

WEBVTT

NOTE duration:"01:00:24"

NOTE recognizability:0.821

NOTE language:en-us

NOTE Confidence: 0.752825055882353

00:00:00.000 --> 00:00:02.724 Let's welcome everyone pleased to be

NOTE Confidence: 0.752825055882353

00:00:02.724 --> 00:00:05.686 able to introduce garlic parsley from

NOTE Confidence: 0.752825055882353

00:00:05.686 --> 00:00:08.346 Boston University School of Medicine,

NOTE Confidence: 0.752825055882353

00:00:08.350 --> 00:00:10.590 School of Dental Medicine.

NOTE Confidence: 0.752825055882353

00:00:10.590 --> 00:00:12.174 Who's going to give us our talk today?

NOTE Confidence: 0.752825055882353

00:00:12.180 --> 00:00:15.099 She's a she's actually a a special

NOTE Confidence: 0.752825055882353

00:00:15.099 --> 00:00:18.489 asset to our Sleep Medicine program.

NOTE Confidence: 0.752825055882353

00:00:18.490 --> 00:00:20.716 And we're fortunate to have her there.

NOTE Confidence: 0.752825055882353

00:00:20.720 --> 00:00:23.498 She's, she's a clinical assistant professor,

NOTE Confidence: 0.752825055882353

00:00:23.500 --> 00:00:26.000 associate professor of in in

NOTE Confidence: 0.752825055882353

00:00:26.000 --> 00:00:28.500 the School of Dental Medicine.

NOTE Confidence: 0.752825055882353

00:00:28.500 --> 00:00:30.800 She recently got her.

NOTE Confidence: 0.752825055882353

00:00:30.800 --> 00:00:33.540 Doctorate of Dental Science in

NOTE Confidence: 0.752825055882353

00:00:33.540 --> 00:00:36.080 2006 from the University Pacific
NOTE Confidence: 0.752825055882353

00:00:36.080 --> 00:00:38.620 Arthur Dugoni School of Dentistry.
NOTE Confidence: 0.752825055882353

00:00:38.620 --> 00:00:40.876 She then came to Boston University
NOTE Confidence: 0.752825055882353

00:00:40.876 --> 00:00:43.020 Goldman School of Dental Medicine.
NOTE Confidence: 0.752825055882353

00:00:43.020 --> 00:00:46.818 She completed her training in Orthodontics,
NOTE Confidence: 0.752825055882353

00:00:46.820 --> 00:00:49.628 Orthodontics, and Dentofacial Orthopedics.
NOTE Confidence: 0.752825055882353

00:00:49.628 --> 00:00:51.734 She went on,
NOTE Confidence: 0.752825055882353

00:00:51.740 --> 00:00:54.458 also got her doctorate in science
NOTE Confidence: 0.752825055882353

00:00:54.458 --> 00:00:55.817 of dental medicine,
NOTE Confidence: 0.752825055882353

00:00:55.820 --> 00:00:59.672 and also has a certificate of
NOTE Confidence: 0.752825055882353

00:00:59.672 --> 00:01:01.910 Advanced graduate Science.
NOTE Confidence: 0.752825055882353

00:01:01.910 --> 00:01:05.090 In north and orthodontics.
NOTE Confidence: 0.752825055882353

00:01:05.090 --> 00:01:07.900 I think I've got it all and she's gone on.
NOTE Confidence: 0.752825055882353

00:01:07.900 --> 00:01:09.212 She's been particularly interested
NOTE Confidence: 0.752825055882353

00:01:09.212 --> 00:01:10.852 in upper airway development and
NOTE Confidence: 0.752825055882353

00:01:10.852 --> 00:01:12.453 also it's been interesting in

NOTE Confidence: 0.752825055882353

00:01:12.453 --> 00:01:13.677 relationship to sleep apnea.

NOTE Confidence: 0.752825055882353

00:01:13.680 --> 00:01:15.346 And with all of that I'm very

NOTE Confidence: 0.752825055882353

00:01:15.346 --> 00:01:16.300 pleased to introduce her.

NOTE Confidence: 0.854527851666667

00:01:18.220 --> 00:01:19.708 Thank you so much, Doctor Orbach.

NOTE Confidence: 0.854527851666667

00:01:19.710 --> 00:01:22.530 Thank you to the host of

NOTE Confidence: 0.854527851666667

00:01:22.530 --> 00:01:23.940 this wonderful meeting.

NOTE Confidence: 0.854527851666667

00:01:23.940 --> 00:01:26.172 I'm pleased to have been invited

NOTE Confidence: 0.854527851666667

00:01:26.172 --> 00:01:29.397 and I hope I that you'll find my.

NOTE Confidence: 0.854527851666667

00:01:29.400 --> 00:01:30.134 Presentation useful.

