 0.781784112

00:00:17.002 --> 00:00:19.735 at the time of the the the the

NOTE Confidence: 0.781784112

00:00:19.735 --> 00:00:22.038 development of the of the new centre.

NOTE Confidence: 0.781784112

00:00:22.040 --> 00:00:23.832 But I'm conscious of course that with

NOTE Confidence: 0.781784112

00:00:23.832 --> 00:00:25.782 Cyril and the centre you probably know

NOTE Confidence: 0.781784112

00:00:25.782 --> 00:00:27.880 a lot about cannabis and mental health.

NOTE Confidence: 0.781784112

00:00:27.880 --> 00:00:28.975 So I'll try.

NOTE Confidence: 0.781784112

00:00:28.975 --> 00:00:32.311 I'll try not to be repetitive and if people

NOTE Confidence: 0.781784112

00:00:32.311 --> 00:00:34.432 I I've given similar lectures to this

NOTE Confidence: 0.781784112

00:00:34.432 --> 00:00:36.800 before so I know what I'm going to say.

NOTE Confidence: 0.781784112

00:00:36.800 --> 00:00:39.446 It's not it's not it's not new to me

NOTE Confidence: 0.781784112

00:00:39.446 --> 00:00:42.401 so if people want to interrupt I make

NOTE Confidence: 0.781784112

00:00:42.401 --> 00:00:45.399 it more lively then I'll be very happy.

NOTE Confidence: 0.781784112

00:00:45.400 --> 00:00:48.930 I guess you could do that by sticking up

NOTE Confidence: 0.781784112

00:00:48.930 --> 00:00:52.077 your hand or or or putting a question in

NOTE Confidence: 0.781784112

00:00:52.077 --> 00:00:55.506 the chat and no doubt Cyril will read it out.

NOTE Confidence: 0.781784112

00:00:55.506 --> 00:00:57.616 So I've received various payments

NOTE Confidence: 0.781784112

00:00:57.616 --> 00:00:59.291 for non promotional lectures.

NOTE Confidence: 0.781784112

00:00:59.291 --> 00:01:01.793 I don't do promotional lectures from

NOTE Confidence: 0.781784112

00:01:01.800 --> 00:01:04.320 from various say, drug companies,

NOTE Confidence: 0.781784112

00:01:04.320 --> 00:01:08.462 no cannabis companies. Of course.

NOTE Confidence: 0.781784112

00:01:08.462 --> 00:01:11.466 We psychiatrists talk about

NOTE Confidence: 0.781784112

00:01:11.466 --> 00:01:14.454 the downside of cannabis use.

NOTE Confidence: 0.781784112

00:01:14.454 --> 00:01:17.390 I we don't talk about the fact that

NOTE Confidence: 0.781784112

00:01:17.472 --> 00:01:19.992 millions of people enjoy using it

NOTE Confidence: 0.781784112

00:01:19.992 --> 00:01:22.799 and we don't generally talk about the

NOTE Confidence: 0.781784112

00:01:22.800 --> 00:01:25.020 indications for medicinal cannabis,

NOTE Confidence: 0.781784112

00:01:25.020 --> 00:01:28.350 but just to very briefly remind

NOTE Confidence: 0.781784112

00:01:28.439 --> 00:01:30.244 ourselves that this is,

NOTE Confidence: 0.781784112

00:01:30.244 --> 00:01:32.498 this is the review of the National

NOTE Confidence: 0.781784112

00:01:32.498 --> 00:01:35.824 Academy of Science that cannabis has a

NOTE Confidence: 0.781784112

00:01:35.824 --> 00:01:39.600 modest beneficial effect on chronic pain.

NOTE Confidence: 0.781784112

00:01:39.600 --> 00:01:40.688 Not a,

NOTE Confidence: 0.781784112

00:01:40.688 --> 00:01:43.376 not a very a powerful effect,

NOTE Confidence: 0.781784112

00:01:43.376 --> 00:01:45.840 a bit like a couple of aspirins.

NOTE Confidence: 0.781784112

00:01:45.840 --> 00:01:48.312 But of course if you have chronic pain

NOTE Confidence: 0.781784112

00:01:48.312 --> 00:01:51.134 and you get an analgesic effect and a

NOTE Confidence: 0.781784112

00:01:51.134 --> 00:01:53.232 little bit of euphoria, then that's good.

NOTE Confidence: 0.781784112

00:01:53.232 --> 00:01:53.680 That's good.

NOTE Confidence: 0.781784112

00:01:53.680 --> 00:01:57.320 To help a intractable nausea,

NOTE Confidence: 0.781784112

00:01:57.320 --> 00:02:00.440 you'll know that Nebulon A,  
NOTE Confidence: 0.781784112

00:02:00.440 --> 00:02:01.640 which is A  
NOTE Confidence: 0.5913475933333333

00:02:03.720 --> 00:02:08.680 is similar to THTHC is very useful in  
NOTE Confidence: 0.5913475933333333

00:02:08.680 --> 00:02:11.819 people who are having chemotherapy or  
NOTE Confidence: 0.5913475933333333

00:02:11.819 --> 00:02:14.280 other intractable causes of nausea.  
NOTE Confidence: 0.5913475933333333

00:02:14.280 --> 00:02:17.360 Though I understand from there been a  
NOTE Confidence: 0.5913475933333333

00:02:17.440 --> 00:02:22.852 survey in Colorado of a charity centre  
NOTE Confidence: 0.5913475933333333

00:02:22.852 --> 00:02:26.390 lady looking pregnant into into a  
NOTE Confidence: 0.5913475933333333

00:02:26.390 --> 00:02:28.965 hundred A marijuana dispensaries and  
NOTE Confidence: 0.5913475933333333

00:02:28.965 --> 00:02:32.960 found that 75% of them recommended  
NOTE Confidence: 0.5913475933333333

00:02:32.960 --> 00:02:37.118 a a cannabis for for nausea during  
NOTE Confidence: 0.5913475933333333

00:02:37.118 --> 00:02:40.560 pregnancy which is clearly counter  
NOTE Confidence: 0.5913475933333333

00:02:40.560 --> 00:02:44.360 counter indicated a multiple sclerosis.  
NOTE Confidence: 0.5913475933333333

00:02:44.360 --> 00:02:46.313 That I I don't know whether it  
NOTE Confidence: 0.5913475933333333

00:02:46.313 --> 00:02:47.920 has a licence in the USA,  
NOTE Confidence: 0.5913475933333333

00:02:47.920 --> 00:02:50.937 but a drug called Sativex which is

NOTE Confidence: 0.5913475933333333

00:02:50.937 --> 00:02:54.016 a combination low of low dose of THC

NOTE Confidence: 0.5913475933333333

00:02:54.016 --> 00:02:56.959 and CBD which you take by inhalation,

NOTE Confidence: 0.5913475933333333

00:02:56.960 --> 00:02:59.520 is useful for a spasticity.

NOTE Confidence: 0.5913475933333333

00:02:59.520 --> 00:03:02.440 And I'll come back to Sativex later on.

NOTE Confidence: 0.5913475933333333

00:03:02.440 --> 00:03:03.720 But the the the, the,

NOTE Confidence: 0.5913475933333333

00:03:03.720 --> 00:03:06.810 the poster boy really of the

NOTE Confidence: 0.5913475933333333

00:03:06.810 --> 00:03:08.890 effectiveness of cannabinoid drugs

NOTE Confidence: 0.5913475933333333

00:03:08.890 --> 00:03:11.515 is ACBD for childhood epilepsy

NOTE Confidence: 0.5913475933333333

00:03:11.515 --> 00:03:14.783 where it can have very spectacular

NOTE Confidence: 0.5913475933333333

00:03:14.783 --> 00:03:17.993 effects on these poor children who

NOTE Confidence: 0.5913475933333333

00:03:18.000 --> 00:03:21.680 have a maybe 100 or 150 fits a day.

NOTE Confidence: 0.5913475933333333

00:03:21.680 --> 00:03:24.077 They can be greatly reduced or in

NOTE Confidence: 0.5913475933333333

00:03:24.077 --> 00:03:28.040 some cases abolished by by CBD.

NOTE Confidence: 0.5913475933333333

00:03:28.040 --> 00:03:28.730 Of course,

NOTE Confidence: 0.5913475933333333

00:03:28.730 --> 00:03:31.742 if you go on the Internet there are

NOTE Confidence: 0.5913475933333333

00:03:31.742 --> 00:03:33.626 indications without but without  
NOTE Confidence: 0.5913475933333333

00:03:33.626 --> 00:03:36.399 RCT evidence that that I think is.  
NOTE Confidence: 0.5913475933333333

00:03:36.400 --> 00:03:38.677 I'll be pleased if people know of any other.  
NOTE Confidence: 0.5913475933333333

00:03:38.680 --> 00:03:40.920 They are more recent RCTs,  
NOTE Confidence: 0.5913475933333333

00:03:40.920 --> 00:03:44.079 but as far as I know that's the only a real,  
NOTE Confidence: 0.5913475933333333

00:03:44.079 --> 00:03:46.557 real hard evidence of the effectiveness  
NOTE Confidence: 0.5913475933333333

00:03:46.557 --> 00:03:48.479 of medicinal cannabis.  
NOTE Confidence: 0.5913475933333333

00:03:48.480 --> 00:03:51.400 But on the Internet,  
NOTE Confidence: 0.5913475933333333

00:03:51.400 --> 00:03:56.278 cannabis and and it's components are  
NOTE Confidence: 0.5913475933333333

00:03:56.280 --> 00:03:59.339 suggested to be of value on absolutely  
NOTE Confidence: 0.5913475933333333

00:03:59.339 --> 00:04:01.440 everything from opioid addiction,  
NOTE Confidence: 0.5913475933333333

00:04:01.440 --> 00:04:05.800 from depression, anxiety, PTSD, insomnia.  
NOTE Confidence: 0.5913475933333333

00:04:05.800 --> 00:04:07.438 Just at the beginning of COVID,  
NOTE Confidence: 0.5913475933333333

00:04:07.440 --> 00:04:09.720 I said to my wife,  
NOTE Confidence: 0.5913475933333333

00:04:09.720 --> 00:04:13.874 I bet people will be advocating a  
NOTE Confidence: 0.5913475933333333

00:04:13.874 --> 00:04:15.998 cannabis as a treatment for COVID.

NOTE Confidence: 0.5913475933333333  
00:04:16.000 --> 00:04:18.400 And of course soon enough this this occurred.  
NOTE Confidence: 0.5913475933333333  
00:04:18.400 --> 00:04:20.234 But there there's no evidence for for,  
NOTE Confidence: 0.5913475933333333  
00:04:20.240 --> 00:04:23.513 for, for these in the UK.  
NOTE Confidence: 0.5913475933333333  
00:04:23.513 --> 00:04:26.217 Most of the hype cannabis is say  
NOTE Confidence: 0.5913475933333333  
00:04:26.217 --> 00:04:29.430 is legal for medicinal use in the  
NOTE Confidence: 0.5913475933333333  
00:04:29.531 --> 00:04:32.436 UK and has been for five years,  
NOTE Confidence: 0.5913475933333333  
00:04:32.440 --> 00:04:34.240 but doctors don't prescribe it.  
NOTE Confidence: 0.5913475933333333  
00:04:34.240 --> 00:04:35.959 By and large,  
NOTE Confidence: 0.5913475933333333  
00:04:35.959 --> 00:04:38.960 the British doctors have been  
NOTE Confidence: 0.5913475933333333  
00:04:38.960 --> 00:04:42.160 indoctrinated that you only prescribed  
NOTE Confidence: 0.5913475933333333  
00:04:42.160 --> 00:04:44.680 drugs for when there is say,  
NOTE Confidence: 0.5913475933333333  
00:04:44.680 --> 00:04:45.937 when, when, when,  
NOTE Confidence: 0.5913475933333333  
00:04:45.937 --> 00:04:46.356 when,  
NOTE Confidence: 0.5913475933333333  
00:04:46.356 --> 00:04:48.451 when there is proper scientific  
NOTE Confidence: 0.5913475933333333  
00:04:48.451 --> 00:04:50.018 evidence for their effectiveness  
NOTE Confidence: 0.5913475933333333

00:04:50.018 --> 00:04:52.538 and we have a thing called NICE  
NOTE Confidence: 0.5913475933333333

00:04:52.606 --> 00:04:54.240 which advises you whether there  
NOTE Confidence: 0.5913475933333333

00:04:54.240 --> 00:04:55.800 is evidence for this or that.  
NOTE Confidence: 0.5913475933333333

00:04:55.800 --> 00:04:59.304 So in in the five years less than  
NOTE Confidence: 0.5913475933333333

00:04:59.304 --> 00:05:02.731 1000 people have have received a  
NOTE Confidence: 0.5913475933333333

00:05:02.731 --> 00:05:06.877 medicinal cannabis from from the state  
NOTE Confidence: 0.5913475933333333

00:05:06.880 --> 00:05:08.840 psychiatric or the state services.  
NOTE Confidence: 0.5913475933333333

00:05:08.840 --> 00:05:10.670 That's what we call the National  
NOTE Confidence: 0.5913475933333333

00:05:10.670 --> 00:05:11.280 Health Service.  
NOTE Confidence: 0.5913475933333333

00:05:11.280 --> 00:05:13.365 There are private practitioners in  
NOTE Confidence: 0.5913475933333333

00:05:13.365 --> 00:05:16.301 in the UK who have realised that  
NOTE Confidence: 0.5913475933333333

00:05:16.301 --> 00:05:19.381 there's a gap here and so they have  
NOTE Confidence: 0.5913475933333333

00:05:19.468 --> 00:05:21.662 been a prescribing a a medicinal  
NOTE Confidence: 0.5913475933333333

00:05:21.662 --> 00:05:24.434 cannabis for in the same way.  
NOTE Confidence: 0.5913475933333333

00:05:24.440 --> 00:05:26.974 I think that it is often prescribed  
NOTE Confidence: 0.5913475933333333

00:05:26.974 --> 00:05:29.760 in the in the USA without much



NOTE Confidence: 0.5913475933333333  
00:05:29.760 --> 00:05:35.524 much evidence but in in the UK you  
NOTE Confidence: 0.5913475933333333  
00:05:35.524 --> 00:05:38.912 can buy CBD and health shops but  
NOTE Confidence: 0.5913475933333333  
00:05:38.912 --> 00:05:41.824 it because of course it's quite  
NOTE Confidence: 0.5913475933333333  
00:05:41.824 --> 00:05:44.988 difficult to get pure T pure CBD  
NOTE Confidence: 0.5913475933333333  
00:05:44.988 --> 00:05:47.110 because you have to extract the  
NOTE Confidence: 0.5913475933333333  
00:05:47.110 --> 00:05:49.600 THC and that is quite expensive.  
NOTE Confidence: 0.5913475933333333  
00:05:49.600 --> 00:05:53.247 So in our shops what they mostly  
NOTE Confidence: 0.5913475933333333  
00:05:53.247 --> 00:05:54.810 sell is water  
NOTE Confidence: 0.8331245713333333  
00:05:54.931 --> 00:05:58.928 with a a very little IACBD in it but  
NOTE Confidence: 0.8331245713333333  
00:05:58.928 --> 00:06:02.071 but it's very fashionable and lots of  
NOTE Confidence: 0.8331245713333333  
00:06:02.071 --> 00:06:04.837 people swear that this CBD flavoured  
NOTE Confidence: 0.8331245713333333  
00:06:04.837 --> 00:06:08.160 water is is very very helpful.  
NOTE Confidence: 0.8331245713333333  
00:06:08.160 --> 00:06:11.796 There have been there has as you  
NOTE Confidence: 0.8331245713333333  
00:06:11.796 --> 00:06:14.091 know there's often it's often  
NOTE Confidence: 0.8331245713333333  
00:06:14.091 --> 00:06:16.840 suggested that THC or CBD are various  
NOTE Confidence: 0.8331245713333333

00:06:16.840 --> 00:06:18.720 combinations may be useful for  
NOTE Confidence: 0.833124571333333

00:06:18.795 --> 00:06:21.279 treatment of psychiatric disorders.  
NOTE Confidence: 0.833124571333333

00:06:21.280 --> 00:06:24.352 The last meta analysis I know is this  
NOTE Confidence: 0.833124571333333

00:06:24.352 --> 00:06:27.787 one by Black and Degenhardt and they  
NOTE Confidence: 0.833124571333333

00:06:27.787 --> 00:06:30.847 really found no evidence from RCTs  
NOTE Confidence: 0.833124571333333

00:06:30.847 --> 00:06:32.869 that cannabinoids are beneficial.  
NOTE Confidence: 0.833124571333333

00:06:32.869 --> 00:06:36.670 But of course you all know this  
NOTE Confidence: 0.833124571333333

00:06:36.761 --> 00:06:39.764 is not what patients say and what  
NOTE Confidence: 0.833124571333333

00:06:39.764 --> 00:06:42.095 many cannabis doctors in the USA  
NOTE Confidence: 0.833124571333333

00:06:42.095 --> 00:06:45.399 and now I guess in the UK also say.  
NOTE Confidence: 0.833124571333333

00:06:45.400 --> 00:06:48.080 And one question is why?  
NOTE Confidence: 0.833124571333333

00:06:48.080 --> 00:06:49.319 Why do people,  
NOTE Confidence: 0.698039984285714

00:06:51.880 --> 00:06:54.760 why do people think that a  
NOTE Confidence: 0.698039984285714

00:06:54.760 --> 00:06:57.142 a cannabis helps anxiety,  
NOTE Confidence: 0.698039984285714

00:06:57.142 --> 00:06:59.678 depression and and PTSD?  
NOTE Confidence: 0.698039984285714

00:06:59.680 --> 00:07:02.767 One problem of course is that many

NOTE Confidence: 0.698039984285714

00:07:02.767 --> 00:07:05.056 of the people who feel that that

NOTE Confidence: 0.698039984285714

00:07:05.056 --> 00:07:07.494 anxiety or the depression or indeed

NOTE Confidence: 0.698039984285714

00:07:07.494 --> 00:07:10.068 their insomnia is benefited are people

NOTE Confidence: 0.698039984285714

00:07:10.137 --> 00:07:12.860 who are already dependent on a a

NOTE Confidence: 0.698039984285714

00:07:12.860 --> 00:07:14.900 cannabis and therefore if they stop

NOTE Confidence: 0.698039984285714

00:07:14.900 --> 00:07:17.237 cannabis they can't sleep for example.

NOTE Confidence: 0.698039984285714

00:07:17.240 --> 00:07:19.186 And then they find that they taking

NOTE Confidence: 0.698039984285714

00:07:19.186 --> 00:07:20.759 the cannabis does benefit them.