NOTE Confidence: 0.854527851666667

00:01:30.134 --> 00:01:32.703 I know that I'm probably speaking to

NOTE Confidence: 0.854527851666667

00:01:32.703 --> 00:01:34.800 most of you in the medical field,

NOTE Confidence: 0.854527851666667

00:01:34.800 --> 00:01:37.797 so I'm coming from the dental side of things.

NOTE Confidence: 0.854527851666667

00:01:37.800 --> 00:01:40.260 So I hope that some of it will be new

NOTE Confidence: 0.854527851666667

00:01:40.336 --> 00:01:42.866 and I apologize if if a bunch of it is

NOTE Confidence: 0.854527851666667

00:01:42.938 --> 00:01:45.536 redundant where the overlap is between,

NOTE Confidence: 0.854527851666667

00:01:45.540 --> 00:01:47.224 I guess our fields.
NOTE Confidence: 0.854527851666667

00:01:47.224 --> 00:01:48.908 So without further ado,
NOTE Confidence: 0.854527851666667

00:01:48.910 --> 00:01:51.990 I believe I need to show this.
NOTE Confidence: 0.854527851666667

00:01:51.990 --> 00:01:53.138 Uh, Sammy,
NOTE Confidence: 0.854527851666667

00:01:53.138 --> 00:01:55.434 disclosure and accreditation for
NOTE Confidence: 0.854527851666667

00:01:55.434 --> 00:01:58.704 the numbers that you may need
NOTE Confidence: 0.854527851666667

00:01:58.704 --> 00:02:01.777 and I do not have any conflict
NOTE Confidence: 0.854527851666667

00:02:01.777 --> 00:02:04.380 financial interest in any of the.
NOTE Confidence: 0.854527851666667

00:02:04.380 --> 00:02:05.645 Portions of the lecture that
NOTE Confidence: 0.854527851666667

00:02:05.645 --> 00:02:06.657 I will be giving.
NOTE Confidence: 0.854527851666667

00:02:06.660 --> 00:02:07.624 So the outline today,
NOTE Confidence: 0.854527851666667

00:02:07.624 --> 00:02:09.819 I would like to go over a little bit
NOTE Confidence: 0.854527851666667

00:02:09.819 --> 00:02:11.624 for you all about how craniofacial
NOTE Confidence: 0.854527851666667

00:02:11.624 --> 00:02:14.276 growth may be associated with sleep
NOTE Confidence: 0.854527851666667

00:02:14.276 --> 00:02:15.996 disorder breathing and particularly
NOTE Confidence: 0.854527851666667

00:02:15.996 --> 00:02:18.312 in children and as they grow

NOTE Confidence: 0.854527851666667
00:02:18.312 --> 00:02:20.020 into adolescence and adulthood.
NOTE Confidence: 0.854527851666667
00:02:20.020 --> 00:02:23.050 And how we as dentists and
NOTE Confidence: 0.854527851666667
00:02:23.050 --> 00:02:24.991 orthodontists use our screening
NOTE Confidence: 0.854527851666667
00:02:24.991 --> 00:02:27.376 tools and other clinical diagnosis
NOTE Confidence: 0.854527851666667
00:02:27.376 --> 00:02:29.774 and imaging techniques to understand
NOTE Confidence: 0.854527851666667
00:02:29.774 --> 00:02:32.049 what treatment we can offer
NOTE Confidence: 0.854527851666667
00:02:32.049 --> 00:02:34.599 and when to refer to you guys.
NOTE Confidence: 0.854527851666667
00:02:34.600 --> 00:02:36.301 And went to or which specialty we
NOTE Confidence: 0.854527851666667
00:02:36.301 --> 00:02:38.250 need to make appropriate referrals to
NOTE Confidence: 0.854527851666667
00:02:38.250 --> 00:02:40.180 and then ultimately what treatment
NOTE Confidence: 0.854527851666667
00:02:40.180 --> 00:02:41.966 modalities we can offer because at
NOTE Confidence: 0.854527851666667
00:02:41.966 --> 00:02:44.596 the end of the day we're all the
NOTE Confidence: 0.854527851666667
00:02:44.596 --> 00:02:47.056 team addressing a multifactorial
NOTE Confidence: 0.854527851666667
00:02:47.056 --> 00:02:49.720 problem in these children.
NOTE Confidence: 0.854527851666667
00:02:49.720 --> 00:02:52.240 So let's talk a little bit about
NOTE Confidence: 0.854527851666667

00:02:52.240 --> 00:02:53.707 craniofacial growth and that's
NOTE Confidence: 0.854527851666667

00:02:53.707 --> 00:02:55.954 the part that I'm hoping that may
NOTE Confidence: 0.854527851666667

00:02:55.954 --> 00:02:58.080 have some new notes for you all.
NOTE Confidence: 0.854527851666667

00:02:58.080 --> 00:03:00.327 You know as an orthodontist that I
NOTE Confidence: 0.854527851666667

00:03:00.327 --> 00:03:02.699 work with patients at an age where a
NOTE Confidence: 0.854527851666667

00:03:02.699 --> 00:03:04.400 lot about their faces, their bites,
NOTE Confidence: 0.854527851666667

00:03:04.400 --> 00:03:06.260 their teeth is going to change.
NOTE Confidence: 0.854527851666667

00:03:06.260 --> 00:03:08.178 I do see how the growth and
NOTE Confidence: 0.854527851666667

00:03:08.178 --> 00:03:10.152 development of the heart tissue and
NOTE Confidence: 0.854527851666667

00:03:10.152 --> 00:03:11.967 the soft tissue structures that
NOTE Confidence: 0.854527851666667

00:03:11.967 --> 00:03:13.762 surround the airway that starts
NOTE Confidence: 0.854527851666667

00:03:13.762 --> 00:03:15.766 from the nerves to the epiglottis
NOTE Confidence: 0.854527851666667

00:03:15.766 --> 00:03:17.448 and can affect the airway.
NOTE Confidence: 0.854527851666667

00:03:17.448 --> 00:03:19.636 So in a sense we have.
NOTE Confidence: 0.854527851666667

00:03:19.636 --> 00:03:21.726 The development of the softened
NOTE Confidence: 0.854527851666667

00:03:21.726 --> 00:03:24.203 heart tissues and that are happening

NOTE Confidence: 0.854527851666667
00:03:24.203 --> 00:03:26.877 as the child is growing and that's
NOTE Confidence: 0.854527851666667
00:03:26.953 --> 00:03:29.185 having an impact on the airway.
NOTE Confidence: 0.854527851666667
00:03:29.190 --> 00:03:30.912 And then the growth of the airway
NOTE Confidence: 0.854527851666667
00:03:30.912 --> 00:03:32.756 or any sort of impairment in the
NOTE Confidence: 0.854527851666667
00:03:32.756 --> 00:03:34.702 growth of the airway can in turn
NOTE Confidence: 0.854527851666667
00:03:34.702 --> 00:03:36.262 affect how the skeletal tissues
NOTE Confidence: 0.854527851666667
00:03:36.262 --> 00:03:38.614 and the soft tissues around it in
NOTE Confidence: 0.854527851666667
00:03:38.614 --> 00:03:40.454 the craniofacial region are going
NOTE Confidence: 0.854527851666667
00:03:40.454 --> 00:03:42.548 to respond and grow in the end.
NOTE Confidence: 0.854527851666667
00:03:42.550 --> 00:03:44.620 So we consider it as airway
NOTE Confidence: 0.854527851666667
00:03:44.620 --> 00:03:46.648 functioning as a keystone for the
NOTE Confidence: 0.854527851666667
00:03:46.648 --> 00:03:48.944 face and how the blueprint of the of
NOTE Confidence: 0.854527851666667
00:03:49.010 --> 00:03:51.488 the growth of the skeletal structures.
NOTE Confidence: 0.854527851666667
00:03:51.490 --> 00:03:53.290 And the and the bones of the jaws,
NOTE Confidence: 0.854527851666667
00:03:53.290 --> 00:03:54.556 the upper jaw and the lower
NOTE Confidence: 0.854527851666667

00:03:54.556 --> 00:03:56.008 jaw really is not in the bone,
NOTE Confidence: 0.854527851666667

00:03:56.010 --> 00:03:58.075 but it's in the structures around it,
NOTE Confidence: 0.854527851666667

00:03:58.080 --> 00:04:00.728 including the muscles, the,
NOTE Confidence: 0.854527851666667

00:04:00.730 --> 00:04:02.140 the, you know, the tongue,
NOTE Confidence: 0.854527851666667

00:04:02.140 --> 00:04:02.583 the,
NOTE Confidence: 0.854527851666667

00:04:02.583 --> 00:04:05.684 the facial structures and the airway itself.
NOTE Confidence: 0.854527851666667

00:04:05.690 --> 00:04:08.624 So it all goes into a two way St.
NOTE Confidence: 0.854527851666667

00:04:08.630 --> 00:04:11.924 in a way one affects the other very closely.
NOTE Confidence: 0.854527851666667

00:04:11.930 --> 00:04:15.800 So it takes about 16 to 18 years for you
NOTE Confidence: 0.887761496363636

00:04:15.905 --> 00:04:17.558 know, to fully develop from
NOTE Confidence: 0.887761496363636

00:04:17.558 --> 00:04:19.310 a newborn to an adult face.
NOTE Confidence: 0.887761496363636

00:04:19.310 --> 00:04:21.788 And during this process there's many
NOTE Confidence: 0.887761496363636