NOTE Confidence: 0.698039984285714

00:07:20.760 --> 00:07:22.905 So it's difficult to disentangle

NOTE Confidence: 0.698039984285714

00:07:22.905 --> 00:07:25.494 whether you're taking or people are

NOTE Confidence: 0.698039984285714

00:07:25.494 --> 00:07:27.708 taking the cannabis for a genuine

NOTE Confidence: 0.698039984285714

00:07:27.708 --> 00:07:31.700 effect or I an effect to relieve

NOTE Confidence: 0.698039984285714

00:07:31.700 --> 00:07:34.480 withdrawal which of course is genuine.

NOTE Confidence: 0.698039984285714

00:07:34.480 --> 00:07:38.435 Also they in our in our department

NOTE Confidence: 0.698039984285714

00:07:38.440 --> 00:07:41.710 Paul Morrison in particular and Phil

NOTE Confidence: 0.698039984285714

00:07:41.710 --> 00:07:46.175 McGuire has added a large doses of  
NOTE Confidence: 0.698039984285714

00:07:46.175 --> 00:07:50.324 oral CBD to the treatment of people  
NOTE Confidence: 0.698039984285714

00:07:50.324 --> 00:07:52.648 with chronic schizophrenia and who  
NOTE Confidence: 0.698039984285714

00:07:52.648 --> 00:07:54.468 were already on antipsychotics and  
NOTE Confidence: 0.698039984285714

00:07:54.468 --> 00:07:57.312 they found a modest improvement  
NOTE Confidence: 0.698039984285714

00:07:57.312 --> 00:08:00.870 on this in this not all studies  
NOTE Confidence: 0.698039984285714

00:08:00.870 --> 00:08:02.590 they've been several negative  
NOTE Confidence: 0.698039984285714

00:08:02.590 --> 00:08:05.125 studies including one from Yale I.  
NOTE Confidence: 0.698039984285714

00:08:05.125 --> 00:08:07.555 So it's a little unclear whether  
NOTE Confidence: 0.688891613076923

00:08:09.880 --> 00:08:11.068 this the what the status is  
NOTE Confidence: 0.688891613076923

00:08:11.068 --> 00:08:12.480 and even if there is an effect.  
NOTE Confidence: 0.688891613076923

00:08:12.480 --> 00:08:15.238 Is that due to the effect of  
NOTE Confidence: 0.688891613076923

00:08:15.238 --> 00:08:16.994 this the the pharmacogenetic  
NOTE Confidence: 0.688891613076923

00:08:16.994 --> 00:08:19.080 pharmacological effect of the CBD?  
NOTE Confidence: 0.688891613076923

00:08:19.080 --> 00:08:22.062 Or is it due to some interference  
NOTE Confidence: 0.688891613076923

00:08:22.062 --> 00:08:24.547 with the metabolism of the

NOTE Confidence: 0.688891613076923  
00:08:24.547 --> 00:08:26.795 antipsychotics resulting in higher,  
NOTE Confidence: 0.688891613076923  
00:08:26.800 --> 00:08:30.800 higher blood level of antipsychotics.  
NOTE Confidence: 0.688891613076923  
00:08:30.800 --> 00:08:32.240 The for  
NOTE Confidence: 0.859777012352941  
00:08:35.240 --> 00:08:37.382 really the the vast majority of  
NOTE Confidence: 0.859777012352941  
00:08:37.382 --> 00:08:39.613 research in cannabis use and mental  
NOTE Confidence: 0.859777012352941  
00:08:39.613 --> 00:08:41.438 health has been on psychosis,  
NOTE Confidence: 0.859777012352941  
00:08:41.440 --> 00:08:43.032 which I'll come to.  
NOTE Confidence: 0.859777012352941  
00:08:43.032 --> 00:08:45.022 But there are increasing numbers  
NOTE Confidence: 0.859777012352941  
00:08:45.022 --> 00:08:47.566 of studies looking at depression  
NOTE Confidence: 0.859777012352941  
00:08:47.566 --> 00:08:51.396 and anxiety and a suicide.  
NOTE Confidence: 0.859777012352941  
00:08:51.400 --> 00:08:55.628 And here is a meta analysis by a  
NOTE Confidence: 0.859777012352941  
00:08:55.628 --> 00:08:57.898 Gabriella Gobby from Montreal showing  
NOTE Confidence: 0.859777012352941  
00:08:57.898 --> 00:09:00.522 that in adolescence that the risk  
NOTE Confidence: 0.859777012352941  
00:09:00.522 --> 00:09:02.892 of depression is increased in people  
NOTE Confidence: 0.859777012352941  
00:09:02.892 --> 00:09:05.735 who are taking cannabis and so also  
NOTE Confidence: 0.859777012352941

00:09:05.735 --> 00:09:08.800 is the the the risk of of suicide.

NOTE Confidence: 0.859777012352941

00:09:08.800 --> 00:09:11.720 They didn't find an effect a

NOTE Confidence: 0.859777012352941

00:09:11.720 --> 00:09:14.340 an adverse effect for anxiety.

NOTE Confidence: 0.859777012352941

00:09:14.340 --> 00:09:17.741 So it's sort of paradoxical that lots

NOTE Confidence: 0.859777012352941

00:09:17.741 --> 00:09:20.908 of people are taking cannabis for to

NOTE Confidence: 0.859777012352941

00:09:20.908 --> 00:09:24.520 to get benefits of depression and anxiety.

NOTE Confidence: 0.859777012352941

00:09:24.520 --> 00:09:27.658 But what little evidence we have

NOTE Confidence: 0.859777012352941

00:09:27.658 --> 00:09:30.410 regarding these non psychotic conditions

NOTE Confidence: 0.859777012352941

00:09:30.410 --> 00:09:33.334 is that actually that actually

NOTE Confidence: 0.859777012352941

00:09:33.334 --> 00:09:36.369 using cannabis is associated with

NOTE Confidence: 0.859777012352941

00:09:36.369 --> 00:09:39.879 increased risk of these conditions.

NOTE Confidence: 0.859777012352941

00:09:39.880 --> 00:09:42.172 You all know that people can

NOTE Confidence: 0.859777012352941

00:09:42.172 --> 00:09:43.318 develop cannabis dependence.

NOTE Confidence: 0.859777012352941

00:09:43.320 --> 00:09:45.560 It used to be thought that about

NOTE Confidence: 0.859777012352941

00:09:45.560 --> 00:09:48.190 10% of people who were taking daily

NOTE Confidence: 0.859777012352941

00:09:48.190 --> 00:09:50.159 cannabis would become dependent on it.

NOTE Confidence: 0.859777012352941  
00:09:50.160 --> 00:09:52.715 But now with the increase in potency,  
NOTE Confidence: 0.859777012352941  
00:09:52.720 --> 00:09:54.345 there are suggestions that maybe  
NOTE Confidence: 0.859777012352941  
00:09:54.345 --> 00:09:58.160 up to 30% of people taking a daily  
NOTE Confidence: 0.859777012352941  
00:09:58.160 --> 00:10:01.000 cannabis may become a dependent.  
NOTE Confidence: 0.859777012352941  
00:10:01.000 --> 00:10:04.276 So obviously there's lots of control,  
NOTE Confidence: 0.859777012352941  
00:10:04.280 --> 00:10:06.954 there's craving, you don't have this problem.  
NOTE Confidence: 0.859777012352941  
00:10:06.960 --> 00:10:09.956 But in Europe and in the UK,  
NOTE Confidence: 0.859777012352941  
00:10:09.960 --> 00:10:12.040 nearly everybody smokes their  
NOTE Confidence: 0.859777012352941  
00:10:12.040 --> 00:10:13.732 cannabis a mixed with tobacco.  
NOTE Confidence: 0.859777012352941  
00:10:13.732 --> 00:10:15.197 You think they think it,  
NOTE Confidence: 0.859777012352941  
00:10:15.200 --> 00:10:18.000 it burns better with tobacco.  
NOTE Confidence: 0.859777012352941  
00:10:18.000 --> 00:10:19.516 So when people stop,  
NOTE Confidence: 0.859777012352941  
00:10:19.516 --> 00:10:21.411 they get withdrawal from the  
NOTE Confidence: 0.859777012352941  
00:10:21.411 --> 00:10:23.688 cannabis and they also get withdrawal  
NOTE Confidence: 0.859777012352941  
00:10:23.688 --> 00:10:25.518 from the tobacco of course,  
NOTE Confidence: 0.859777012352941

00:10:25.520 --> 00:10:28.355 which makes it more difficult to stop.  
NOTE Confidence: 0.859777012352941

00:10:28.360 --> 00:10:28.845 Whoops,  
NOTE Confidence: 0.859777012352941

00:10:28.845 --> 00:10:31.755 There's there's lots of evidence for  
NOTE Confidence: 0.859777012352941

00:10:31.755 --> 00:10:33.696 tolerance and that is withdrawal.  
NOTE Confidence: 0.859777012352941

00:10:33.696 --> 00:10:36.240 But this is not immediate because cannabis  
NOTE Confidence: 0.859777012352941

00:10:36.240 --> 00:10:39.280 can still be detected up for up to a month.  
NOTE Confidence: 0.859777012352941

00:10:39.280 --> 00:10:40.720 So I you know,  
NOTE Confidence: 0.859777012352941

00:10:40.720 --> 00:10:43.759 if if any of us go out and  
NOTE Confidence: 0.859777012352941

00:10:43.760 --> 00:10:46.080 get drunk within 24 hours,  
NOTE Confidence: 0.859777012352941

00:10:46.080 --> 00:10:47.865 most of the alcohol is as is  
NOTE Confidence: 0.859777012352941

00:10:47.865 --> 00:10:49.160 out of our system.  
NOTE Confidence: 0.859777012352941

00:10:49.160 --> 00:10:51.800 But if we go out and take a lot of cannabis,  
NOTE Confidence: 0.859777012352941

00:10:51.800 --> 00:10:53.800 it will still be detected for up to a month.  
NOTE Confidence: 0.859777012352941

00:10:53.800 --> 00:10:56.032 So the withdrawal symptoms tend not  
NOTE Confidence: 0.859777012352941

00:10:56.032 --> 00:10:58.880 to occur until a four or five days.  
NOTE Confidence: 0.896850375

00:11:01.200 --> 00:11:03.040 I guess you all know that, say,



NOTE Confidence: 0.896850375  
00:11:03.040 --> 00:11:05.240 the main ingredients of cannabis  
NOTE Confidence: 0.896850375  
00:11:05.240 --> 00:11:06.260 are tetrahydrocannabinol.  
NOTE Confidence: 0.896850375  
00:11:06.260 --> 00:11:09.160 THC, which is a partial  
NOTE Confidence: 0.896850375  
00:11:09.160 --> 00:11:11.480 agonist at CB1 receptor,  
NOTE Confidence: 0.896850375  
00:11:11.480 --> 00:11:13.496 causes euphoria and enjoyment,  
NOTE Confidence: 0.896850375  
00:11:13.496 --> 00:11:16.520 which is why people take it.  
NOTE Confidence: 0.896850375  
00:11:16.520 --> 00:11:18.480 If you if you try,  
NOTE Confidence: 0.896850375  
00:11:18.480 --> 00:11:20.412 you try and talk to somebody who's  
NOTE Confidence: 0.896850375  
00:11:20.412 --> 00:11:22.539 don't you know that they they they  
NOTE Confidence: 0.896850375  
00:11:22.539 --> 00:11:24.399 may think they're getting new sick,  
NOTE Confidence: 0.896850375  
00:11:24.400 --> 00:11:25.975 new new insights into the  
NOTE Confidence: 0.896850375  
00:11:25.975 --> 00:11:27.235 secrets of the universe,  
NOTE Confidence: 0.896850375  
00:11:27.240 --> 00:11:30.720 but they can't often remember  
NOTE Confidence: 0.896850375  
00:11:30.720 --> 00:11:32.025 what question you've asked them  
NOTE Confidence: 0.896850375  
00:11:32.025 --> 00:11:33.330 or they don't remember the  
NOTE Confidence: 0.896850375

00:11:33.382 --> 00:11:34.708 beginning of their reply when they  
NOTE Confidence: 0.896850375

00:11:34.708 --> 00:11:36.358 get to the end of the sentence.  
NOTE Confidence: 0.896850375

00:11:36.360 --> 00:11:39.384 So attention and memory can be impaired  
NOTE Confidence: 0.896850375

00:11:39.384 --> 00:11:41.160 particularly with higher doses.  
NOTE Confidence: 0.896850375

00:11:41.160 --> 00:11:43.575 And we and I guess Suttle and  
NOTE Confidence: 0.896850375

00:11:43.575 --> 00:11:45.064 colleagues are very familiar with  
NOTE Confidence: 0.896850375

00:11:45.064 --> 00:11:47.281 the fact it's very easy to induce  
NOTE Confidence: 0.896850375

00:11:47.281 --> 00:11:49.320 paranoia with THC in our hands.  
NOTE Confidence: 0.896850375

00:11:49.320 --> 00:11:52.128 It's actually easier to induce paranoia  
NOTE Confidence: 0.896850375

00:11:52.128 --> 00:11:55.758 with THC than it is with amphetamine,  
NOTE Confidence: 0.896850375

00:11:55.760 --> 00:11:58.154 but then that's with high doses obviously.  
NOTE Confidence: 0.896850375

00:11:58.160 --> 00:12:00.584 I CBD on the other hand  
NOTE Confidence: 0.896850375

00:12:00.584 --> 00:12:01.796 is not hallucinogenic.  
NOTE Confidence: 0.896850375

00:12:01.800 --> 00:12:03.575 The mechanism of action is  
NOTE Confidence: 0.896850375

00:12:03.575 --> 00:12:04.640 still very contentious.  
NOTE Confidence: 0.896850375

00:12:04.640 --> 00:12:06.838 Some people say it's an inverse agonist.

NOTE Confidence: 0.896850375

00:12:06.840 --> 00:12:09.897 Other people say it's got a a range

NOTE Confidence: 0.896850375

00:12:09.897 --> 00:12:14.620 of of of indirect indirect effects on

NOTE Confidence: 0.896850375

00:12:14.620 --> 00:12:18.520 the the endogenous cannabinoid system.

NOTE Confidence: 0.896850375

00:12:18.520 --> 00:12:20.720 It has anxiety relieving properties

NOTE Confidence: 0.896850375

00:12:20.720 --> 00:12:22.920 and there's been some question

NOTE Confidence: 0.896850375

00:12:22.987 --> 00:12:24.943 as to whether it can antagonize

NOTE Confidence: 0.896850375

00:12:24.943 --> 00:12:26.720 THC in very large doses.

NOTE Confidence: 0.896850375

00:12:26.720 --> 00:12:30.350 So we were quite enthusiastic about

NOTE Confidence: 0.896850375

00:12:30.350 --> 00:12:35.286 this last last piece of information

NOTE Confidence: 0.896850375

00:12:35.286 --> 00:12:38.993 that if we gave huge doses of CBD we

NOTE Confidence: 0.896850375

00:12:38.993 --> 00:12:42.200 could prevent some of the effects of THC.

NOTE Confidence: 0.896850375

00:12:42.200 --> 00:12:44.462 But in fact when we actually

NOTE Confidence: 0.896850375

00:12:44.462 --> 00:12:46.360 gave modest doses of CBD,

NOTE Confidence: 0.896850375

00:12:46.360 --> 00:12:48.360 the sort the sort of doses that you

NOTE Confidence: 0.896850375

00:12:48.360 --> 00:12:50.360 would get in old fashioned cannabis,

NOTE Confidence: 0.896850375

00:12:50.360 --> 00:12:51.760 then it had no effect.  
NOTE Confidence: 0.896850375

00:12:51.760 --> 00:12:56.113 So it does seem that that for  
NOTE Confidence: 0.896850375

00:12:56.113 --> 00:12:57.878 all practical points of view  
NOTE Confidence: 0.703186628571429

00:12:59.960 --> 00:13:03.040 sort of real world amounts of CBD,  
NOTE Confidence: 0.703186628571429

00:13:03.040 --> 00:13:04.984 we don't ameliorate the  
NOTE Confidence: 0.703186628571429

00:13:04.984 --> 00:13:07.073 effect of THC and cannabis.  
NOTE Confidence: 0.703186628571429

00:13:07.073 --> 00:13:10.114 So the crucial thing is the is the  
NOTE Confidence: 0.703186628571429

00:13:10.114 --> 00:13:13.018 potency of the other the the the potency  
NOTE Confidence: 0.703186628571429

00:13:13.018 --> 00:13:16.000 of the of the cannabis of of THC.  
NOTE Confidence: 0.703186628571429

00:13:16.000 --> 00:13:16.820 And you know, yeah,  
NOTE Confidence: 0.703186628571429

00:13:16.820 --> 00:13:18.511 I'm sure you'll, you'll know this.  
NOTE Confidence: 0.703186628571429

00:13:18.511 --> 00:13:21.010 This is the percentage of THC and  
NOTE Confidence: 0.703186628571429

00:13:21.080 --> 00:13:24.440 CBD and cannabis samples in the USA  
NOTE Confidence: 0.703186628571429

00:13:24.440 --> 00:13:27.480 from 1995 and the red is THC and  
NOTE Confidence: 0.703186628571429

00:13:27.480 --> 00:13:29.669 you can see the steady increase  
NOTE Confidence: 0.703186628571429

00:13:29.669 --> 00:13:33.612 from about 3 or 4% up to about 15%.