00:04:21.788 --> 00:04:23.440 environmental variables that are
NOTE Confidence: 0.887761496363636

00:04:23.502 --> 00:04:25.728 acting on what could have genetically
NOTE Confidence: 0.887761496363636

00:04:25.728 --> 00:04:27.898 been programmed for face to turn
NOTE Confidence: 0.887761496363636

00:04:27.898 --> 00:04:29.764 into with what the child inherits

NOTE Confidence: 0.887761496363636
00:04:29.764 --> 00:04:32.460 from their parents and in a sense
NOTE Confidence: 0.887761496363636
00:04:32.460 --> 00:04:34.530 for the nasal maxillary complex.
NOTE Confidence: 0.887761496363636
00:04:34.530 --> 00:04:36.540 And that's really the area that
NOTE Confidence: 0.887761496363636
00:04:36.540 --> 00:04:39.536 you know as an orthodontist I I can
NOTE Confidence: 0.887761496363636
00:04:39.536 --> 00:04:41.900 have any control over and that's.
NOTE Confidence: 0.887761496363636
00:04:41.900 --> 00:04:43.742 Really the area that grows out
NOTE Confidence: 0.887761496363636
00:04:43.742 --> 00:04:45.862 from down and under of the cranial
NOTE Confidence: 0.887761496363636
00:04:45.862 --> 00:04:47.794 base and it is pushed from the
NOTE Confidence: 0.887761496363636
00:04:47.861 --> 00:04:49.847 cranial base and the growth of
NOTE Confidence: 0.887761496363636
00:04:49.847 --> 00:04:51.525 the cranial base around here,
NOTE Confidence: 0.887761496363636
00:04:51.525 --> 00:04:53.250 the anterior portion is about
NOTE Confidence: 0.887761496363636
00:04:53.250 --> 00:04:55.179 done by the age of 6-7.
NOTE Confidence: 0.887761496363636
00:04:55.180 --> 00:04:57.180 So we have a short,
NOTE Confidence: 0.887761496363636
00:04:57.180 --> 00:04:59.490 I guess window of opportunity to maybe
NOTE Confidence: 0.887761496363636
00:04:59.490 --> 00:05:02.428 have any any impact in that area early on.
NOTE Confidence: 0.887761496363636

00:05:02.430 --> 00:05:04.302 And a lot of times I don't even
NOTE Confidence: 0.887761496363636

00:05:04.302 --> 00:05:06.555 get to see a lot of the children
NOTE Confidence: 0.887761496363636

00:05:06.555 --> 00:05:08.595 during that time to to do much work
NOTE Confidence: 0.887761496363636

00:05:08.595 --> 00:05:10.476 and then there's a ton of growth
NOTE Confidence: 0.887761496363636

00:05:10.476 --> 00:05:12.076 still left and continuing on.
NOTE Confidence: 0.887761496363636

00:05:12.080 --> 00:05:13.920 So.
NOTE Confidence: 0.887761496363636

00:05:13.920 --> 00:05:15.135 With that said,
NOTE Confidence: 0.887761496363636

00:05:15.135 --> 00:05:18.178 and what what we really sort of
NOTE Confidence: 0.887761496363636

00:05:18.178 --> 00:05:22.250 bank on a lot of our treatment is
NOTE Confidence: 0.887761496363636

00:05:22.378 --> 00:05:25.126 a very old hypothesis that came
NOTE Confidence: 0.887761496363636

00:05:25.126 --> 00:05:27.919 about by Doctor Melvin Moss and
NOTE Confidence: 0.887761496363636

00:05:27.919 --> 00:05:29.314 that basically introduced the idea
NOTE Confidence: 0.887761496363636

00:05:29.314 --> 00:05:31.428 that the bone growth is under the
NOTE Confidence: 0.887761496363636

00:05:31.428 --> 00:05:32.998 influence of the surrounding structures.
NOTE Confidence: 0.887761496363636

00:05:33.000 --> 00:05:35.785 So the skeletal structures are
NOTE Confidence: 0.887761496363636

00:05:35.785 --> 00:05:38.013 under mostly epigenetic control.

NOTE Confidence: 0.887761496363636

00:05:38.020 --> 00:05:40.337 So the stimulus is coming really from

NOTE Confidence: 0.887761496363636

00:05:40.337 --> 00:05:42.483 the tissues around the bone basically

NOTE Confidence: 0.887761496363636

00:05:42.483 --> 00:05:44.293 to determine their final size.

NOTE Confidence: 0.887761496363636

00:05:44.300 --> 00:05:47.750 Shape and there's strong evidence

NOTE Confidence: 0.887761496363636

00:05:47.750 --> 00:05:50.025 that the the dental structures is

NOTE Confidence: 0.887761496363636

00:05:50.025 --> 00:05:52.110 as much as the Bony structures

NOTE Confidence: 0.887761496363636

00:05:52.110 --> 00:05:54.255 are really affected by this,

NOTE Confidence: 0.887761496363636

00:05:54.260 --> 00:05:55.848 by the external stimuli,

NOTE Confidence: 0.887761496363636

00:05:55.848 --> 00:05:57.039 even the nutrition,

NOTE Confidence: 0.887761496363636

00:05:57.040 --> 00:05:59.758 even having a softer diet versus

NOTE Confidence: 0.887761496363636

00:05:59.758 --> 00:06:02.591 a harder diet that maybe are

NOTE Confidence: 0.887761496363636

00:06:02.591 --> 00:06:05.387 our ancestors were more used to.

NOTE Confidence: 0.887761496363636

00:06:05.390 --> 00:06:07.910 So a little bit about the cranial base.

NOTE Confidence: 0.887761496363636

00:06:07.910 --> 00:06:08.480 You know,

NOTE Confidence: 0.887761496363636

00:06:08.480 --> 00:06:10.190 it connects the skull with the

NOTE Confidence: 0.887761496363636

00:06:10.190 --> 00:06:11.670 vertebral column and the mandible.
NOTE Confidence: 0.887761496363636

00:06:11.670 --> 00:06:14.710 It influences the craniofacial morphology.
NOTE Confidence: 0.887761496363636

00:06:14.710 --> 00:06:16.834 And there's really 2 main ones
NOTE Confidence: 0.887761496363636

00:06:16.834 --> 00:06:19.509 that I want to point out here.
NOTE Confidence: 0.887761496363636

00:06:19.510 --> 00:06:23.290 That's the inner sphenoidal suture here.
NOTE Confidence: 0.887761496363636

00:06:23.290 --> 00:06:26.110 And then there's the spheno
NOTE Confidence: 0.887761496363636

00:06:26.110 --> 00:06:28.366 occipital suture right here.
NOTE Confidence: 0.887761496363636

00:06:28.370 --> 00:06:30.530 And those are the two that,
NOTE Confidence: 0.887761496363636

00:06:30.530 --> 00:06:31.498 you know,
NOTE Confidence: 0.887761496363636

00:06:31.498 --> 00:06:34.886 sort of their growth affects the anterior.
NOTE Confidence: 0.887761496363636

00:06:34.890 --> 00:06:36.546 Out of the cranial basin because
NOTE Confidence: 0.887761496363636

00:06:36.546 --> 00:06:38.780 again as you saw the nasal maxillary
NOTE Confidence: 0.887761496363636

00:06:38.780 --> 00:06:40.910 complex is right underneath that any
NOTE Confidence: 0.887761496363636

00:06:40.910 --> 00:06:43.416 growth in the cranial base effects how long,
NOTE Confidence: 0.887761496363636

00:06:43.420 --> 00:06:46.579 how wide and you know how the size of
NOTE Confidence: 0.887761496363636

00:06:46.579 --> 00:06:50.020 the the nasal maxillary complex for us.

NOTE Confidence: 0.887761496363636

00:06:50.020 --> 00:06:51.870 So the inner entrance interest

NOTE Confidence: 0.887761496363636

00:06:51.870 --> 00:06:52.980 Sphenoidal synchondrosis that's

NOTE Confidence: 0.887761496363636

00:06:52.980 --> 00:06:54.912 that that junction usually for the

NOTE Confidence: 0.887761496363636

00:06:54.912 --> 00:06:56.610 1st 12 months it's it's active

NOTE Confidence: 0.887761496363636

00:06:56.665 --> 00:06:58.210 with this phenoxy Capital One.

NOTE Confidence: 0.887761496363636

00:06:58.210 --> 00:07:00.730 The more posterior one it tends to

NOTE Confidence: 0.887761496363636

00:07:00.730 --> 00:07:03.326 stay active for for a bit longer

NOTE Confidence: 0.887761496363636

00:07:03.326 --> 00:07:05.126 and really it's active even.

NOTE Confidence: 0.887761496363636

00:07:05.130 --> 00:07:06.978 Well into, you know, the teen years,

NOTE Confidence: 0.887761496363636

00:07:06.980 --> 00:07:09.311 and it has been evidence that it

NOTE Confidence: 0.887761496363636

00:07:09.311 --> 00:07:11.868 may not even fully fuse up until,

NOTE Confidence: 0.887761496363636

00:07:11.870 --> 00:07:13.620 you know, maybe 1820 years of age,

NOTE Confidence: 0.887761496363636

00:07:13.620 --> 00:07:14.896 but that's more posteriorly.

NOTE Confidence: 0.887761496363636

00:07:14.896 --> 00:07:16.810 The anterior part of the cranial

NOTE Confidence: 0.887761496363636

00:07:16.864 --> 00:07:18.120 based generally is done.