NOTE Confidence: 0.703186628571429  
00:13:33.612 --> 00:13:36.994 This is a smoked cannabis and you  
NOTE Confidence: 0.703186628571429  
00:13:36.994 --> 00:13:40.018 can see also that CBD has tended  
NOTE Confidence: 0.703186628571429  
00:13:40.018 --> 00:13:43.332 to be declining much the same as  
NOTE Confidence: 0.703186628571429  
00:13:43.332 --> 00:13:47.160 been happening in in in in the UK.  
NOTE Confidence: 0.703186628571429  
00:13:47.160 --> 00:13:53.016 This is say from I study of in  
NOTE Confidence: 0.703186628571429  
00:13:53.016 --> 00:13:55.700 the Netherlands and this is just  
NOTE Confidence: 0.703186628571429  
00:13:55.700 --> 00:13:57.280 showing the relationship between  
NOTE Confidence: 0.703186628571429  
00:13:57.280 --> 00:13:59.784 a potency and dependence.  
NOTE Confidence: 0.703186628571429  
00:13:59.784 --> 00:14:03.434 So the the red is the potency of  
NOTE Confidence: 0.703186628571429  
00:14:03.434 --> 00:14:06.422 THC and you can see that from  
NOTE Confidence: 0.703186628571429  
00:14:06.422 --> 00:14:11.828 two 2000 it was about 8% THC and  
NOTE Confidence: 0.703186628571429  
00:14:11.828 --> 00:14:14.696 it went up to about 20% and then  
NOTE Confidence: 0.703186628571429  
00:14:14.696 --> 00:14:16.952 slightly came down to about 15%.  
NOTE Confidence: 0.703186628571429  
00:14:16.952 --> 00:14:19.136 And you can see that there was  
NOTE Confidence: 0.703186628571429  
00:14:19.136 --> 00:14:21.480 a lag and then people coming to  
NOTE Confidence: 0.703186628571429

00:14:21.480 --> 00:14:23.835 treatment that came after a few years  
NOTE Confidence: 0.703186628571429

00:14:23.835 --> 00:14:26.115 later and you can see that the the  
NOTE Confidence: 0.703186628571429

00:14:26.186 --> 00:14:28.832 people number of people coming into  
NOTE Confidence: 0.703186628571429

00:14:28.832 --> 00:14:30.596 treatment steadily increased and  
NOTE Confidence: 0.703186628571429

00:14:30.600 --> 00:14:35.080 then a few years after the peak of  
NOTE Confidence: 0.703186628571429

00:14:35.080 --> 00:14:38.516 a potency then as the potency fell,  
NOTE Confidence: 0.703186628571429

00:14:38.520 --> 00:14:40.165 so did the number of people coming  
NOTE Confidence: 0.703186628571429

00:14:40.165 --> 00:14:40.635 to treatment.  
NOTE Confidence: 0.852039692

00:14:43.120 --> 00:14:45.744 So apart from psychosis,  
NOTE Confidence: 0.852039692

00:14:45.744 --> 00:14:49.680 there's the question of cognitive impairment.  
NOTE Confidence: 0.852039692

00:14:49.680 --> 00:14:53.124 And the most spectacular evidence from  
NOTE Confidence: 0.852039692

00:14:53.124 --> 00:14:57.380 this came from the Dunedin Study that  
NOTE Confidence: 0.852039692

00:14:57.380 --> 00:15:03.240 that between the ages of of 16 and 38,  
NOTE Confidence: 0.852039692

00:15:03.240 --> 00:15:04.732 regular cannabis users lost  
NOTE Confidence: 0.852039692

00:15:04.732 --> 00:15:06.597 about 8 points in IQ.  
NOTE Confidence: 0.852039692

00:15:06.600 --> 00:15:09.276 And nobody has ever replicated this.

NOTE Confidence: 0.852039692

00:15:09.280 --> 00:15:11.926 And they I I I personally

NOTE Confidence: 0.852039692

00:15:11.926 --> 00:15:14.560 find it difficult to believe,

NOTE Confidence: 0.852039692

00:15:14.560 --> 00:15:18.502 But certainly while people are I intoxicated,

NOTE Confidence: 0.852039692

00:15:18.502 --> 00:15:19.644 they're cognitive,

NOTE Confidence: 0.852039692

00:15:19.644 --> 00:15:21.357 they're cognitively impaired,

NOTE Confidence: 0.852039692

00:15:21.360 --> 00:15:24.174 and we don't yet know whether this

NOTE Confidence: 0.852039692

00:15:24.174 --> 00:15:26.678 totally recovers when they stop or not.

NOTE Confidence: 0.852039692

00:15:26.680 --> 00:15:29.968 The increased risk of violence has not had

NOTE Confidence: 0.852039692

00:15:29.968 --> 00:15:33.838 been as much attention as I think it merits.

NOTE Confidence: 0.852039692

00:15:33.840 --> 00:15:37.288 I in the UK there is a national

NOTE Confidence: 0.852039692

00:15:37.288 --> 00:15:41.327 survey of all the people who I commit

NOTE Confidence: 0.852039692

00:15:41.327 --> 00:15:45.620 murder and a of those people with

NOTE Confidence: 0.852039692

00:15:45.620 --> 00:15:47.396 schizophrenia who commit murder,

NOTE Confidence: 0.852039692

00:15:47.400 --> 00:15:52.452 about half a are a abusing alcohol and

NOTE Confidence: 0.852039692

00:15:52.452 --> 00:15:55.116 just under that are abusing cannabis.

NOTE Confidence: 0.852039692

00:15:55.120 --> 00:15:57.616 So it seems that cannabis and  
NOTE Confidence: 0.852039692

00:15:57.616 --> 00:15:59.280 alcohol are equally irrelevant  
NOTE Confidence: 0.852039692

00:15:59.349 --> 00:16:01.357 to people with schizophrenia.  
NOTE Confidence: 0.852039692

00:16:01.360 --> 00:16:04.840 Who I who commit murder oops.  
NOTE Confidence: 0.852039692

00:16:04.840 --> 00:16:07.648 I can see who my cat has appeared  
NOTE Confidence: 0.852039692

00:16:07.648 --> 00:16:10.060 behind if they this is a strategy  
NOTE Confidence: 0.852039692

00:16:10.060 --> 00:16:12.920 I I I use to keep you awake  
NOTE Confidence: 0.7691905

00:16:16.520 --> 00:16:21.432 anyway so so I I think there's a  
NOTE Confidence: 0.7691905

00:16:21.432 --> 00:16:23.618 creeping evidence that a cannabis  
NOTE Confidence: 0.7691905

00:16:23.618 --> 00:16:26.312 does does increase risk of violence  
NOTE Confidence: 0.7691905

00:16:26.312 --> 00:16:29.598 and we we are just completing a  
NOTE Confidence: 0.7691905

00:16:29.598 --> 00:16:31.665 meta analysis on this on on this  
NOTE Confidence: 0.7691905

00:16:31.665 --> 00:16:33.432 issue it seems to be pretty clear  
NOTE Confidence: 0.7691905

00:16:33.432 --> 00:16:35.392 that it it does have an effect  
NOTE Confidence: 0.88332861

00:16:37.640 --> 00:16:42.480 so cannabis and psychosis the first  
NOTE Confidence: 0.88332861

00:16:42.480 --> 00:16:47.000 study a really to adopt A systematic



NOTE Confidence: 0.88332861

00:16:47.000 --> 00:16:49.800 approach to this is an Indian study

NOTE Confidence: 0.88332861

00:16:49.800 --> 00:16:53.032 and was back in the 1890s and the

NOTE Confidence: 0.88332861

00:16:53.032 --> 00:16:55.811 the British Raj that this this

NOTE Confidence: 0.88332861

00:16:55.811 --> 00:16:58.986 was colonial times had built a big

NOTE Confidence: 0.88332861

00:16:58.986 --> 00:17:01.464 mental hospitals around some of the

NOTE Confidence: 0.88332861

00:17:01.464 --> 00:17:04.077 major cities and they were very

NOTE Confidence: 0.88332861

00:17:04.077 --> 00:17:06.136 concerned that these asylums seem

NOTE Confidence: 0.88332861

00:17:06.136 --> 00:17:08.852 to be filling up with people who

NOTE Confidence: 0.88332861

00:17:08.852 --> 00:17:13.100 were a with cannabis users or AI.

NOTE Confidence: 0.88332861

00:17:13.100 --> 00:17:18.680 So I they they introduced a a review

NOTE Confidence: 0.88332861

00:17:18.680 --> 00:17:22.440 and there's a it's actually a very

NOTE Confidence: 0.88332861

00:17:22.440 --> 00:17:27.336 thorough review with thousands of pages.

NOTE Confidence: 0.88332861

00:17:27.336 --> 00:17:30.946 And they the here is here is just

NOTE Confidence: 0.88332861

00:17:30.946 --> 00:17:34.174 a quote from one of the the the the

NOTE Confidence: 0.88332861

00:17:34.174 --> 00:17:37.378 the Indian doctors who said the

NOTE Confidence: 0.88332861

00:17:37.378 --> 00:17:40.580 majority of habitual users of a  
NOTE Confidence: 0.88332861

00:17:40.580 --> 00:17:42.620 cannabis become permanently insane  
NOTE Confidence: 0.88332861

00:17:42.620 --> 00:17:45.520 never to be confused or cured.  
NOTE Confidence: 0.88332861

00:17:45.520 --> 00:17:46.891 Then somewhat contradictory,  
NOTE Confidence: 0.88332861

00:17:46.891 --> 00:17:49.633 he says somebody can't come temporarily  
NOTE Confidence: 0.88332861

00:17:49.633 --> 00:17:52.599 so and become sane on breaking off the  
NOTE Confidence: 0.88332861

00:17:52.599 --> 00:17:55.313 habit but symptoms are apartment to be  
NOTE Confidence: 0.88332861

00:17:55.313 --> 00:17:57.318 reintroduced and resuming the habit.  
NOTE Confidence: 0.88332861

00:17:57.320 --> 00:18:00.960 Now I I several knows this say  
NOTE Confidence: 0.88332861

00:18:00.960 --> 00:18:02.232 the British rash.  
NOTE Confidence: 0.88332861

00:18:02.232 --> 00:18:05.200 I was quite smart in some ways.  
NOTE Confidence: 0.88332861

00:18:05.200 --> 00:18:07.192 So this this committee that they  
NOTE Confidence: 0.88332861

00:18:07.192 --> 00:18:08.520 had the set up,  
NOTE Confidence: 0.88332861

00:18:08.520 --> 00:18:11.791 had Indian psychiatrists on it and  
NOTE Confidence: 0.88332861

00:18:11.791 --> 00:18:13.746 it also had British administrators  
NOTE Confidence: 0.88332861

00:18:13.746 --> 00:18:16.152 and people from the tax office

NOTE Confidence: 0.88332861

00:18:16.152 --> 00:18:18.474 because they were worried that the,

NOTE Confidence: 0.88332861

00:18:18.480 --> 00:18:18.791 the,

NOTE Confidence: 0.88332861

00:18:18.791 --> 00:18:20.968 the cannabis was legal at the time

NOTE Confidence: 0.88332861

00:18:20.968 --> 00:18:23.317 and the the the the the colonial,

NOTE Confidence: 0.88332861

00:18:23.320 --> 00:18:24.792 the colonial administration made

NOTE Confidence: 0.88332861

00:18:24.792 --> 00:18:28.008 quite a lot of money out of taxing cannabis.

NOTE Confidence: 0.88332861

00:18:28.008 --> 00:18:30.518 So they arranged that there would be

NOTE Confidence: 0.88332861

00:18:30.518 --> 00:18:32.858 more administrators than there were a

NOTE Confidence: 0.88332861

00:18:32.858 --> 00:18:35.118 psychiatrist and doctors on the committee.

NOTE Confidence: 0.88332861

00:18:35.120 --> 00:18:36.560 So the committee eventually

NOTE Confidence: 0.88332861

00:18:36.560 --> 00:18:38.360 concluded that it should stay,

NOTE Confidence: 0.88332861

00:18:38.360 --> 00:18:41.755 it should stay legal because of the,

NOTE Confidence: 0.88332861

00:18:41.760 --> 00:18:44.168 I think probably because of the tax income.

NOTE Confidence: 0.88332861

00:18:44.168 --> 00:18:46.400 And this is this is very reminiscent I think,

NOTE Confidence: 0.88332861

00:18:46.400 --> 00:18:48.800 of some of the discussions that you've been

NOTE Confidence: 0.88332861

00:18:48.800 --> 00:18:51.160 having in different states than the USA,  
NOTE Confidence: 0.88332861

00:18:51.160 --> 00:18:52.705 where politicians have been very  
NOTE Confidence: 0.88332861

00:18:52.705 --> 00:18:54.673 keen on the idea of legalizing  
NOTE Confidence: 0.88332861

00:18:54.673 --> 00:18:56.815 cannabis because of the amount of  
NOTE Confidence: 0.88332861

00:18:56.815 --> 00:18:59.077 money that they would get in taxes.  
NOTE Confidence: 0.88332861

00:18:59.080 --> 00:19:02.596 But the the the British colonialists  
NOTE Confidence: 0.88332861

00:19:02.596 --> 00:19:07.000 thought of this 130 years ago.  
NOTE Confidence: 0.88332861

00:19:07.000 --> 00:19:09.905 So there are now three meta analysis  
NOTE Confidence: 0.88332861

00:19:09.905 --> 00:19:13.194 which point to cannabis use as a  
NOTE Confidence: 0.88332861

00:19:13.194 --> 00:19:15.639 risk factor for psychotic disorders.  
NOTE Confidence: 0.88332861

00:19:15.640 --> 00:19:19.320 This is a summary produced by Evangelis  
NOTE Confidence: 0.88332861

00:19:19.320 --> 00:19:22.920 Vasos and each of these studies or excuse me,  
NOTE Confidence: 0.88332861

00:19:22.920 --> 00:19:27.085 each of these lines is a different  
NOTE Confidence: 0.88332861

00:19:27.085 --> 00:19:29.108 cannabis use and psychosis study.  
NOTE Confidence: 0.88332861

00:19:29.108 --> 00:19:31.693 Along the bottom is the amount of  
NOTE Confidence: 0.88332861

00:19:31.693 --> 00:19:33.628 cannabis people are taking and

NOTE Confidence: 0.88332861

00:19:33.628 --> 00:19:36.624 then the vertical axis is the odds

NOTE Confidence: 0.88332861

00:19:36.624 --> 00:19:38.366 ratio for for psychosis.

NOTE Confidence: 0.88332861

00:19:38.366 --> 00:19:42.476 And you can see that at the at the

NOTE Confidence: 0.88332861

00:19:42.476 --> 00:19:45.324 right hand side the 20% people who

NOTE Confidence: 0.88332861

00:19:45.324 --> 00:19:47.948 had smoked the most cannabis had a

NOTE Confidence: 0.88332861

00:19:47.948 --> 00:19:51.496 greater risk of psychosis than the 20 people,

NOTE Confidence: 0.88332861

00:19:51.496 --> 00:19:54.450 20% of people who had smoked the least

NOTE Confidence: 0.88332861

00:19:54.450 --> 00:19:57.040 cannabis or had spoke no cannabis at all.

NOTE Confidence: 0.88332861

00:19:57.040 --> 00:19:59.105 But you'll notice that there's

NOTE Confidence: 0.88332861

00:19:59.105 --> 00:20:02.596 quite a a a spread that in on on how

NOTE Confidence: 0.88332861

00:20:02.596 --> 00:20:04.920 high the risk is in heavy users.

NOTE Confidence: 0.88332861

00:20:04.920 --> 00:20:07.600 And if you look at the grey line at the

NOTE Confidence: 0.88332861

00:20:07.677 --> 00:20:11.840 bottom, that is TN in 1990 in the USA.

NOTE Confidence: 0.845243906875

00:20:11.840 --> 00:20:14.176 And at that time of course cannabis was

NOTE Confidence: 0.845243906875

00:20:14.176 --> 00:20:16.197 still quite a was not potent at all.

NOTE Confidence: 0.845243906875

00:20:16.200 --> 00:20:18.279 It was quite weak with low low.  
NOTE Confidence: 0.845243906875

00:20:18.280 --> 00:20:20.872 No percentage of THC, but if you look  
NOTE Confidence: 0.845243906875

00:20:20.872 --> 00:20:23.718 at say if you look at say the red,  
NOTE Confidence: 0.845243906875

00:20:23.720 --> 00:20:28.670 that's South London in 2000 and 2011.  
NOTE Confidence: 0.845243906875

00:20:28.670 --> 00:20:32.720 So and the odds ratio goes up to about 7:00.  
NOTE Confidence: 0.845243906875

00:20:32.720 --> 00:20:34.920 But overall it's the pooled  
NOTE Confidence: 0.845243906875

00:20:34.920 --> 00:20:37.120 odds ratio was about four.  
NOTE Confidence: 0.847551031818182

00:20:40.000 --> 00:20:42.125 Now of course there's been  
NOTE Confidence: 0.847551031818182

00:20:42.125 --> 00:20:44.600 a lot of argument about it.  
NOTE Confidence: 0.847551031818182

00:20:44.600 --> 00:20:46.685 Could this be because people  
NOTE Confidence: 0.847551031818182

00:20:46.685 --> 00:20:48.353 are taking other drugs,  
NOTE Confidence: 0.847551031818182

00:20:48.360 --> 00:20:50.952 amphetamines and and studies  
NOTE Confidence: 0.847551031818182

00:20:50.952 --> 00:20:54.192 have tried to exclude this?  
NOTE Confidence: 0.847551031818182

00:20:54.200 --> 00:20:58.036 I could also be that people were  
NOTE Confidence: 0.847551031818182

00:20:58.036 --> 00:21:00.766 rather strange and and we're taking  
NOTE Confidence: 0.847551031818182

00:21:00.766 --> 00:21:03.300 the the cannabis to try and prevent

NOTE Confidence: 0.847551031818182

00:21:03.378 --> 00:21:06.054 them to try and prevent psychiatric

NOTE Confidence: 0.847551031818182

00:21:06.054 --> 00:21:08.317 service symptoms and they've been

NOTE Confidence: 0.847551031818182

00:21:08.317 --> 00:21:10.337 studies where they excluded people

NOTE Confidence: 0.847551031818182

00:21:10.337 --> 00:21:12.880 in the prodrome or excluded people

NOTE Confidence: 0.847551031818182

00:21:12.880 --> 00:21:15.118 who were abnormalized children and

NOTE Confidence: 0.847551031818182

00:21:15.118 --> 00:21:17.506 they they've still had still shown

NOTE Confidence: 0.847551031818182

00:21:17.506 --> 00:21:20.093 an effect for for for cannabis on

NOTE Confidence: 0.847551031818182

00:21:20.093 --> 00:21:24.800 on on risk the the the the major I

NOTE Confidence: 0.847551031818182

00:21:24.800 --> 00:21:28.120 mean one of one of the the the the

NOTE Confidence: 0.847551031818182

00:21:28.120 --> 00:21:30.328 the things which tends to convince

NOTE Confidence: 0.847551031818182

00:21:30.328 --> 00:21:34.136 people is say the evidence of the

NOTE Confidence: 0.847551031818182

00:21:34.136 --> 00:21:36.543 effect of experimental experimentally

NOTE Confidence: 0.847551031818182

00:21:36.543 --> 00:21:39.607 giving THC and and you've done a lot

NOTE Confidence: 0.847551031818182

00:21:39.607 --> 00:21:42.072 of this work in the early days in

NOTE Confidence: 0.847551031818182

00:21:42.072 --> 00:21:44.220 Yale we've done a sort of variant

NOTE Confidence: 0.847551031818182

00:21:44.220 --> 00:21:46.656 on the kids that kind of studies  
NOTE Confidence: 0.847551031818182

00:21:46.656 --> 00:21:48.633 that settle and colleagues have  
NOTE Confidence: 0.847551031818182

00:21:48.633 --> 00:21:51.235 been doing this here we have 121  
NOTE Confidence: 0.847551031818182

00:21:51.235 --> 00:21:53.376 people chosen because they were a  
NOTE Confidence: 0.847551031818182