NOTE Confidence: 0.887761496363636

00:07:18.120 --> 00:07:18.624 You know,
NOTE Confidence: 0.887761496363636
00:07:18.624 --> 00:07:20.640 we can sort of count on it being
NOTE Confidence: 0.891709084
00:07:20.707 --> 00:07:22.027 done by 6-7 years old.
NOTE Confidence: 0.891709084
00:07:22.030 --> 00:07:24.262 But it's flexure as I as I was
NOTE Confidence: 0.891709084
00:07:24.262 --> 00:07:26.026 explaining how it affects the
NOTE Confidence: 0.891709084
00:07:26.026 --> 00:07:27.550 the nasal maxillary complex,
NOTE Confidence: 0.891709084
00:07:27.550 --> 00:07:29.326 it's interesting because as
NOTE Confidence: 0.891709084
00:07:29.326 --> 00:07:31.546 the basic cranial flexes it,
NOTE Confidence: 0.891709084
00:07:31.550 --> 00:07:33.545 the cranial base tends to shorten and
NOTE Confidence: 0.891709084
00:07:33.545 --> 00:07:35.660 widen and then the Volt increases in
NOTE Confidence: 0.891709084
00:07:35.660 --> 00:07:37.910 height and the cranial base angle closes.
NOTE Confidence: 0.891709084
00:07:37.910 --> 00:07:40.486 So as you can see here where
NOTE Confidence: 0.891709084
00:07:40.486 --> 00:07:43.538 we have a the slightly flexed
NOTE Confidence: 0.891709084
00:07:43.540 --> 00:07:45.886 cranial base that's in red it,
NOTE Confidence: 0.891709084
00:07:45.890 --> 00:07:49.880 it tends to translate into a much
NOTE Confidence: 0.891709084
00:07:49.880 --> 00:07:51.891 narrower and longer maxillary.

NOTE Confidence: 0.891709084

00:07:51.891 --> 00:07:53.697 Arch and that's sort of the

NOTE Confidence: 0.891709084

00:07:53.697 --> 00:07:55.239 upper arch of the teeth.

NOTE Confidence: 0.891709084

00:07:55.240 --> 00:07:57.580 And then when we have the the green one

NOTE Confidence: 0.891709084

00:07:57.580 --> 00:07:59.760 where the cranial base is more flexed,

NOTE Confidence: 0.891709084

00:07:59.760 --> 00:08:01.720 it tends to end up sort of

NOTE Confidence: 0.891709084

00:08:01.720 --> 00:08:03.652 correlate again with a much wider

NOTE Confidence: 0.891709084

00:08:03.652 --> 00:08:05.016 and shorter maxillary arch.

NOTE Confidence: 0.891709084

00:08:05.020 --> 00:08:06.883 So you can see how how they are all

NOTE Confidence: 0.891709084

00:08:06.883 --> 00:08:08.978 are are going hand in hand and these

NOTE Confidence: 0.891709084

00:08:08.978 --> 00:08:10.755 patients tend to have longer faces

NOTE Confidence: 0.891709084

00:08:10.755 --> 00:08:12.633 than these ones with shorter faces.

NOTE Confidence: 0.891709084

00:08:12.640 --> 00:08:14.704 So that the shape of the palette and

NOTE Confidence: 0.891709084

00:08:14.704 --> 00:08:16.871 the arch form is actually sort of all

NOTE Confidence: 0.891709084

00:08:16.871 --> 00:08:19.023 in a pattern with with how the face

NOTE Confidence: 0.891709084

00:08:19.023 --> 00:08:21.668 looks too and the height of it and then how,

NOTE Confidence: 0.891709084

00:08:21.668 --> 00:08:22.756 how maybe a lot.
NOTE Confidence: 0.891709084

00:08:22.760 --> 00:08:24.712 Face that's long then the the the child
NOTE Confidence: 0.891709084

00:08:24.712 --> 00:08:26.770 has a hard time bringing their lips
NOTE Confidence: 0.891709084

00:08:26.770 --> 00:08:28.950 together and then they end up maybe
NOTE Confidence: 0.891709084

00:08:28.950 --> 00:08:31.057 having more of a mouth breathing pattern.
NOTE Confidence: 0.891709084

00:08:31.060 --> 00:08:32.760 So.
NOTE Confidence: 0.891709084

00:08:32.760 --> 00:08:35.436 Um, the airway configuration in general,
NOTE Confidence: 0.891709084

00:08:35.440 --> 00:08:36.995 and its size would affect
NOTE Confidence: 0.891709084

00:08:36.995 --> 00:08:39.100 the arch form of the orbits.
NOTE Confidence: 0.891709084

00:08:39.100 --> 00:08:40.787 The nasal and oral sides of the
NOTE Confidence: 0.891709084

00:08:40.787 --> 00:08:42.144 palate are affected by it because
NOTE Confidence: 0.891709084

00:08:42.144 --> 00:08:43.502 the the nasal side of it is
NOTE Confidence: 0.891709084

00:08:43.551 --> 00:08:44.827 obviously the nasal cavity.
NOTE Confidence: 0.891709084

00:08:44.830 --> 00:08:46.050 The oral side would be
NOTE Confidence: 0.891709084

00:08:46.050 --> 00:08:47.270 the would be the mouse,
NOTE Confidence: 0.891709084

00:08:47.270 --> 00:08:48.548 the maxillary arch,

NOTE Confidence: 0.891709084

00:08:48.548 --> 00:08:50.678 the sinuses right above it,

NOTE Confidence: 0.891709084

00:08:50.680 --> 00:08:52.731 and the zygomatic arches are all subject

NOTE Confidence: 0.891709084

00:08:52.731 --> 00:08:54.757 to it because as you can see here,

NOTE Confidence: 0.891709084

00:08:54.760 --> 00:08:56.993 the way that the growth is happening

NOTE Confidence: 0.891709084

00:08:56.993 --> 00:08:58.821 within that we have the Bony

NOTE Confidence: 0.891709084

00:08:58.821 --> 00:09:01.142 walls of the of the nose that are

NOTE Confidence: 0.891709084

00:09:01.142 --> 00:09:03.017 all sort of resorptive surfaces.

NOTE Confidence: 0.891709084

00:09:03.020 --> 00:09:04.020 Is the child that's growing,

NOTE Confidence: 0.891709084

00:09:04.020 --> 00:09:05.772 there's resorption of the bone on

NOTE Confidence: 0.891709084

00:09:05.772 --> 00:09:07.723 these lateral walls the the the nose

NOTE Confidence: 0.891709084

00:09:07.723 --> 00:09:09.410 is becoming wider at the same time

NOTE Confidence: 0.891709084

00:09:09.466 --> 00:09:11.110 the sinuses are growing in size.

NOTE Confidence: 0.891709084

00:09:11.110 --> 00:09:12.748 But the medial wall of it,

NOTE Confidence: 0.891709084

00:09:12.750 --> 00:09:14.250 there is opposition of the bone

NOTE Confidence: 0.891709084

00:09:14.250 --> 00:09:16.583 sort of in in response to having the

NOTE Confidence: 0.891709084

00:09:16.583 --> 00:09:19.050 resorption on the lateral walls of the nose.

NOTE Confidence: 0.891709084

00:09:19.050 --> 00:09:21.325 And then it sort of grows laterally

NOTE Confidence: 0.891709084

00:09:21.325 --> 00:09:22.750 and and becomes wider.

NOTE Confidence: 0.891709084

00:09:22.750 --> 00:09:24.580 Similarly we have opposition of the

NOTE Confidence: 0.891709084

00:09:24.580 --> 00:09:27.189 bone and the sort of in the orbits there.

NOTE Confidence: 0.891709084

00:09:27.190 --> 00:09:27.573 So,

NOTE Confidence: 0.891709084

00:09:27.573 --> 00:09:30.254 so this whole segment between the floor

NOTE Confidence: 0.891709084

00:09:30.254 --> 00:09:33.096 of the eye and the and the mouth.

NOTE Confidence: 0.891709084

00:09:33.100 --> 00:09:34.915 It just lengthens significantly between

NOTE Confidence: 0.891709084

00:09:34.915 --> 00:09:37.112 because we have opposition right and

NOTE Confidence: 0.891709084

00:09:37.112 --> 00:09:39.098 inferiorly here and then superiorly there.

NOTE Confidence: 0.891709084

00:09:39.100 --> 00:09:41.510 And this height just increases

NOTE Confidence: 0.891709084

00:09:41.510 --> 00:09:43.602 significantly between the the child

NOTE Confidence: 0.891709084

00:09:43.602 --> 00:09:45.207 sort of growing into adulthood

NOTE Confidence: 0.891709084

00:09:45.207 --> 00:09:47.130 and that's making the whole array

NOTE Confidence: 0.891709084

00:09:47.130 --> 00:09:48.936 again longer and then wider here.

NOTE Confidence: 0.891709084

00:09:48.940 --> 00:09:50.732 And then we have the palatal side

NOTE Confidence: 0.891709084

00:09:50.732 --> 00:09:52.792 of the the whole structure sort

NOTE Confidence: 0.891709084

00:09:52.792 --> 00:09:54.016 of acquisition there.