00:21:53.376 --> 00:21:55.608 bit \*\*\*\*\* they were \*\*\*\*\* tippie  
NOTE Confidence: 0.847551031818182

00:21:55.608 --> 00:21:58.818 and so they they we we sent out lots  
NOTE Confidence: 0.847551031818182

00:21:58.818 --> 00:22:01.148 of lots of questionnaires on on the  
NOTE Confidence: 0.847551031818182

00:22:01.148 --> 00:22:03.086 Internet and then we selected people  
NOTE Confidence: 0.847551031818182

00:22:03.086 --> 00:22:05.851 who scored highly on on \*\*\*\*\* tippy  
NOTE Confidence: 0.847551031818182

00:22:05.851 --> 00:22:09.997 and they we're really trying to  
NOTE Confidence: 0.847551031818182

00:22:10.000 --> 00:22:12.195 select people who are particularly  
NOTE Confidence: 0.847551031818182

00:22:12.195 --> 00:22:15.035 likely to have a a a psychotic  
NOTE Confidence: 0.847551031818182

00:22:15.035 --> 00:22:18.360 reaction to to to to to cannabis.  
NOTE Confidence: 0.847551031818182

00:22:18.360 --> 00:22:20.887 So they they they they they either  
NOTE Confidence: 0.847551031818182

00:22:20.887 --> 00:22:23.699 get THC or placebo and they get  
NOTE Confidence: 0.847551031818182

00:22:23.699 --> 00:22:26.159 they go into a virtual reality



NOTE Confidence: 0.853043740666667  
00:22:28.520 --> 00:22:31.976 set up and what they see is like going  
NOTE Confidence: 0.853043740666667  
00:22:31.976 --> 00:22:35.317 into the London Underground or Subway  
NOTE Confidence: 0.853043740666667  
00:22:35.320 --> 00:22:37.792 and they and then they see the train  
NOTE Confidence: 0.853043740666667  
00:22:37.792 --> 00:22:40.297 comes in and the doors open and they  
NOTE Confidence: 0.853043740666667  
00:22:40.297 --> 00:22:43.127 look in and they go in and there are  
NOTE Confidence: 0.853043740666667  
00:22:43.127 --> 00:22:45.960 various human like figures there.  
NOTE Confidence: 0.853043740666667  
00:22:45.960 --> 00:22:48.480 And interestingly normal people,  
NOTE Confidence: 0.853043740666667  
00:22:48.480 --> 00:22:50.745 well non patients differ very  
NOTE Confidence: 0.853043740666667  
00:22:50.745 --> 00:22:52.557 strikingly in the reaction.  
NOTE Confidence: 0.853043740666667  
00:22:52.560 --> 00:22:56.436 For example you can think of a normal  
NOTE Confidence: 0.853043740666667  
00:22:56.436 --> 00:22:58.345 individual who saw this man here  
NOTE Confidence: 0.853043740666667  
00:22:58.345 --> 00:23:00.710 and he looks up and she says oh he  
NOTE Confidence: 0.853043740666667  
00:23:00.710 --> 00:23:02.784 looked at me as if I was attractive.  
NOTE Confidence: 0.853043740666667  
00:23:02.784 --> 00:23:05.312 Maybe he fancies me And then  
NOTE Confidence: 0.853043740666667  
00:23:05.312 --> 00:23:06.581 another lady said, oh,  
NOTE Confidence: 0.853043740666667

00:23:06.581 --> 00:23:09.240 this man looked at me in a very hostile way.  
NOTE Confidence: 0.853043740666667

00:23:09.240 --> 00:23:11.910 I I don't know what he's  
NOTE Confidence: 0.853043740666667

00:23:11.910 --> 00:23:13.880 got against people like me.  
NOTE Confidence: 0.853043740666667

00:23:13.880 --> 00:23:17.086 So we then compared the people who had had  
NOTE Confidence: 0.853043740666667

00:23:17.086 --> 00:23:20.160 the THC but the people who had the placebo.  
NOTE Confidence: 0.853043740666667

00:23:20.160 --> 00:23:22.608 And you can see that they've  
NOTE Confidence: 0.853043740666667

00:23:22.608 --> 00:23:25.110 the mean scores on a store score  
NOTE Confidence: 0.853043740666667

00:23:25.110 --> 00:23:26.560 called the called the Green  
NOTE Confidence: 0.689710401363636

00:23:28.800 --> 00:23:31.894 a paranoia scale. The the the people  
NOTE Confidence: 0.689710401363636

00:23:31.894 --> 00:23:35.386 who had the THC were twice as likely  
NOTE Confidence: 0.689710401363636

00:23:35.386 --> 00:23:38.591 to or had a paranoia score a twice  
NOTE Confidence: 0.689710401363636

00:23:38.591 --> 00:23:41.719 that of the people on on the placebo.  
NOTE Confidence: 0.689710401363636

00:23:41.720 --> 00:23:43.239 Now of course you think to yourself,  
NOTE Confidence: 0.689710401363636

00:23:43.240 --> 00:23:46.447 why would people pay good money in order to  
NOTE Confidence: 0.689710401363636

00:23:46.447 --> 00:23:48.960 get a drug which will make them paranoid.  
NOTE Confidence: 0.689710401363636

00:23:48.960 --> 00:23:51.192 But of course this is a high dose

NOTE Confidence: 0.689710401363636

00:23:51.192 --> 00:23:52.650 intravenously and it's also it's

NOTE Confidence: 0.689710401363636

00:23:52.650 --> 00:23:54.603 not that this is not spoken cannabis

NOTE Confidence: 0.689710401363636

00:23:54.665 --> 00:23:56.639 with your mates on a Saturday night.

NOTE Confidence: 0.689710401363636

00:23:56.640 --> 00:24:00.608 This is in in in a medical set up where

NOTE Confidence: 0.689710401363636

00:24:00.608 --> 00:24:03.269 you know you're being you're you're

NOTE Confidence: 0.689710401363636

00:24:03.269 --> 00:24:09.288 being watched or monitored rather the

NOTE Confidence: 0.689710401363636

00:24:09.288 --> 00:24:15.040 I think the evidence that this that

NOTE Confidence: 0.689710401363636

00:24:15.040 --> 00:24:17.900 that I'm sorry I should have said

NOTE Confidence: 0.689710401363636

00:24:17.900 --> 00:24:20.430 that amongst these studies of cannabis

NOTE Confidence: 0.689710401363636

00:24:20.430 --> 00:24:22.752 there and risk of psychosis there are

NOTE Confidence: 0.689710401363636

00:24:22.752 --> 00:24:24.982 there are a number of prospective

NOTE Confidence: 0.689710401363636

00:24:24.982 --> 00:24:29.420 studies on the same way that that we

NOTE Confidence: 0.689710401363636

00:24:29.420 --> 00:24:32.540 discovered that tobacco use increases

NOTE Confidence: 0.689710401363636

00:24:32.540 --> 00:24:35.760 the the later risk of lung cancer.

NOTE Confidence: 0.689710401363636

00:24:35.760 --> 00:24:38.308 You take up a a sample of the general

NOTE Confidence: 0.689710401363636

00:24:38.308 --> 00:24:40.210 population to divide them into those  
NOTE Confidence: 0.689710401363636

00:24:40.268 --> 00:24:42.825 who smoke tobacco or in this case  
NOTE Confidence: 0.689710401363636

00:24:42.825 --> 00:24:44.710 smoke cannabis and then follow them  
NOTE Confidence: 0.689710401363636

00:24:44.710 --> 00:24:46.680 up and see what happens to them.  
NOTE Confidence: 0.689710401363636

00:24:46.680 --> 00:24:49.544 And of course the people who are smoking  
NOTE Confidence: 0.689710401363636

00:24:49.544 --> 00:24:52.119 cannabis have a higher risk of psychosis.  
NOTE Confidence: 0.689710401363636

00:24:52.120 --> 00:24:55.026 But one question has been do people  
NOTE Confidence: 0.689710401363636

00:24:55.026 --> 00:24:57.984 smoke cannabis because they have a  
NOTE Confidence: 0.689710401363636

00:24:57.984 --> 00:24:59.999 genetic predisposition to psychosis?  
NOTE Confidence: 0.689710401363636

00:25:00.000 --> 00:25:02.331 And we have looked at this in  
NOTE Confidence: 0.689710401363636

00:25:02.331 --> 00:25:02.997 several studies,  
NOTE Confidence: 0.689710401363636

00:25:03.000 --> 00:25:05.660 and there have been some genetic studies  
NOTE Confidence: 0.689710401363636

00:25:05.660 --> 00:25:09.013 where they did show an effect of the  
NOTE Confidence: 0.689710401363636

00:25:09.013 --> 00:25:11.153 apologetic risk score for schizophrenia.  
NOTE Confidence: 0.689710401363636

00:25:11.160 --> 00:25:14.520 So it's a it's a means of a  
NOTE Confidence: 0.689710401363636

00:25:14.520 --> 00:25:18.296 of a assessing the the, the,

NOTE Confidence: 0.689710401363636  
00:25:18.296 --> 00:25:21.116 the genetic predisposition to psychosis.  
NOTE Confidence: 0.689710401363636  
00:25:21.120 --> 00:25:22.800 And they've been some studies  
NOTE Confidence: 0.689710401363636  
00:25:22.800 --> 00:25:24.829 which have suggested that this did  
NOTE Confidence: 0.689710401363636  
00:25:24.829 --> 00:25:26.557 have a small effect on cannabis,  
NOTE Confidence: 0.689710401363636  
00:25:26.560 --> 00:25:29.514 on cannabis use in the general population.  
NOTE Confidence: 0.689710401363636  
00:25:29.520 --> 00:25:32.439 And we've done studies where we have,  
NOTE Confidence: 0.689710401363636  
00:25:32.440 --> 00:25:34.552 I found no effect on cannabis  
NOTE Confidence: 0.689710401363636  
00:25:34.552 --> 00:25:36.840 use in the general population.  
NOTE Confidence: 0.689710401363636  
00:25:36.840 --> 00:25:39.598 And also one study in the UK,  
NOTE Confidence: 0.689710401363636  
00:25:39.600 --> 00:25:39.879 Biobank,  
NOTE Confidence: 0.689710401363636  
00:25:39.879 --> 00:25:41.832 which is a huge study of about  
NOTE Confidence: 0.689710401363636  
00:25:41.832 --> 00:25:43.360 half a million people,  
NOTE Confidence: 0.689710401363636  
00:25:43.360 --> 00:25:47.514 where there did seem to be a small effect of  
NOTE Confidence: 0.689710401363636  
00:25:47.514 --> 00:25:50.713 cannabis use on variance in cannabis use.  
NOTE Confidence: 0.689710401363636  
00:25:50.720 --> 00:25:52.912 But it was of the order of about  
NOTE Confidence: 0.689710401363636

00:25:52.912 --> 00:25:55.636 say less than 2% of the variance in  
NOTE Confidence: 0.689710401363636

00:25:55.636 --> 00:25:58.320 cannabis use appeared to be related to  
NOTE Confidence: 0.689710401363636

00:25:58.320 --> 00:26:01.925 the the palogenic risk score for for  
NOTE Confidence: 0.689710401363636

00:26:01.925 --> 00:26:03.524 schizophrenia. I think it's myself.  
NOTE Confidence: 0.689710401363636

00:26:03.524 --> 00:26:05.566 It's a bit probably a bit like  
NOTE Confidence: 0.689710401363636

00:26:05.566 --> 00:26:06.888 alcohol and alcoholism.  
NOTE Confidence: 0.689710401363636

00:26:06.888 --> 00:26:10.276 The majority of people who become alcoholic.  
NOTE Confidence: 0.689710401363636

00:26:10.280 --> 00:26:12.160 But why do how how does this happen.  
NOTE Confidence: 0.689710401363636

00:26:12.160 --> 00:26:14.386 Well they they they like alcohol  
NOTE Confidence: 0.689710401363636

00:26:14.386 --> 00:26:16.584 they're they're they're in the army  
NOTE Confidence: 0.689710401363636

00:26:16.584 --> 00:26:18.510 and all their friends are drinking  
NOTE Confidence: 0.689710401363636

00:26:18.510 --> 00:26:21.250 or they work in pubs or the rest of  
NOTE Confidence: 0.689710401363636

00:26:21.250 --> 00:26:23.488 their own business and there's a lot  
NOTE Confidence: 0.689710401363636

00:26:23.488 --> 00:26:25.387 of available alcohol or in Britain  
NOTE Confidence: 0.689710401363636

00:26:25.387 --> 00:26:27.410 they they they they they play rugby  
NOTE Confidence: 0.689710401363636

00:26:27.472 --> 00:26:29.327 and after the rugby they they they

NOTE Confidence: 0.689710401363636

00:26:29.327 --> 00:26:30.720 all go out drinking.

NOTE Confidence: 0.689710401363636

00:26:30.720 --> 00:26:32.580 So most people become alcoholic

NOTE Confidence: 0.689710401363636

00:26:32.580 --> 00:26:35.000 because they like the alcohol but as

NOTE Confidence: 0.689710401363636

00:26:35.000 --> 00:26:37.240 you know there is there is a small

NOTE Confidence: 0.689710401363636

00:26:37.314 --> 00:26:39.414 proportion of people who find that

NOTE Confidence: 0.689710401363636

00:26:39.414 --> 00:26:41.956 in the at a later point in their

NOTE Confidence: 0.689710401363636

00:26:41.956 --> 00:26:42.874 life often that

NOTE Confidence: 0.85203664

00:26:42.880 --> 00:26:45.255 alcohol can produce some immediate

NOTE Confidence: 0.85203664

00:26:45.255 --> 00:26:48.600 relief from anxiety or a depression.

NOTE Confidence: 0.85203664

00:26:48.600 --> 00:26:54.382 So I think probably cannabis has

NOTE Confidence: 0.85203664

00:26:54.382 --> 00:26:57.154 a similar sort of effect that

NOTE Confidence: 0.85203664

00:26:57.154 --> 00:26:59.837 majority of people are not taking

NOTE Confidence: 0.85203664

00:26:59.837 --> 00:27:02.759 it because I for medicinal reasons

NOTE Confidence: 0.85203664

00:27:02.759 --> 00:27:06.197 but some people are self medicating.

NOTE Confidence: 0.85203664

00:27:06.200 --> 00:27:09.376 The more important question is

NOTE Confidence: 0.85203664

00:27:09.376 --> 00:27:12.000 does say genetic predisposition?  
NOTE Confidence: 0.85203664

00:27:12.000 --> 00:27:14.960 How does genetic predisposition  
NOTE Confidence: 0.85203664

00:27:14.960 --> 00:27:17.920 relate to cannabis use?  
NOTE Confidence: 0.85203664

00:27:17.920 --> 00:27:21.320 Do they are the effects additive  
NOTE Confidence: 0.85203664

00:27:21.320 --> 00:27:24.659 or indeed are they are they more  
NOTE Confidence: 0.85203664

00:27:24.659 --> 00:27:27.182 than additive And this is this  
NOTE Confidence: 0.85203664

00:27:27.182 --> 00:27:29.428 is a study where oh excuse me I  
NOTE Confidence: 0.85203664

00:27:29.428 --> 00:27:31.048 should just I'm sure you all know  
NOTE Confidence: 0.85203664

00:27:31.048 --> 00:27:32.356 about apologetic risk scores.  
NOTE Confidence: 0.85203664

00:27:32.360 --> 00:27:35.179 But just to remind you that say you  
NOTE Confidence: 0.85203664

00:27:35.179 --> 00:27:38.502 take a blood sample you do AG was  
NOTE Confidence: 0.85203664

00:27:38.502 --> 00:27:41.841 and they they're now they're now have  
NOTE Confidence: 0.85203664

00:27:41.841 --> 00:27:45.400 been very large studies which they  
NOTE Confidence: 0.85203664

00:27:45.400 --> 00:27:49.851 have shown that say people with with  
NOTE Confidence: 0.85203664

00:27:49.851 --> 00:27:52.675 with schizophrenia have about 280  
NOTE Confidence: 0.85203664

00:27:52.675 --> 00:27:56.280 A loci on the genome which differ



NOTE Confidence: 0.85203664

00:27:56.280 --> 00:27:58.955 between them and the controls And

NOTE Confidence: 0.85203664

00:27:58.955 --> 00:28:02.086 that you can also use the similar

NOTE Confidence: 0.85203664

00:28:02.086 --> 00:28:05.152 set of methods to to assess the

NOTE Confidence: 0.85203664

00:28:05.160 --> 00:28:07.640 genetic liability in the general

NOTE Confidence: 0.85203664

00:28:07.640 --> 00:28:10.120 population by allogenic risk score.

NOTE Confidence: 0.85203664

00:28:10.120 --> 00:28:13.088 So you can take the polygenic risk

NOTE Confidence: 0.85203664

00:28:13.088 --> 00:28:15.438 score for schizophrenia and then run

NOTE Confidence: 0.85203664

00:28:15.438 --> 00:28:20.152 it through people who have a by who

NOTE Confidence: 0.85203664

00:28:20.152 --> 00:28:23.880 have psychosis and psychosis for example,

NOTE Confidence: 0.85203664

00:28:23.880 --> 00:28:28.640 induced by are associated with with cannabis.

NOTE Confidence: 0.85203664

00:28:28.640 --> 00:28:31.040 So this is a study that we've just sent off

NOTE Confidence: 0.43503603

00:28:33.840 --> 00:28:34.400 for

NOTE Confidence: 0.73336416

00:28:37.120 --> 00:28:40.448 to a journal. So if any any of

NOTE Confidence: 0.73336416

00:28:40.448 --> 00:28:42.848 you are likely to be reviewers,

NOTE Confidence: 0.73336416

00:28:42.848 --> 00:28:45.800 I hope you'll you'll treat us kindly.

NOTE Confidence: 0.73336416

00:28:45.800 --> 00:28:48.558 But essentially this is a study called  
NOTE Confidence: 0.73336416

00:28:48.560 --> 00:28:51.048 EUGI which is a big trans European study  
NOTE Confidence: 0.73336416

00:28:51.048 --> 00:28:55.712 that I'll come back to and where we have.  
NOTE Confidence: 0.73336416

00:28:55.712 --> 00:28:58.518 So this really looks at the Scott,  
NOTE Confidence: 0.73336416

00:28:58.520 --> 00:29:02.026 the the liability to be not  
NOTE Confidence: 0.73336416

00:29:02.026 --> 00:29:03.556 a case but a control.  
NOTE Confidence: 0.73336416

00:29:03.560 --> 00:29:05.436 So it's a case control study Along  
NOTE Confidence: 0.73336416

00:29:05.436 --> 00:29:07.709 the bottom is your score on the  
NOTE Confidence: 0.73336416

00:29:07.709 --> 00:29:09.474 polygenic risk score for schizophrenia.  
NOTE Confidence: 0.73336416

00:29:09.480 --> 00:29:11.505 So long at the right hand side you have  
NOTE Confidence: 0.73336416

00:29:11.505 --> 00:29:13.297 a high predisposition to schizophrenia.  
NOTE Confidence: 0.73336416

00:29:13.297 --> 00:29:15.970 On the on the left you have a low  
NOTE Confidence: 0.73336416

00:29:16.038 --> 00:29:17.958 predisposition to schizophrenia  
NOTE Confidence: 0.73336416

00:29:17.960 --> 00:29:20.340 and the different colours are  
NOTE Confidence: 0.73336416

00:29:20.340 --> 00:29:22.720 how much cannabis you use.  
NOTE Confidence: 0.73336416

00:29:22.720 --> 00:29:26.284 So for example if you look down in the

NOTE Confidence: 0.73336416

00:29:26.284 --> 00:29:28.798 bottom in this brownie set of colour,

NOTE Confidence: 0.73336416

00:29:28.800 --> 00:29:32.688 these are people who have a oh the red one,

NOTE Confidence: 0.73336416

00:29:32.688 --> 00:29:33.354 which removes me.

NOTE Confidence: 0.73336416

00:29:33.360 --> 00:29:36.176 The the sort of orange ones are people

NOTE Confidence: 0.73336416

00:29:36.176 --> 00:29:38.639 who've never used cannabis and the ones

NOTE Confidence: 0.73336416

00:29:38.639 --> 00:29:41.520 in brown are those two rarely used a

NOTE Confidence: 0.73336416

00:29:41.520 --> 00:29:43.320 old fashioned low potency cannabis.

NOTE Confidence: 0.73336416

00:29:43.320 --> 00:29:46.270 And you can see that say that say

NOTE Confidence: 0.73336416

00:29:46.270 --> 00:29:48.475 they have a low likelihood of being

NOTE Confidence: 0.73336416

00:29:48.475 --> 00:29:50.668 psychotic if they don't have a high

NOTE Confidence: 0.73336416

00:29:50.668 --> 00:29:52.760 apollogenic risk score for schizophrenia.

NOTE Confidence: 0.73336416

00:29:52.760 --> 00:29:54.958 But if they have a high apollogenic

NOTE Confidence: 0.73336416

00:29:54.958 --> 00:29:56.967 risk score for schizophrenia then

NOTE Confidence: 0.73336416

00:29:56.967 --> 00:29:59.477 they certainly can develop psychosis.

NOTE Confidence: 0.73336416

00:29:59.480 --> 00:30:02.344 On the other hand the the the ones

NOTE Confidence: 0.73336416

00:30:02.344 --> 00:30:05.332 who are daily using a cannabis which  
NOTE Confidence: 0.73336416

00:30:05.332 --> 00:30:08.358 is in this purple colour here you  
NOTE Confidence: 0.73336416

00:30:08.358 --> 00:30:12.880 can see that A that at at low levels  
NOTE Confidence: 0.73336416

00:30:12.880 --> 00:30:15.765 of polygenic risk score they have a  
NOTE Confidence: 0.73336416

00:30:15.765 --> 00:30:18.075 higher risk of developing psychosis.  
NOTE Confidence: 0.73336416

00:30:18.080 --> 00:30:21.528 That the one that the number users tend  
NOTE Confidence: 0.73336416

00:30:21.528 --> 00:30:25.576 to catch up a bit but a they they but  
NOTE Confidence: 0.73336416

00:30:25.576 --> 00:30:30.376 the ones who are who are a a heavily using,  
NOTE Confidence: 0.73336416

00:30:30.376 --> 00:30:33.268 who are who have a high apollogenic  
NOTE Confidence: 0.73336416

00:30:33.268 --> 00:30:35.940 risk score are still more likely to go  
NOTE Confidence: 0.73336416

00:30:36.001 --> 00:30:38.423 psychotic than the ones with a hypologenic  
NOTE Confidence: 0.73336416

00:30:38.423 --> 00:30:40.919 risk score who are not using cannabis.  
NOTE Confidence: 0.73336416

00:30:40.920 --> 00:30:42.600 So this just seems to be a  
NOTE Confidence: 0.73336416

00:30:42.600 --> 00:30:43.760 sort of summation effect.  
NOTE Confidence: 0.73336416

00:30:43.760 --> 00:30:46.196 So there's no interaction or evidence  
NOTE Confidence: 0.73336416

00:30:46.196 --> 00:30:48.200 of a biological interaction here.

NOTE Confidence: 0.73336416

00:30:48.200 --> 00:30:50.140 These are independent effects an

NOTE Confidence: 0.73336416

00:30:50.140 --> 00:30:52.844 effect of cannabis on site or risk

NOTE Confidence: 0.73336416

00:30:52.844 --> 00:30:55.280 of psychosis and an effect of the

NOTE Confidence: 0.73336416

00:30:55.280 --> 00:30:57.014 apollogenic risk score on psychosis.

NOTE Confidence: 0.73336416

00:30:57.014 --> 00:30:59.303 So obviously the apollogenic risk or is

NOTE Confidence: 0.73336416

00:30:59.303 --> 00:31:01.771 a very crude thing and one really wants

NOTE Confidence: 0.73336416

00:31:01.771 --> 00:31:04.241 to know what is the effect of people

NOTE Confidence: 0.73336416

00:31:04.241 --> 00:31:06.464 who have differences in the end the

NOTE Confidence: 0.73336416

00:31:06.464 --> 00:31:08.576 genes for the endocannabinoid system And

NOTE Confidence: 0.73336416

00:31:08.576 --> 00:31:10.956 so various people are looking at that.

NOTE Confidence: 0.8535525075

00:31:13.360 --> 00:31:15.080 What about the characteristics

NOTE Confidence: 0.8535525075

00:31:15.080 --> 00:31:16.800 of cannabis associated psychosis?

NOTE Confidence: 0.8535525075

00:31:16.800 --> 00:31:19.934 I should say that we are lucky or

NOTE Confidence: 0.8535525075

00:31:19.934 --> 00:31:22.643 unlucky in that say in South London

NOTE Confidence: 0.8535525075

00:31:22.643 --> 00:31:24.889 we have the highest consumption

NOTE Confidence: 0.8535525075

00:31:24.889 --> 00:31:27.553 of cannabis in in the UK,  
NOTE Confidence: 0.8535525075

00:31:27.560 --> 00:31:30.416 so about 60% of our patients with  
NOTE Confidence: 0.8535525075

00:31:30.416 --> 00:31:32.760 the first episode of psychosis.  
NOTE Confidence: 0.94878452

00:31:36.280 --> 00:31:39.160 The cannabis associated psychotic patients,  
NOTE Confidence: 0.94878452

00:31:39.160 --> 00:31:42.289 I they they they just look they  
NOTE Confidence: 0.94878452

00:31:42.289 --> 00:31:44.312 can they can look very they they  
NOTE Confidence: 0.94878452

00:31:44.312 --> 00:31:46.845 just in many ways look the same  
NOTE Confidence: 0.94878452

00:31:46.845 --> 00:31:48.357 as people with schizophrenia,  
NOTE Confidence: 0.94878452

00:31:48.360 --> 00:31:50.238 but they have an earlier onset  
NOTE Confidence: 0.94878452

00:31:50.238 --> 00:31:51.920 than the non cannabis users.  
NOTE Confidence: 0.94878452

00:31:51.920 --> 00:31:54.236 They have more prominent positive symptoms,  
NOTE Confidence: 0.94878452

00:31:54.240 --> 00:31:55.168 especially paranoia,  
NOTE Confidence: 0.94878452

00:31:55.168 --> 00:31:58.880 and less in the way of negative symptoms.  
NOTE Confidence: 0.94878452

00:31:58.880 --> 00:32:01.388 They have a higher premorbid IQ  
NOTE Confidence: 0.94878452

00:32:01.388 --> 00:32:03.474 and better premorbid function than  
NOTE Confidence: 0.94878452

00:32:03.474 --> 00:32:06.420 many other schizophrenia patients.

NOTE Confidence: 0.94878452

00:32:06.420 --> 00:32:09.678 You know as you know a proportion of

NOTE Confidence: 0.94878452

00:32:09.678 --> 00:32:11.436 schizophrenia is neurodevelopmental

NOTE Confidence: 0.94878452

00:32:11.436 --> 00:32:14.586 and therefore these people have always

NOTE Confidence: 0.94878452

00:32:14.586 --> 00:32:16.290 had carbon cognitive difficulties

NOTE Confidence: 0.94878452

00:32:16.290 --> 00:32:18.760 throughout their childhood and their life.

NOTE Confidence: 0.94878452

00:32:18.760 --> 00:32:21.945 And so they are performed The the

NOTE Confidence: 0.94878452

00:32:21.945 --> 00:32:24.932 average IQ of somebody in the in

NOTE Confidence: 0.94878452

00:32:24.932 --> 00:32:27.885 England who develops a A psychosis

NOTE Confidence: 0.94878452

00:32:27.885 --> 00:32:30.720 is not 100 as it should be,

NOTE Confidence: 0.94878452

00:32:30.720 --> 00:32:34.492 but it's 95 S The the the non

NOTE Confidence: 0.94878452

00:32:34.492 --> 00:32:36.712 cannabis users have a slightly

NOTE Confidence: 0.94878452

00:32:36.712 --> 00:32:37.862 decreased premorbid function.

NOTE Confidence: 0.94878452

00:32:37.862 --> 00:32:39.968 The cannabis users start off doing

NOTE Confidence: 0.94878452

00:32:39.968 --> 00:32:42.116 very well and they're very clever

NOTE Confidence: 0.94878452

00:32:42.116 --> 00:32:43.846 and often they're very sociable

NOTE Confidence: 0.94878452

00:32:43.846 --> 00:32:45.588 because they have friends that  
NOTE Confidence: 0.94878452

00:32:45.588 --> 00:32:47.263 can introduce them to cannabis  
NOTE Confidence: 0.94878452

00:32:47.263 --> 00:32:49.040 dealers when they're 13 or 14.  
NOTE Confidence: 0.67473432625

00:32:51.400 --> 00:32:54.640 I this is a just to show I that  
NOTE Confidence: 0.67473432625

00:32:54.640 --> 00:32:57.999 the the effect of a whether you,  
NOTE Confidence: 0.67473432625

00:32:58.000 --> 00:33:00.900 whether you continue or don't  
NOTE Confidence: 0.67473432625

00:33:00.900 --> 00:33:02.640 continue using cannabis.  
NOTE Confidence: 0.67473432625

00:33:02.640 --> 00:33:05.272 So this is a lady called Tabia Scholar  
NOTE Confidence: 0.67473432625

00:33:05.272 --> 00:33:07.540 who was a APHD student with us.  
NOTE Confidence: 0.67473432625

00:33:07.540 --> 00:33:08.635 Whoops excuse me?  
NOTE Confidence: 0.67473432625

00:33:08.640 --> 00:33:11.412 And here a there is a follow up of  
NOTE Confidence: 0.67473432625

00:33:11.412 --> 00:33:13.931 people with their first episode of  
NOTE Confidence: 0.67473432625

00:33:13.931 --> 00:33:16.960 psychosis for two years and here is  
NOTE Confidence: 0.67473432625

00:33:16.960 --> 00:33:19.706 the proportion who relapsed and you  
NOTE Confidence: 0.67473432625

00:33:19.706 --> 00:33:23.240 can see in the down here in the brown  
NOTE Confidence: 0.425391185

00:33:26.600 --> 00:33:31.032 so the the sorry the blue are the



NOTE Confidence: 0.425391185

00:33:31.032 --> 00:33:34.158 blue is say I've never used cannabis.

NOTE Confidence: 0.425391185

00:33:34.160 --> 00:33:37.065 The the green here are people who

NOTE Confidence: 0.425391185

00:33:37.065 --> 00:33:42.518 continue to use cannabis and they the

NOTE Confidence: 0.425391185

00:33:42.520 --> 00:33:44.878 the former cannabis users are are,

NOTE Confidence: 0.425391185

00:33:44.880 --> 00:33:46.932 are are down here.

NOTE Confidence: 0.425391185

00:33:46.932 --> 00:33:49.032 So essentially the people who've never

NOTE Confidence: 0.425391185

00:33:49.032 --> 00:33:50.640 used cannabis are in the middle.

NOTE Confidence: 0.425391185

00:33:50.640 --> 00:33:53.118 The people who stop using cannabis have

NOTE Confidence: 0.425391185

00:33:53.118 --> 00:33:56.013 the the worst outcome and are likely to

NOTE Confidence: 0.425391185

00:33:56.013 --> 00:33:58.118 relapse but you have a very good outcome.

NOTE Confidence: 0.425391185

00:33:58.120 --> 00:34:00.290 Well a pretty good outcome if you've

NOTE Confidence: 0.425391185

00:34:00.290 --> 00:34:02.278 been using cannabis and you then stop.

NOTE Confidence: 0.865980451333333

00:34:04.880 --> 00:34:07.064 One of the problems least to the

NOTE Confidence: 0.865980451333333

00:34:07.064 --> 00:34:09.717 UK is who is going to treat you.

NOTE Confidence: 0.865980451333333

00:34:09.720 --> 00:34:14.023 And if you go to the if you're a

NOTE Confidence: 0.865980451333333

00:34:14.023 --> 00:34:15.547 cannabis associated psychosis and  
NOTE Confidence: 0.865980451333333

00:34:15.547 --> 00:34:18.358 you go to the addiction services,  
NOTE Confidence: 0.865980451333333

00:34:18.360 --> 00:34:20.677 they won't be interested because they say,  
NOTE Confidence: 0.865980451333333

00:34:20.680 --> 00:34:21.673 well you're psychotic.  
NOTE Confidence: 0.865980451333333

00:34:21.673 --> 00:34:24.424 You need to be treated by the people  
NOTE Confidence: 0.865980451333333

00:34:24.424 --> 00:34:26.602 who look at the adult psychiatrists  
NOTE Confidence: 0.865980451333333

00:34:26.602 --> 00:34:28.400 who look after psychosis.  
NOTE Confidence: 0.865980451333333

00:34:28.400 --> 00:34:31.200 And if you go to the psychosis services,  
NOTE Confidence: 0.865980451333333

00:34:31.200 --> 00:34:31.910 well they'll,  
NOTE Confidence: 0.865980451333333

00:34:31.910 --> 00:34:34.040 they'll admit you when you're psychotic,  
NOTE Confidence: 0.865980451333333

00:34:34.040 --> 00:34:35.815 but when you're when you're  
NOTE Confidence: 0.865980451333333

00:34:35.815 --> 00:34:37.185 discharged they say, well,  
NOTE Confidence: 0.865980451333333

00:34:37.185 --> 00:34:39.320 you just got to stop smoking cannabis,  
NOTE Confidence: 0.865980451333333

00:34:39.320 --> 00:34:41.200 but they don't do any more than that.  
NOTE Confidence: 0.865980451333333

00:34:41.200 --> 00:34:44.180 And if you come back to the outpatient clinic  
NOTE Confidence: 0.865980451333333

00:34:44.180 --> 00:34:47.240 and you started smoking cannabis again,

NOTE Confidence: 0.865980451333333

00:34:47.240 --> 00:34:49.408 and then the usual reaction of a British

NOTE Confidence: 0.865980451333333

00:34:49.408 --> 00:34:51.159 psychiatrist is to shout at the patient,

NOTE Confidence: 0.865980451333333

00:34:51.160 --> 00:34:52.248 see why were you?

NOTE Confidence: 0.865980451333333

00:34:52.248 --> 00:34:53.880 Why are you using a cannabis?

NOTE Confidence: 0.865980451333333

00:34:53.880 --> 00:34:54.879 This is ridiculous.

NOTE Confidence: 0.865980451333333

00:34:54.879 --> 00:34:57.210 Of course what this does just ensures

NOTE Confidence: 0.865980451333333

00:34:57.276 --> 00:34:59.558 the patient will never come back again.

NOTE Confidence: 0.865980451333333

00:34:59.560 --> 00:35:03.120 So I the problem is that there isn't.

NOTE Confidence: 0.865980451333333

00:35:03.120 --> 00:35:07.538 There isn't service focused on

NOTE Confidence: 0.865980451333333

00:35:07.538 --> 00:35:09.716 cannabis induced psychosis,

NOTE Confidence: 0.865980451333333

00:35:09.720 --> 00:35:12.717 but it's such a big problem in our services.

NOTE Confidence: 0.865980451333333

00:35:12.720 --> 00:35:13.920 As I said,

NOTE Confidence: 0.865980451333333

00:35:13.920 --> 00:35:16.350 more than 60% of our first orven

NOTE Confidence: 0.865980451333333

00:35:16.350 --> 00:35:17.980 said psychotic patients are taking

NOTE Confidence: 0.865980451333333

00:35:18.042 --> 00:35:20.604 cannabis and the patients who are under

NOTE Confidence: 0.865980451333333

00:35:20.604 --> 00:35:22.280 compulsion for potential violence,  
NOTE Confidence: 0.865980451333333

00:35:22.280 --> 00:35:27.080 over 87% of them are using a cannabis.  
NOTE Confidence: 0.865980451333333

00:35:27.080 --> 00:35:30.804 So my wife Martha, the 40I,  
NOTE Confidence: 0.865980451333333

00:35:30.804 --> 00:35:33.396 whose picture is down in the left here,  
NOTE Confidence: 0.865980451333333

00:35:33.400 --> 00:35:36.625 she has developed a cannabis  
NOTE Confidence: 0.865980451333333

00:35:36.625 --> 00:35:39.166 clinic for patients with psychosis.  
NOTE Confidence: 0.865980451333333

00:35:39.166 --> 00:35:42.119 And you can see this is a logo for it,  
NOTE Confidence: 0.865980451333333

00:35:42.120 --> 00:35:43.836 and it's a very optimistic logo.  
NOTE Confidence: 0.865980451333333

00:35:43.840 --> 00:35:46.477 On the left you can see these poor souls.  
NOTE Confidence: 0.865980451333333

00:35:46.480 --> 00:35:48.118 Their brain is full of cannabis.  
NOTE Confidence: 0.865980451333333

00:35:48.120 --> 00:35:50.380 They're miserable and depressed,  
NOTE Confidence: 0.865980451333333

00:35:50.380 --> 00:35:52.075 They're smoking furiously.  
NOTE Confidence: 0.865980451333333

00:35:52.080 --> 00:35:53.688 And then they come to the clinic and  
NOTE Confidence: 0.865980451333333

00:35:53.688 --> 00:35:55.514 then you can see on the right hand side,  
NOTE Confidence: 0.865980451333333

00:35:55.520 --> 00:35:57.638 whoa, they've stopped using the cannabis.  
NOTE Confidence: 0.865980451333333

00:35:57.640 --> 00:35:59.957 They're they're learning to play the guitar.

NOTE Confidence: 0.865980451333333  
00:35:59.960 --> 00:36:02.288 They're reading furiously.  
NOTE Confidence: 0.865980451333333  
00:36:02.288 --> 00:36:03.840 They're writing.  
NOTE Confidence: 0.865980451333333  
00:36:03.840 --> 00:36:05.706 They're taking up exercise and they've  
NOTE Confidence: 0.865980451333333  
00:36:05.706 --> 00:36:08.560 got a girlfriend. So this is this.  
NOTE Confidence: 0.865980451333333  
00:36:08.560 --> 00:36:11.680 Obviously we don't we don't manage  
NOTE Confidence: 0.865980451333333  
00:36:11.680 --> 00:36:14.365 this in in the majority of patients  
NOTE Confidence: 0.865980451333333  
00:36:14.365 --> 00:36:18.830 but we we we do in some I so this  
NOTE Confidence: 0.865980451333333  
00:36:18.830 --> 00:36:23.640 say this is offered to all patients  
NOTE Confidence: 0.865980451333333  
00:36:23.640 --> 00:36:26.510 in our services who are using high  
NOTE Confidence: 0.865980451333333  
00:36:26.510 --> 00:36:28.785 potency cannabis and are also  
NOTE Confidence: 0.865980451333333  
00:36:28.785 --> 00:36:32.636 psychotic and they have one to one  
NOTE Confidence: 0.865980451333333  
00:36:32.640 --> 00:36:35.622 meetings with a therapist for up  
NOTE Confidence: 0.865980451333333  
00:36:35.622 --> 00:36:39.068 to up to 15 or 2020 sessions.  
NOTE Confidence: 0.865980451333333  
00:36:39.068 --> 00:36:42.630 And we also have a weekly peer  
NOTE Confidence: 0.865980451333333  
00:36:42.630 --> 00:36:46.040 group that is an online peer group.  
NOTE Confidence: 0.865980451333333

00:36:46.040 --> 00:36:49.278 And at that we usually get a,  
NOTE Confidence: 0.8736421685

00:36:51.320 --> 00:36:53.558 we usually get some expert from  
NOTE Confidence: 0.8736421685

00:36:53.558 --> 00:36:56.032 somewhere in the world that come and  
NOTE Confidence: 0.8736421685

00:36:56.032 --> 00:36:58.446 they talk for 10 to 15 minutes and  
NOTE Confidence: 0.8736421685

00:36:58.446 --> 00:36:59.876 then there's a general discussion.  
NOTE Confidence: 0.8736421685

00:36:59.880 --> 00:37:01.465 Actually, we always ask the  
NOTE Confidence: 0.8736421685

00:37:01.465 --> 00:37:03.440 the expert to choose a song.  
NOTE Confidence: 0.8736421685

00:37:03.440 --> 00:37:04.720 So usually people choose  
NOTE Confidence: 0.8736421685

00:37:04.720 --> 00:37:06.000 a song about marijuana,  
NOTE Confidence: 0.8736421685

00:37:06.000 --> 00:37:08.597 but we've had one visiting speaker visit,  
NOTE Confidence: 0.8736421685

00:37:08.600 --> 00:37:10.152 visiting speaker who actually  
NOTE Confidence: 0.8736421685

00:37:10.152 --> 00:37:11.316 brought his band.  
NOTE Confidence: 0.8736421685

00:37:11.320 --> 00:37:14.264 And so that was Cyril who brought his  
NOTE Confidence: 0.8736421685

00:37:14.264 --> 00:37:17.920 jazz band and I took to great enthusiasm.  
NOTE Confidence: 0.8736421685

00:37:17.920 --> 00:37:19.680 I introduced his session  
NOTE Confidence: 0.751315846666667

00:37:22.160 --> 00:37:24.425 by by playing very delightful

NOTE Confidence: 0.751315846666667  
00:37:24.425 --> 00:37:26.237 jazz with his colleagues.  
NOTE Confidence: 0.751315846666667  
00:37:26.240 --> 00:37:29.440 So anyway, so we get about,  
NOTE Confidence: 0.751315846666667  
00:37:29.440 --> 00:37:32.158 say up to about 45 people come to this,  
NOTE Confidence: 0.751315846666667  
00:37:32.160 --> 00:37:33.920 this virtual peer group.  
NOTE Confidence: 0.751315846666667  
00:37:33.920 --> 00:37:36.560 It's in some ways a bit  
NOTE Confidence: 0.751315846666667  
00:37:36.655 --> 00:37:39.040 like Alcoholics Anonymous.  
NOTE Confidence: 0.751315846666667  
00:37:39.040 --> 00:37:41.488 And of course the patients benefit  
NOTE Confidence: 0.751315846666667  
00:37:41.488 --> 00:37:43.490 much more from discussion with  
NOTE Confidence: 0.751315846666667  
00:37:43.490 --> 00:37:46.210 you know being told to stop your  
NOTE Confidence: 0.751315846666667  
00:37:46.210 --> 00:37:48.288 cannabis by an old Scotsman.  
NOTE Confidence: 0.751315846666667  
00:37:48.288 --> 00:37:51.232 I mean they they are 20 year olds.  
NOTE Confidence: 0.751315846666667  
00:37:51.240 --> 00:37:52.218 Not going to think he's going  
NOTE Confidence: 0.751315846666667  
00:37:52.218 --> 00:37:53.120 to think this old fella.  
NOTE Confidence: 0.751315846666667  
00:37:53.120 --> 00:37:54.764 He doesn't think anybody  
NOTE Confidence: 0.751315846666667  
00:37:54.764 --> 00:37:55.997 should enjoy themselves.  
NOTE Confidence: 0.751315846666667

00:37:56.000 --> 00:37:57.316 But if they're told,  
NOTE Confidence: 0.751315846666667

00:37:57.316 --> 00:37:59.894 if they're told the same by a 25  
NOTE Confidence: 0.751315846666667

00:37:59.894 --> 00:38:02.030 year old who says that my life was  
NOTE Confidence: 0.751315846666667

00:38:02.103 --> 00:38:04.546 a total mess mess before I stopped  
NOTE Confidence: 0.751315846666667

00:38:04.546 --> 00:38:07.160 cannabis and and now I'm getting on fine,  
NOTE Confidence: 0.751315846666667

00:38:07.160 --> 00:38:11.237 this is likely to have a much bigger effect.  
NOTE Confidence: 0.751315846666667

00:38:11.240 --> 00:38:15.768 So I patients with cannabis induced  
NOTE Confidence: 0.751315846666667

00:38:15.768 --> 00:38:17.980 psychosis they can suffer withdrawal  
NOTE Confidence: 0.751315846666667

00:38:17.980 --> 00:38:21.600 and what we use is to cover with  
NOTE Confidence: 0.751315846666667

00:38:21.600 --> 00:38:24.256 Sativex which I mentioned the this  
NOTE Confidence: 0.751315846666667

00:38:24.256 --> 00:38:27.340 say drug which has both say CBD and  
NOTE Confidence: 0.751315846666667

00:38:27.340 --> 00:38:30.145 THC in it and they in our situation  
NOTE Confidence: 0.751315846666667

00:38:30.145 --> 00:38:32.090 they also get tobacco withdrawal  
NOTE Confidence: 0.751315846666667

00:38:32.159 --> 00:38:34.439 when they're admitted to hospital.  
NOTE Confidence: 0.751315846666667

00:38:34.440 --> 00:38:38.176 So we give them a the the nicotine  
NOTE Confidence: 0.751315846666667

00:38:38.176 --> 00:38:42.010 replacement in in some form one



NOTE Confidence: 0.751315846666667  
00:38:42.010 --> 00:38:44.880 thing that not all that many people  
NOTE Confidence: 0.751315846666667  
00:38:44.880 --> 00:38:47.826 I take into consideration as what  
NOTE Confidence: 0.751315846666667  
00:38:47.826 --> 00:38:50.240 antipsychotic to get to give to  
NOTE Confidence: 0.751315846666667  
00:38:50.240 --> 00:38:52.160 cannabis and just psychotic people.  
NOTE Confidence: 0.751315846666667  
00:38:52.160 --> 00:38:54.344 As you know well many of you will  
NOTE Confidence: 0.751315846666667  
00:38:54.344 --> 00:38:56.253 know that drug dependent individuals  
NOTE Confidence: 0.751315846666667  
00:38:56.253 --> 00:38:58.845 have low dopamine in the ventral  
NOTE Confidence: 0.751315846666667  
00:38:58.845 --> 00:39:00.154 striatum and antipsychotics.  
NOTE Confidence: 0.751315846666667  
00:39:00.154 --> 00:39:03.213 We give antipsychotics to try and block  
NOTE Confidence: 0.751315846666667  
00:39:03.213 --> 00:39:05.519 dopamine in the associative striatum,  
NOTE Confidence: 0.751315846666667  
00:39:05.520 --> 00:39:07.781 but of course by accident we also  
NOTE Confidence: 0.751315846666667  
00:39:07.781 --> 00:39:10.240 decrease it in the ventral striatum.  
NOTE Confidence: 0.751315846666667  
00:39:10.240 --> 00:39:14.040 And people who are the drug dependent,  
NOTE Confidence: 0.751315846666667  
00:39:14.040 --> 00:39:15.828 they want their craving for the  
NOTE Confidence: 0.751315846666667  
00:39:15.828 --> 00:39:18.016 drug in order to increase their  
NOTE Confidence: 0.751315846666667

00:39:18.016 --> 00:39:19.880 eventual strength of dopamine.

NOTE Confidence: 0.751315846666667

00:39:19.880 --> 00:39:22.722 So if you give things like haloperidol

NOTE Confidence: 0.751315846666667

00:39:22.722 --> 00:39:24.800 and risperidone ID 2 blockers,

NOTE Confidence: 0.751315846666667

00:39:24.800 --> 00:39:27.356 you may actually increase the craving.

NOTE Confidence: 0.751315846666667

00:39:27.360 --> 00:39:30.234 So drugs which are which have

NOTE Confidence: 0.751315846666667

00:39:30.234 --> 00:39:33.718 a less less high ID 2 blockade,

NOTE Confidence: 0.751315846666667

00:39:33.720 --> 00:39:37.692 particularly adiprazole or clozapine

NOTE Confidence: 0.751315846666667

00:39:37.692 --> 00:39:41.944 or maybe maybe quetiapine or or

NOTE Confidence: 0.751315846666667

00:39:41.944 --> 00:39:45.320 olanzapine are are are are better.

NOTE Confidence: 0.751315846666667

00:39:45.320 --> 00:39:48.071 This just shows you the results of

NOTE Confidence: 0.751315846666667

00:39:48.071 --> 00:39:50.878 people coming to the cannabis clinic.

NOTE Confidence: 0.751315846666667

00:39:50.880 --> 00:39:53.840 On the left is money spent per week

NOTE Confidence: 0.751315846666667

00:39:53.840 --> 00:39:56.097 on cannabis. This is about £75.

NOTE Confidence: 0.751315846666667

00:39:56.097 --> 00:39:58.176 That would be about \$100 a week

NOTE Confidence: 0.751315846666667

00:39:58.176 --> 00:40:00.638 at the beginning of the baseline.

NOTE Confidence: 0.751315846666667

00:40:00.640 --> 00:40:03.160 This is 40 patients.

NOTE Confidence: 0.751315846666667  
00:40:03.160 --> 00:40:04.000 The endpoint,  
NOTE Confidence: 0.751315846666667  
00:40:04.000 --> 00:40:07.360 the average spent was down to 20 lbs.  
NOTE Confidence: 0.751315846666667  
00:40:07.360 --> 00:40:09.640 Here is the frequency of use.  
NOTE Confidence: 0.751315846666667  
00:40:09.640 --> 00:40:11.488 Initially 100% every day.  
NOTE Confidence: 0.751315846666667  
00:40:11.488 --> 00:40:12.874 At the end  
NOTE Confidence: 0.773708082857143  
00:40:16.880 --> 00:40:20.359 .2020202020% were were using once a week.  
NOTE Confidence: 0.773708082857143  
00:40:20.360 --> 00:40:24.180 So these people are worth a lot  
NOTE Confidence: 0.773708082857143  
00:40:24.180 --> 00:40:25.780 of investment because they're  
NOTE Confidence: 0.773708082857143  
00:40:25.780 --> 00:40:27.740 they've premorbidly they were  
NOTE Confidence: 0.773708082857143  
00:40:27.740 --> 00:40:30.839 smart and they were socially able.  
NOTE Confidence: 0.773708082857143  
00:40:30.840 --> 00:40:33.213 So you have a much better chance  
NOTE Confidence: 0.773708082857143  
00:40:33.213 --> 00:40:35.999 of getting them back to work than  
NOTE Confidence: 0.773708082857143  
00:40:35.999 --> 00:40:38.119 many other people with schizophrenia  
NOTE Confidence: 0.773708082857143  
00:40:38.120 --> 00:40:40.612 and this just shows the decrease a  
NOTE Confidence: 0.773708082857143  
00:40:40.612 --> 00:40:42.267 particularly in delusions and there  
NOTE Confidence: 0.773708082857143

00:40:42.267 --> 00:40:44.355 you can see in the right hand side  
NOTE Confidence: 0.773708082857143

00:40:44.360 --> 00:40:49.838 after the the cannabis use decreases.  
NOTE Confidence: 0.773708082857143

00:40:49.840 --> 00:40:52.720 So we've been interviewed Sunday Times  
NOTE Confidence: 0.773708082857143

00:40:52.720 --> 00:40:56.598 as the the main Sunday newspaper that  
NOTE Confidence: 0.773708082857143

00:40:56.600 --> 00:40:58.688 intelligent people would read in the  
NOTE Confidence: 0.773708082857143

00:40:58.688 --> 00:41:01.517 UK and a couple of years ago we had  
NOTE Confidence: 0.773708082857143

00:41:01.517 --> 00:41:03.984 a big article on this clinic and here  
NOTE Confidence: 0.773708082857143

00:41:03.984 --> 00:41:05.706 is somebody saying, no, the clinic.  
NOTE Confidence: 0.773708082857143

00:41:05.706 --> 00:41:08.399 I'm looking at life in a whole different way.  
NOTE Confidence: 0.773708082857143

00:41:08.400 --> 00:41:10.437 My brain is starting to work again.  
NOTE Confidence: 0.773708082857143

00:41:10.440 --> 00:41:12.305 I'm doing an apprenticeship that  
NOTE Confidence: 0.773708082857143

00:41:12.305 --> 00:41:13.797 has changed my life.  
NOTE Confidence: 0.773708082857143

00:41:13.800 --> 00:41:14.804 So this,  
NOTE Confidence: 0.773708082857143

00:41:14.804 --> 00:41:18.488 this really was my wife wife's initiative,  
NOTE Confidence: 0.773708082857143

00:41:18.488 --> 00:41:20.240 this cannabis clinic.  
NOTE Confidence: 0.773708082857143

00:41:20.240 --> 00:41:21.696 And I was a little bit cautious

NOTE Confidence: 0.773708082857143

00:41:21.696 --> 00:41:22.320 at the beginning,

NOTE Confidence: 0.773708082857143

00:41:22.320 --> 00:41:24.630 but there's no doubt that it

NOTE Confidence: 0.773708082857143

00:41:24.630 --> 00:41:26.760 can have very beneficial effect.

NOTE Confidence: 0.773708082857143

00:41:26.760 --> 00:41:30.918 So I'm becoming quite evangelical about it.

NOTE Confidence: 0.773708082857143

00:41:30.920 --> 00:41:35.728 So the the, the, the switching.

NOTE Confidence: 0.773708082857143

00:41:35.728 --> 00:41:39.704 What about if we accept that cannabis

NOTE Confidence: 0.773708082857143

00:41:39.704 --> 00:41:43.428 use can have a causal impact on psychosis?

NOTE Confidence: 0.773708082857143

00:41:43.428 --> 00:41:46.580 Is it big enough to impact the incidence

NOTE Confidence: 0.773708082857143

00:41:46.653 --> 00:41:49.278 of psychosis in different countries?

NOTE Confidence: 0.773708082857143

00:41:49.280 --> 00:41:52.034 So this is a big study from the EU.

NOTE Confidence: 0.773708082857143

00:41:52.040 --> 00:41:55.596 Across the EU 16 sites in Europe

NOTE Confidence: 0.773708082857143

00:41:55.600 --> 00:41:58.424 and in each country a big city like

NOTE Confidence: 0.773708082857143

00:41:58.424 --> 00:42:01.058 London and a smaller place like

NOTE Confidence: 0.773708082857143

00:42:01.058 --> 00:42:05.000 Cambridge are in in in France,

NOTE Confidence: 0.773708082857143

00:42:05.000 --> 00:42:07.664 Paris and then a rural area

NOTE Confidence: 0.773708082857143

00:42:07.664 --> 00:42:09.673 called Clermont from Barcelona,  
NOTE Confidence: 0.773708082857143

00:42:09.673 --> 00:42:13.038 Madrid and three Spanish centres.  
NOTE Confidence: 0.773708082857143

00:42:13.040 --> 00:42:16.850 2 modest cities in middle class  
NOTE Confidence: 0.773708082857143

00:42:16.850 --> 00:42:18.755 cities in Italy,  
NOTE Confidence: 0.773708082857143

00:42:18.760 --> 00:42:21.718 Verona and Bologna and a Palermo,  
NOTE Confidence: 0.773708082857143

00:42:21.720 --> 00:42:23.960 a big poor city in the South.  
NOTE Confidence: 0.773708082857143

00:42:23.960 --> 00:42:29.373 So everybody was trained to to to  
NOTE Confidence: 0.773708082857143

00:42:29.373 --> 00:42:32.264 try and get every case of psychosis  
NOTE Confidence: 0.773708082857143

00:42:32.264 --> 00:42:34.744 presenting A to psychiatrist to  
NOTE Confidence: 0.773708082857143

00:42:34.744 --> 00:42:38.360 secondary services in from a particular area.  
NOTE Confidence: 0.773708082857143

00:42:38.360 --> 00:42:40.768 And this is popular possible in Europe  
NOTE Confidence: 0.773708082857143

00:42:40.768 --> 00:42:43.106 because we tend to have socialised  
NOTE Confidence: 0.773708082857143

00:42:43.106 --> 00:42:45.244 systems and everybody was trained  
NOTE Confidence: 0.773708082857143

00:42:45.244 --> 00:42:48.173 diagnosed in the same way and there  
NOTE Confidence: 0.773708082857143

00:42:48.173 --> 00:42:50.533 was a lot of a lot of emphasis  
NOTE Confidence: 0.773708082857143

00:42:50.533 --> 00:42:52.639 on all using the same methods.

NOTE Confidence: 0.773708082857143

00:42:52.640 --> 00:42:54.794 So if you're thinking here you

NOTE Confidence: 0.773708082857143

00:42:54.794 --> 00:42:56.879 are in midwinter in in Yale,

NOTE Confidence: 0.773708082857143

00:42:56.880 --> 00:42:59.058 you're thinking I'd like to go to to to

NOTE Confidence: 0.773708082857143

00:42:59.058 --> 00:43:01.718 to to Europe for the for my summer holidays.

NOTE Confidence: 0.773708082857143

00:43:01.720 --> 00:43:03.600 But you think I spend all my time

NOTE Confidence: 0.773708082857143

00:43:03.600 --> 00:43:05.079 looking after psychotic patients.

NOTE Confidence: 0.773708082857143

00:43:05.080 --> 00:43:06.400 I'd like to go somewhere,

NOTE Confidence: 0.773708082857143

00:43:06.400 --> 00:43:08.206 but I won't meet a lot of

NOTE Confidence: 0.773708082857143

00:43:08.206 --> 00:43:09.640 psychotic patients in the street.

NOTE Confidence: 0.773708082857143

00:43:09.640 --> 00:43:11.480 So where would you go?

NOTE Confidence: 0.773708082857143

00:43:11.480 --> 00:43:11.755 Well,

NOTE Confidence: 0.773708082857143

00:43:11.755 --> 00:43:13.680 for sure you wouldn't come to London.

NOTE Confidence: 0.773708082857143

00:43:13.680 --> 00:43:17.425 This is the incidence of a psychosis

NOTE Confidence: 0.773708082857143

00:43:17.425 --> 00:43:19.660 across different parts of Europe and

NOTE Confidence: 0.773708082857143

00:43:19.660 --> 00:43:22.236 you can see the highest incidence of

NOTE Confidence: 0.773708082857143

00:43:22.236 --> 00:43:25.000 psychosis is 61 per 100,000 in London,  
NOTE Confidence: 0.773708082857143

00:43:25.000 --> 00:43:29.392 followed by Amsterdam 47 and Paris 44.  
NOTE Confidence: 0.773708082857143

00:43:29.392 --> 00:43:30.496 Southern Europe,  
NOTE Confidence: 0.773708082857143

00:43:30.496 --> 00:43:31.600 Excuse me,  
NOTE Confidence: 0.773708082857143

00:43:31.600 --> 00:43:33.987 I should say that in Northern Europe  
NOTE Confidence: 0.773708082857143

00:43:33.987 --> 00:43:36.550 the rates are much lower in smaller  
NOTE Confidence: 0.773708082857143

00:43:36.550 --> 00:43:38.940 towns and that's an epidemiological  
NOTE Confidence: 0.773708082857143

00:43:38.940 --> 00:43:42.259 dogma in many ways and but in  
NOTE Confidence: 0.773708082857143

00:43:42.259 --> 00:43:44.857 Southern Europe the rates are all  
NOTE Confidence: 0.773708082857143

00:43:44.857 --> 00:43:48.028 much lower and there isn't much  
NOTE Confidence: 0.773708082857143

00:43:48.028 --> 00:43:50.678 difference between big cities and  
NOTE Confidence: 0.839145565384615

00:43:50.680 --> 00:43:52.548 and and the countryside.  
NOTE Confidence: 0.839145565384615

00:43:52.548 --> 00:43:56.600 Again if I quote my wife who is from,  
NOTE Confidence: 0.839145565384615

00:43:56.600 --> 00:43:59.636 who's from Palermo, she says that  
NOTE Confidence: 0.839145565384615

00:43:59.640 --> 00:44:02.576 she has done a very risky thing from  
NOTE Confidence: 0.839145565384615

00:44:02.576 --> 00:44:05.297 moving from Palermo to to to London.



NOTE Confidence: 0.839145565384615  
00:44:05.297 --> 00:44:08.436 Her risk of psychosis has gone up five  
NOTE Confidence: 0.839145565384615  
00:44:08.436 --> 00:44:11.279 times but she's a bit not she's OK so far.  
NOTE Confidence: 0.839145565384615  
00:44:11.280 --> 00:44:13.520 So it's it's it's it's been all  
NOTE Confidence: 0.839145565384615  
00:44:13.520 --> 00:44:16.010 right so far but the question is what  
NOTE Confidence: 0.839145565384615  
00:44:16.010 --> 00:44:18.376 what is the reason And there are  
NOTE Confidence: 0.839145565384615  
00:44:18.376 --> 00:44:20.296 there are various possible reasons  
NOTE Confidence: 0.839145565384615  
00:44:20.296 --> 00:44:22.872 but looking at cannabis this is,  
NOTE Confidence: 0.839145565384615  
00:44:22.872 --> 00:44:26.200 this is this slide shows both the frequency,  
NOTE Confidence: 0.839145565384615  
00:44:26.200 --> 00:44:27.900 the frequency of cannabis use  
NOTE Confidence: 0.839145565384615  
00:44:27.900 --> 00:44:29.600 and the rate of psychosis.  
NOTE Confidence: 0.839145565384615  
00:44:29.600 --> 00:44:33.205 So in in grey is the adjusted  
NOTE Confidence: 0.839145565384615  
00:44:33.205 --> 00:44:34.235 psychosis incidence.  
NOTE Confidence: 0.839145565384615  
00:44:34.240 --> 00:44:35.628 We've taken out migrants.  
NOTE Confidence: 0.839145565384615  
00:44:35.628 --> 00:44:37.710 So this is just natives of  
NOTE Confidence: 0.839145565384615  
00:44:37.782 --> 00:44:39.519 these different countries.  
NOTE Confidence: 0.839145565384615

00:44:39.520 --> 00:44:41.956 You can see that still London,  
NOTE Confidence: 0.839145565384615

00:44:41.960 --> 00:44:45.260 Amsterdam and Paris are highest, and  
NOTE Confidence: 0.839145565384615

00:44:45.260 --> 00:44:49.880 places like Palermo and Barcelona are low.  
NOTE Confidence: 0.839145565384615

00:44:49.880 --> 00:44:52.519 And here is the daily cannabis use,  
NOTE Confidence: 0.839145565384615

00:44:52.520 --> 00:44:55.537 and you can see that it tracks  
NOTE Confidence: 0.839145565384615

00:44:55.537 --> 00:44:57.310 the incidents pretty well.  
NOTE Confidence: 0.839145565384615

00:44:57.310 --> 00:45:00.040 Not .8, quite surprisingly well actually.  
NOTE Confidence: 0.839145565384615

00:45:00.040 --> 00:45:02.092 So this is compatible with the  
NOTE Confidence: 0.839145565384615

00:45:02.092 --> 00:45:05.560 idea that cannabis use is a cause,  
NOTE Confidence: 0.839145565384615

00:45:05.560 --> 00:45:08.784 One of the causes is a contributory cause  
NOTE Confidence: 0.839145565384615

00:45:08.784 --> 00:45:11.677 of psychosis in these different centres,  
NOTE Confidence: 0.839145565384615

00:45:11.680 --> 00:45:14.970 and that is has a big enough effect to cause  
NOTE Confidence: 0.839145565384615

00:45:15.052 --> 00:45:18.196 differences in the incidence of psychosis.  
NOTE Confidence: 0.839145565384615

00:45:18.200 --> 00:45:19.400 Now you may say to yourself,  
NOTE Confidence: 0.839145565384615

00:45:19.400 --> 00:45:21.260 but this is just correlational  
NOTE Confidence: 0.839145565384615

00:45:21.260 --> 00:45:23.120 and statistics can prove anything.

NOTE Confidence: 0.839145565384615  
00:45:23.120 --> 00:45:25.720 So let's think about another  
NOTE Confidence: 0.839145565384615  
00:45:25.720 --> 00:45:28.080 recreational substance based on natural  
NOTE Confidence: 0.839145565384615  
00:45:28.080 --> 00:45:30.280 ingredients that people might use  
NOTE Confidence: 0.839145565384615  
00:45:30.280 --> 00:45:32.520 differently or consume differently  
NOTE Confidence: 0.839145565384615  
00:45:32.520 --> 00:45:35.880 across different parts of Europe.  
NOTE Confidence: 0.839145565384615  
00:45:35.880 --> 00:45:37.400 What about ice cream?  
NOTE Confidence: 0.839145565384615  
00:45:37.400 --> 00:45:41.364 So if here here am I in the pink shirt  
NOTE Confidence: 0.839145565384615  
00:45:41.364 --> 00:45:44.840 in in an ice cream parlour in Palermo,  
NOTE Confidence: 0.839145565384615  
00:45:44.840 --> 00:45:46.832 along with my godson and the  
NOTE Confidence: 0.839145565384615  
00:45:46.832 --> 00:45:48.160 man with the ice,  
NOTE Confidence: 0.839145565384615  
00:45:48.160 --> 00:45:50.212 the the the ice cream shop here, Mr.  
NOTE Confidence: 0.839145565384615  
00:45:50.212 --> 00:45:50.584 Franco,  
NOTE Confidence: 0.839145565384615  
00:45:50.584 --> 00:45:53.560 so do you think there would be any  
NOTE Confidence: 0.839145565384615  
00:45:53.560 --> 00:45:56.560 relationship between daily ice cream  
NOTE Confidence: 0.839145565384615  
00:45:56.560 --> 00:46:00.718 use and the incidence of psychosis?  
NOTE Confidence: 0.839145565384615

00:46:00.720 --> 00:46:03.040 But you you probably think there won't be,  
NOTE Confidence: 0.839145565384615

00:46:03.040 --> 00:46:04.840 but you would be wrong.  
NOTE Confidence: 0.839145565384615

00:46:04.840 --> 00:46:07.234 So and this is the relationship with  
NOTE Confidence: 0.839145565384615

00:46:07.234 --> 00:46:09.016 the frequency ice cream consumption  
NOTE Confidence: 0.839145565384615

00:46:09.016 --> 00:46:11.752 which you can find out from the from  
NOTE Confidence: 0.839145565384615

00:46:11.760 --> 00:46:15.040 across the EU and the rate of psychosis.  
NOTE Confidence: 0.839145565384615

00:46:15.040 --> 00:46:17.875 So here is psychosis in the grey,  
NOTE Confidence: 0.839145565384615

00:46:17.880 --> 00:46:21.155 as we've seen before And here is London,  
NOTE Confidence: 0.839145565384615

00:46:21.155 --> 00:46:23.730 where hardly anybody uses ice  
NOTE Confidence: 0.839145565384615

00:46:23.730 --> 00:46:25.902 cream every day. Amsterdam.  
NOTE Confidence: 0.839145565384615

00:46:25.902 --> 00:46:29.634 Similarly I and here is Madrid.  
NOTE Confidence: 0.839145565384615

00:46:29.640 --> 00:46:31.560 Twitter they're using a bit more ice cream.  
NOTE Confidence: 0.839145565384615

00:46:31.560 --> 00:46:33.680 Ice cream.  
NOTE Confidence: 0.839145565384615

00:46:33.680 --> 00:46:34.640 And here is Palermo,  
NOTE Confidence: 0.839145565384615

00:46:34.640 --> 00:46:35.840 where they're taking ice cream.  
NOTE Confidence: 0.839145565384615

00:46:35.840 --> 00:46:37.660 More than half the population

NOTE Confidence: 0.839145565384615

00:46:37.660 --> 00:46:39.480 takes ice cream every day.

NOTE Confidence: 0.839145565384615

00:46:39.480 --> 00:46:41.840 This is actually true because

NOTE Confidence: 0.839145565384615

00:46:41.840 --> 00:46:44.200 Palermo ice cream is wonderful.

NOTE Confidence: 0.839145565384615

00:46:44.200 --> 00:46:45.976 People have children have it for

NOTE Confidence: 0.839145565384615

00:46:45.976 --> 00:46:47.734 their breakfast in A roll before

NOTE Confidence: 0.839145565384615

00:46:47.734 --> 00:46:49.519 they go to they go to school.

NOTE Confidence: 0.839145565384615

00:46:49.520 --> 00:46:52.788 But as you can see that,

NOTE Confidence: 0.839145565384615

00:46:52.788 --> 00:46:53.096 say,

NOTE Confidence: 0.839145565384615

00:46:53.096 --> 00:46:55.560 places where there's a lot of ice cream

NOTE Confidence: 0.839145565384615

00:46:55.625 --> 00:46:58.393 I consumed have a low incidence of psychosis,

NOTE Confidence: 0.839145565384615

00:46:58.400 --> 00:46:59.408 and Pearl London,

NOTE Confidence: 0.839145565384615

00:46:59.408 --> 00:47:01.760 where there's not much ice cream consumed,

NOTE Confidence: 0.839145565384615

00:47:01.760 --> 00:47:03.720 then there's a high incidence of psychosis.

NOTE Confidence: 0.839145565384615

00:47:03.720 --> 00:47:06.240 So probably some of you are still

NOTE Confidence: 0.839145565384615

00:47:06.240 --> 00:47:06.960 using antipsychotics.

NOTE Confidence: 0.839145565384615

00:47:06.960 --> 00:47:08.706 Maybe you should be sending your  
NOTE Confidence: 0.839145565384615

00:47:08.706 --> 00:47:10.920 patients down to the ice cream parlour,  
NOTE Confidence: 0.623773878888889

00:47:10.920 --> 00:47:12.999 No, they said this is just a  
NOTE Confidence: 0.623773878888889

00:47:12.999 --> 00:47:14.502 statistical artefact. Or mostly,  
NOTE Confidence: 0.623773878888889

00:47:14.502 --> 00:47:17.659 though you might see that maybe teenagers  
NOTE Confidence: 0.623773878888889

00:47:17.659 --> 00:47:20.518 in Sicily at this point had not  
NOTE Confidence: 0.623773878888889

00:47:20.518 --> 00:47:22.552 discovered cannabis and they were still  
NOTE Confidence: 0.623773878888889

00:47:22.552 --> 00:47:24.518 hanging about the ice cream parlour.  
NOTE Confidence: 0.623773878888889

00:47:24.520 --> 00:47:26.875 But what we really need  
NOTE Confidence: 0.623773878888889

00:47:26.875 --> 00:47:28.759 is a proper replication.  
NOTE Confidence: 0.623773878888889

00:47:28.760 --> 00:47:31.160 So this is a study called  
NOTE Confidence: 0.623773878888889

00:47:31.160 --> 00:47:33.732 Intrepid in three countries,  
NOTE Confidence: 0.623773878888889

00:47:33.732 --> 00:47:38.076 Chennai or near Chennai in India,  
NOTE Confidence: 0.623773878888889

00:47:38.080 --> 00:47:41.600 Nigeria, Ibadan, a big city,  
NOTE Confidence: 0.623773878888889

00:47:41.600 --> 00:47:45.275 and Trinidad and Tobago and the Caribbean.  
NOTE Confidence: 0.623773878888889

00:47:45.280 --> 00:47:49.142 And it's mostly done by Craig Morgan.

NOTE Confidence: 0.623773878888889  
00:47:49.142 --> 00:47:50.797 And this is the incidence,  
NOTE Confidence: 0.623773878888889  
00:47:50.800 --> 00:47:53.746 the same sort of study as the EUGI study.  
NOTE Confidence: 0.623773878888889  
00:47:53.746 --> 00:47:55.798 So here is India.  
NOTE Confidence: 0.623773878888889  
00:47:55.800 --> 00:47:58.915 This is the incidence of psychosis in  
NOTE Confidence: 0.623773878888889  
00:47:58.920 --> 00:48:01.240 Kashnipuram, which is near Chennai.  
NOTE Confidence: 0.623773878888889  
00:48:01.240 --> 00:48:02.216 Pretty low.  
NOTE Confidence: 0.623773878888889  
00:48:02.216 --> 00:48:04.160 Here is Ebadan, a bigger,  
NOTE Confidence: 0.623773878888889  
00:48:04.160 --> 00:48:06.568 a big city, pretty low in Nigeria.  
NOTE Confidence: 0.623773878888889  
00:48:06.568 --> 00:48:09.760 Here is Trinidad, very high.  
NOTE Confidence: 0.623773878888889  
00:48:09.760 --> 00:48:12.560 So what is the reason that Trinidad  
NOTE Confidence: 0.623773878888889  
00:48:12.560 --> 00:48:13.360 is different?  
NOTE Confidence: 0.623773878888889  
00:48:13.360 --> 00:48:14.680 What about looking at cannabis?  
NOTE Confidence: 0.623773878888889  
00:48:14.680 --> 00:48:16.560 So this is the same sort of study,  
NOTE Confidence: 0.623773878888889  
00:48:16.560 --> 00:48:18.594 the same sort of figure as you saw before,  
NOTE Confidence: 0.623773878888889  
00:48:18.600 --> 00:48:21.032 except this time psychosis  
NOTE Confidence: 0.623773878888889

00:48:21.032 --> 00:48:22.760 incidence is in black,  
NOTE Confidence: 0.623773878888889

00:48:22.760 --> 00:48:26.824 showing it's much higher in Trinidad and I.  
NOTE Confidence: 0.623773878888889

00:48:26.824 --> 00:48:29.084 Here is cannabis use frequent  
NOTE Confidence: 0.623773878888889

00:48:29.084 --> 00:48:31.320 cannabis use in controls,  
NOTE Confidence: 0.623773878888889

00:48:31.320 --> 00:48:33.592 uncommon in rural India,  
NOTE Confidence: 0.623773878888889

00:48:33.592 --> 00:48:37.799 a little more common in than in men,  
NOTE Confidence: 0.623773878888889

00:48:37.799 --> 00:48:40.517 but much more common in Trinidad.  
NOTE Confidence: 0.623773878888889

00:48:40.520 --> 00:48:41.651 People in Trinidad,  
NOTE Confidence: 0.623773878888889

00:48:41.651 --> 00:48:43.913 half have come from Africa and  
NOTE Confidence: 0.623773878888889

00:48:43.913 --> 00:48:45.800 half have come from India.  
NOTE Confidence: 0.623773878888889

00:48:45.800 --> 00:48:46.985 And it's people,  
NOTE Confidence: 0.623773878888889

00:48:46.985 --> 00:48:48.960 particularly the people from Africa,  
NOTE Confidence: 0.623773878888889

00:48:48.960 --> 00:48:51.936 who use a lot of cannabis and have  
NOTE Confidence: 0.623773878888889

00:48:51.936 --> 00:48:54.186 the highest incidence of psychosis.  
NOTE Confidence: 0.623773878888889

00:48:54.186 --> 00:48:57.198 So this really replicates the EU  
NOTE Confidence: 0.623773878888889

00:48:57.200 --> 00:49:01.340 study and does suggest that that's



NOTE Confidence: 0.623773878888889

00:49:01.340 --> 00:49:04.998 a the heavier use of cannabis is

NOTE Confidence: 0.623773878888889

00:49:04.998 --> 00:49:07.599 associated with high incidence of psychosis.

NOTE Confidence: 0.623773878888889

00:49:07.600 --> 00:49:11.310 The the the average THC in cannabis

NOTE Confidence: 0.623773878888889

00:49:11.310 --> 00:49:16.796 in by Trinidad is say is say about

NOTE Confidence: 0.623773878888889

00:49:16.800 --> 00:49:19.110 25% so higher certainly than in

NOTE Confidence: 0.623773878888889

00:49:19.110 --> 00:49:21.636 London and these are amongst the

NOTE Confidence: 0.623773878888889

00:49:21.636 --> 00:49:24.360 highest psychosis rates in the world.

NOTE Confidence: 0.623773878888889

00:49:24.360 --> 00:49:24.800 So

NOTE Confidence: 0.931728268461538

00:49:26.840 --> 00:49:29.115 the amount of cannabis used in different

NOTE Confidence: 0.931728268461538

00:49:29.115 --> 00:49:31.360 countries affects the incidence of psychosis.

NOTE Confidence: 0.931728268461538

00:49:31.360 --> 00:49:33.658 What about taking one country and

NOTE Confidence: 0.931728268461538

00:49:33.658 --> 00:49:36.086 seeing whether changes in the pattern

NOTE Confidence: 0.931728268461538

00:49:36.086 --> 00:49:38.161 of cannabis associated with changes

NOTE Confidence: 0.931728268461538

00:49:38.161 --> 00:49:40.320 in the incidence of psychosis?

NOTE Confidence: 0.931728268461538

00:49:40.320 --> 00:49:42.480 So some of you will maybe know this study

NOTE Confidence: 0.931728268461538

00:49:42.480 --> 00:49:46.560 from Carsten Horshop in in Denmark.

NOTE Confidence: 0.931728268461538

00:49:46.560 --> 00:49:50.400 This is the incidence of schizophrenia

NOTE Confidence: 0.931728268461538

00:49:50.400 --> 00:49:53.520 in Denmark. And of course during this

NOTE Confidence: 0.931728268461538

00:49:53.520 --> 00:49:55.776 period the consumption of cannabis and

NOTE Confidence: 0.931728268461538

00:49:55.776 --> 00:49:58.931 its potency has increased and this is

NOTE Confidence: 0.931728268461538

00:49:58.931 --> 00:50:01.239 the population attributable fraction.

NOTE Confidence: 0.931728268461538

00:50:01.240 --> 00:50:03.310 So this is the proportion of

NOTE Confidence: 0.931728268461538

00:50:03.310 --> 00:50:05.000 kind of schizophrenia which the,

NOTE Confidence: 0.931728268461538

00:50:05.000 --> 00:50:07.598 the and where the individual with

NOTE Confidence: 0.931728268461538

00:50:07.598 --> 00:50:09.330 schizophrenia had previously been

NOTE Confidence: 0.931728268461538

00:50:09.398 --> 00:50:11.918 hospitalized for cannabis use disorder.

NOTE Confidence: 0.931728268461538

00:50:11.920 --> 00:50:14.181 So there's very severe cannabis use and

NOTE Confidence: 0.931728268461538

00:50:14.181 --> 00:50:17.536 you can see that say the proportion of

NOTE Confidence: 0.931728268461538

00:50:17.536 --> 00:50:19.392 schizophrenia attributable to cannabis,

NOTE Confidence: 0.931728268461538

00:50:19.400 --> 00:50:22.440 cannabis use dependent cannabis

NOTE Confidence: 0.931728268461538

00:50:22.440 --> 00:50:25.480 dependence was steadily increasing.

NOTE Confidence: 0.931728268461538

00:50:25.480 --> 00:50:29.638 We've done a study a similar study in London.

NOTE Confidence: 0.931728268461538

00:50:29.640 --> 00:50:32.928 We have good data on schizophrenia.

NOTE Confidence: 0.931728268461538

00:50:32.928 --> 00:50:34.400 This is not psychosis.

NOTE Confidence: 0.931728268461538

00:50:34.400 --> 00:50:36.320 This is schizophrenia since the

NOTE Confidence: 0.931728268461538

00:50:36.320 --> 00:50:38.400 1960s and that's in blue.

NOTE Confidence: 0.931728268461538

00:50:38.400 --> 00:50:41.320 Here you can see it started off low.

NOTE Confidence: 0.931728268461538

00:50:41.320 --> 00:50:44.680 So this is 11 per 100,000 that

NOTE Confidence: 0.931728268461538

00:50:44.680 --> 00:50:46.120 schizophrenia not psychosis.

NOTE Confidence: 0.931728268461538

00:50:46.120 --> 00:50:50.080 It had doubled by the the the 1990s

NOTE Confidence: 0.931728268461538

00:50:50.080 --> 00:50:53.913 and then it had trebled by a 2012

NOTE Confidence: 0.931728268461538

00:50:53.913 --> 00:50:57.474 and the orange shows the the rise

NOTE Confidence: 0.931728268461538

00:50:57.474 --> 00:50:59.553 at the same time in cannabis use.

NOTE Confidence: 0.931728268461538

00:50:59.560 --> 00:51:00.404 So again,

NOTE Confidence: 0.931728268461538

00:51:00.404 --> 00:51:02.514 this is correlational but suggestive.

NOTE Confidence: 0.962137291666667

00:51:04.680 --> 00:51:07.137 The place in the world which smokes

NOTE Confidence: 0.962137291666667

00:51:07.137 --> 00:51:08.919 the most cannabis is Canada,  
NOTE Confidence: 0.962137291666667

00:51:08.920 --> 00:51:13.366 and a consumption of cannabis has  
NOTE Confidence: 0.962137291666667

00:51:13.366 --> 00:51:17.199 been steadily rising since it was  
NOTE Confidence: 0.962137291666667

00:51:17.200 --> 00:51:20.022 legalised for medicinal use in 2006.  
NOTE Confidence: 0.962137291666667

00:51:20.022 --> 00:51:23.078 And you can see that the black here,  
NOTE Confidence: 0.962137291666667

00:51:23.080 --> 00:51:24.216 psychotic disorder,  
NOTE Confidence: 0.962137291666667

00:51:24.216 --> 00:51:26.488 the number of hospitalizations  
NOTE Confidence: 0.962137291666667

00:51:26.488 --> 00:51:30.226 for psychotic disorder has has  
NOTE Confidence: 0.962137291666667

00:51:30.226 --> 00:51:32.920 trebled over a 10 year period.  
NOTE Confidence: 0.868103732857143

00:51:35.720 --> 00:51:39.128 And here again this is the the in in,  
NOTE Confidence: 0.868103732857143

00:51:39.128 --> 00:51:43.292 so in 2000, in 2001 they  
NOTE Confidence: 0.868103732857143

00:51:43.292 --> 00:51:45.476 legalized for medicinal use,  
NOTE Confidence: 0.868103732857143

00:51:45.480 --> 00:51:49.956 in 2018 legalised for recreational use.  
NOTE Confidence: 0.868103732857143

00:51:49.960 --> 00:51:54.760 And the green is showing visits to emergency  
NOTE Confidence: 0.868103732857143

00:51:54.760 --> 00:51:58.840 clinics for cannabis use, a disorder.  
NOTE Confidence: 0.868103732857143

00:51:58.840 --> 00:52:01.900 So you can see a steady increase as we've

NOTE Confidence: 0.868103732857143

00:52:01.900 --> 00:52:05.120 already alluded to when they legalised.

NOTE Confidence: 0.868103732857143

00:52:05.120 --> 00:52:08.000 At first there was a lot of confusion

NOTE Confidence: 0.868103732857143

00:52:08.000 --> 00:52:10.800 and the cannabis shops hadn't opened

NOTE Confidence: 0.868103732857143

00:52:10.800 --> 00:52:14.639 and they couldn't say they they they

NOTE Confidence: 0.868103732857143

00:52:14.639 --> 00:52:16.992 couldn't get a available cannabis.

NOTE Confidence: 0.868103732857143

00:52:16.992 --> 00:52:19.519 And of course it was also the time of COVID,

NOTE Confidence: 0.868103732857143

00:52:19.520 --> 00:52:20.780 so the legalization didn't seem

NOTE Confidence: 0.868103732857143

00:52:20.780 --> 00:52:22.680 to make a lot of difference.

NOTE Confidence: 0.868103732857143

00:52:22.680 --> 00:52:26.264 But once the shops all opened and the

NOTE Confidence: 0.868103732857143

00:52:26.264 --> 00:52:28.780 big commercial operations got going and

NOTE Confidence: 0.868103732857143

00:52:28.780 --> 00:52:31.618 chains of cannabis use a cannabis say

NOTE Confidence: 0.868103732857143

00:52:31.618 --> 00:52:34.054 the dispensaries opened then you could

NOTE Confidence: 0.868103732857143

00:52:34.054 --> 00:52:36.426 see that consumption increased and so

NOTE Confidence: 0.868103732857143

00:52:36.426 --> 00:52:39.600 did a visits to the emergency clinic.

NOTE Confidence: 0.868103732857143

00:52:39.600 --> 00:52:42.210 You may and wonder what are these brown the

NOTE Confidence: 0.868103732857143

00:52:42.210 --> 00:52:44.637 brown rates is methamphetamine psychosis.

NOTE Confidence: 0.868103732857143

00:52:44.640 --> 00:52:47.928 So you can see that methamphetamine

NOTE Confidence: 0.868103732857143

00:52:47.928 --> 00:52:50.880 psychosis has also been steadily

NOTE Confidence: 0.868103732857143

00:52:50.880 --> 00:52:53.108 increasing in in this isn't this

NOTE Confidence: 0.868103732857143

00:52:53.108 --> 00:52:54.393 excuse me this is Ontario.

NOTE Confidence: 0.877311813333333

00:52:58.480 --> 00:53:01.536 You'd as you know there's been a race

NOTE Confidence: 0.877311813333333

00:53:01.536 --> 00:53:03.600 to more potent forms of cannabinoids

NOTE Confidence: 0.877311813333333

00:53:03.600 --> 00:53:05.976 and I'm sure you have much greater

NOTE Confidence: 0.877311813333333

00:53:05.976 --> 00:53:08.512 experience of of this than than I have.

NOTE Confidence: 0.877311813333333

00:53:08.520 --> 00:53:14.518 You can now get up to 90% or 95% a a cannabis

NOTE Confidence: 0.958029665714286

00:53:16.560 --> 00:53:22.200 and here is the this is the the regular

NOTE Confidence: 0.86947869

00:53:24.680 --> 00:53:28.382 assessment of THC potency in the

NOTE Confidence: 0.86947869

00:53:28.382 --> 00:53:31.820 brown is in a smoked cannabis and here

NOTE Confidence: 0.86947869

00:53:31.820 --> 00:53:34.177 is the green is an edible cannabis

NOTE Confidence: 0.86947869

00:53:34.177 --> 00:53:37.440 going up to an average of 60% THC.

NOTE Confidence: 0.825393999444445

00:53:39.640 --> 00:53:43.749 So my last slide will legalisation and

NOTE Confidence: 0.825393999444445

00:53:43.749 --> 00:53:46.793 commercialisation of cannabis use increase

NOTE Confidence: 0.825393999444445

00:53:46.793 --> 00:53:50.357 the incidence and prevalence of psychosis?

NOTE Confidence: 0.825393999444445

00:53:50.360 --> 00:53:53.987 Well, I I think it ought to be possible

NOTE Confidence: 0.825393999444445

00:53:53.987 --> 00:53:57.644 to legalise cannabis and not increase

NOTE Confidence: 0.825393999444445

00:53:57.644 --> 00:54:01.200 its use and not increase its potency.

NOTE Confidence: 0.825393999444445

00:54:01.200 --> 00:54:04.674 But no western country has done that so far.

NOTE Confidence: 0.825393999444445

00:54:04.680 --> 00:54:08.420 Whatever, by legalization where whatever

NOTE Confidence: 0.825393999444445

00:54:08.420 --> 00:54:11.588 the rules for legalization have relaxed,

NOTE Confidence: 0.825393999444445

00:54:11.588 --> 00:54:14.090 there's been an increase in the

NOTE Confidence: 0.825393999444445

00:54:14.163 --> 00:54:16.515 use and an increase in the potency.

NOTE Confidence: 0.825393999444445

00:54:16.520 --> 00:54:19.464 But I think this is often driven by

NOTE Confidence: 0.825393999444445

00:54:19.464 --> 00:54:20.920 commercialization that say again,

NOTE Confidence: 0.825393999444445

00:54:20.920 --> 00:54:23.080 I guess as again as you,

NOTE Confidence: 0.825393999444445

00:54:23.080 --> 00:54:26.092 you'll probably know that that's the sort

NOTE Confidence: 0.825393999444445

00:54:26.092 --> 00:54:30.008 of little local the the the the local.

NOTE Confidence: 0.825393999444445

00:54:30.008 --> 00:54:33.846 The idea was that the local poor or  
NOTE Confidence: 0.825393999444445

00:54:33.846 --> 00:54:36.504 minority people who are drug dealers  
NOTE Confidence: 0.825393999444445

00:54:36.504 --> 00:54:39.031 would become legalised and then they  
NOTE Confidence: 0.825393999444445

00:54:39.031 --> 00:54:42.000 would run a they would run medicinal  
NOTE Confidence: 0.825393999444445

00:54:42.000 --> 00:54:43.800 or recreational cannabis dispensaries,  
NOTE Confidence: 0.825393999444445

00:54:43.800 --> 00:54:45.760 but in fact they these have all  
NOTE Confidence: 0.825393999444445

00:54:45.760 --> 00:54:46.840 been bought out by,  
NOTE Confidence: 0.825393999444445

00:54:46.840 --> 00:54:49.415 or mostly bought out by  
NOTE Confidence: 0.825393999444445

00:54:49.415 --> 00:54:50.960 big cannabis companies.  
NOTE Confidence: 0.825393999444445

00:54:50.960 --> 00:54:54.713 Here is the the the US cannabis retail sales.  
NOTE Confidence: 0.825393999444445

00:54:54.720 --> 00:54:59.760 We're currently in 2023 and you can see  
NOTE Confidence: 0.825393999444445

00:54:59.760 --> 00:55:04.690 that the sales are about say 35 billion  
NOTE Confidence: 0.825393999444445

00:55:04.690 --> 00:55:08.570 I think and they're expected to go up  
NOTE Confidence: 0.825393999444445

00:55:08.678 --> 00:55:13.720 to over to about 60 billion by 2026.  
NOTE Confidence: 0.825393999444445

00:55:13.720 --> 00:55:17.844 So this is big business and of course a lot  
NOTE Confidence: 0.825393999444445

00:55:17.844 --> 00:55:21.396 of a lot of companies have empty factories,



NOTE Confidence: 0.825393999444445  
00:55:21.400 --> 00:55:23.660 a particularly tobacco companies.  
NOTE Confidence: 0.825393999444445  
00:55:23.660 --> 00:55:27.487 So cigarette companies are not selling so  
NOTE Confidence: 0.825393999444445  
00:55:27.487 --> 00:55:30.744 much in the way of cigarettes in the West.  
NOTE Confidence: 0.825393999444445  
00:55:30.744 --> 00:55:33.320 So they're looking around for new products.  
NOTE Confidence: 0.825393999444445  
00:55:33.320 --> 00:55:35.020 So they've been buying into  
NOTE Confidence: 0.825393999444445  
00:55:35.020 --> 00:55:36.720 cannabis companies and of course  
NOTE Confidence: 0.825393999444445  
00:55:36.777 --> 00:55:38.757 hedge funds have also been putting,  
NOTE Confidence: 0.825393999444445  
00:55:38.760 --> 00:55:41.460 putting a lot of money into  
NOTE Confidence: 0.825393999444445  
00:55:41.460 --> 00:55:42.360 cannabis companies.  
NOTE Confidence: 0.825393999444445  
00:55:42.360 --> 00:55:47.824 So I think the question is I how would you?  
NOTE Confidence: 0.825393999444445  
00:55:47.824 --> 00:55:50.718 In a sense we we have the same people  
NOTE Confidence: 0.825393999444445  
00:55:50.718 --> 00:55:53.539 who brought us lung cancer are now  
NOTE Confidence: 0.825393999444445  
00:55:53.539 --> 00:55:55.344 investing heavily in a cannabis  
NOTE Confidence: 0.825393999444445  
00:55:55.344 --> 00:55:57.200 in the cannabis industry.  
NOTE Confidence: 0.825393999444445  
00:55:57.200 --> 00:56:01.048 And the question is it took us 60  
NOTE Confidence: 0.825393999444445

00:56:01.048 --> 00:56:04.877 years to wake up to the effect of  
NOTE Confidence: 0.825393999444445

00:56:04.880 --> 00:56:06.440 of tobacco and lung cancer.  
NOTE Confidence: 0.825393999444445

00:56:06.440 --> 00:56:09.360 How long is it going to take before  
NOTE Confidence: 0.825393999444445

00:56:09.360 --> 00:56:11.454 politicians and the country as a  
NOTE Confidence: 0.825393999444445

00:56:11.454 --> 00:56:13.927 whole wake up to the effects of  
NOTE Confidence: 0.825393999444445

00:56:13.927 --> 00:56:16.717 cannabis on psychosis or the the  
NOTE Confidence: 0.825393999444445

00:56:16.717 --> 00:56:19.364 commercialisation of cannabis on psychosis?  
NOTE Confidence: 0.825393999444445

00:56:19.364 --> 00:56:23.780 So I will stop at at that point and  
NOTE Confidence: 0.825393999444445

00:56:23.780 --> 00:56:25.880 I'm very happy to answer questions  
NOTE Confidence: 0.825393999444445

00:56:25.880 --> 00:56:28.280 or this have discussion or argument  
NOTE Confidence: 0.825393999444445

00:56:28.280 --> 00:56:31.279 and I'm very interested to learn of  
NOTE Confidence: 0.825393999444445

00:56:31.279 --> 00:56:34.026 your experience because we don't  
NOTE Confidence: 0.825393999444445

00:56:34.026 --> 00:56:38.040 have we have unofficial legalization  
NOTE Confidence: 0.929861575454545

00:56:40.600 --> 00:56:43.127 you can be arrested by a policeman  
NOTE Confidence: 0.929861575454545

00:56:43.127 --> 00:56:45.112 for smoking cannabis but they say  
NOTE Confidence: 0.929861575454545

00:56:45.112 --> 00:56:47.377 only if you blow the smoke in his

NOTE Confidence: 0.929861575454545

00:56:47.377 --> 00:56:49.500 face otherwise they they they they

NOTE Confidence: 0.929861575454545

00:56:49.500 --> 00:56:51.878 won't they'll just they tell you not

NOTE Confidence: 0.929861575454545

00:56:51.878 --> 00:56:54.000 to do it and and go on your way.