NOTE Confidence: 0.891709084

00:09:54.020 --> 00:09:56.676 So in a way again we have facial

NOTE Confidence: 0.891709084

00:09:56.676 --> 00:09:58.721 areas and exceedingly significant

NOTE Confidence: 0.891709084

00:09:58.721 --> 00:10:01.317 component that's involved in

NOTE Confidence: 0.891709084

00:10:01.317 --> 00:10:03.913 normal versus abnormal facial

NOTE Confidence: 0.874370403333333

00:10:03.992 --> 00:10:06.424 morphogenesis. Now mouth breathing and

NOTE Confidence: 0.874370403333333

00:10:06.424 --> 00:10:08.975 how how that correlates to all this is

NOTE Confidence: 0.874370403333333

00:10:08.975 --> 00:10:11.379 that we're where we tend to see a lot

NOTE Confidence: 0.874370403333333

00:10:11.379 --> 00:10:13.696 of the mouth readers would then have

NOTE Confidence: 0.874370403333333

00:10:13.696 --> 00:10:16.260 smaller nasal cavities if for whatever

NOTE Confidence: 0.874370403333333

00:10:16.260 --> 00:10:18.578 reason they're I mean whatever would

NOTE Confidence: 0.874370403333333

00:10:18.578 --> 00:10:21.047 be the the etiologic factor for it

NOTE Confidence: 0.874370403333333

00:10:21.047 --> 00:10:23.483 that aside they tend to show smaller

NOTE Confidence: 0.874370403333333

00:10:23.483 --> 00:10:25.749 nasal cavities and that they're now
NOTE Confidence: 0.8743704033333333

00:10:25.749 --> 00:10:27.993 they're they're mid faces are smaller
NOTE Confidence: 0.8743704033333333

00:10:28.000 --> 00:10:30.142 again all the the the blueprint being
NOTE Confidence: 0.8743704033333333

00:10:30.142 --> 00:10:33.122 in the in the soft tissue and the
NOTE Confidence: 0.8743704033333333

00:10:33.122 --> 00:10:34.714 structures around the skeleton.
NOTE Confidence: 0.8743704033333333

00:10:34.720 --> 00:10:36.855 Then the and the airway they they
NOTE Confidence: 0.8743704033333333

00:10:36.855 --> 00:10:39.105 never got the in a way the the
NOTE Confidence: 0.8743704033333333

00:10:39.105 --> 00:10:41.012 motive to to grow more around the
NOTE Confidence: 0.8743704033333333

00:10:41.012 --> 00:10:43.680 mid face so they they it tends to be
NOTE Confidence: 0.8743704033333333

00:10:43.680 --> 00:10:45.960 smaller and then ultimately the their
NOTE Confidence: 0.8743704033333333

00:10:45.960 --> 00:10:48.159 maxillas are going to be narrower.
NOTE Confidence: 0.8743704033333333

00:10:48.160 --> 00:10:49.945 Their arches if you look in these
NOTE Confidence: 0.8743704033333333

00:10:49.945 --> 00:10:51.542 patients mouth they tend to have
NOTE Confidence: 0.8743704033333333

00:10:51.542 --> 00:10:52.837 much much narrower upper jaws,
NOTE Confidence: 0.8743704033333333

00:10:52.840 --> 00:10:55.185 the palates the the roof of the
NOTE Confidence: 0.8743704033333333

00:10:55.185 --> 00:10:57.446 mouth is is much higher deeper

NOTE Confidence: 0.874370403333333

00:10:57.446 --> 00:11:00.176 in a way but but much narrower.

NOTE Confidence: 0.874370403333333

00:11:00.180 --> 00:11:02.434 So what we call this these sort

NOTE Confidence: 0.874370403333333

00:11:02.434 --> 00:11:04.900 of all of these significant.

NOTE Confidence: 0.874370403333333

00:11:04.900 --> 00:11:07.036 The findings together they kind of

NOTE Confidence: 0.874370403333333

00:11:07.036 --> 00:11:09.448 compile into what we call a long

NOTE Confidence: 0.874370403333333

00:11:09.448 --> 00:11:11.583 face syndrome that would go hand in

NOTE Confidence: 0.874370403333333

00:11:11.648 --> 00:11:13.723 hand with chronic mouth breathers

NOTE Confidence: 0.874370403333333

00:11:13.723 --> 00:11:16.151 that have that's implicated in the

NOTE Confidence: 0.874370403333333

00:11:16.151 --> 00:11:17.906 dental facial deformities they have.

NOTE Confidence: 0.874370403333333

00:11:17.910 --> 00:11:19.650 They tend to have extended head,

NOTE Confidence: 0.874370403333333

00:11:19.650 --> 00:11:21.742 the craniocervical posture they're,

NOTE Confidence: 0.874370403333333

00:11:21.742 --> 00:11:24.357 they're sort of forwardly inclined

NOTE Confidence: 0.874370403333333

00:11:24.357 --> 00:11:26.890 as they try to increase their.

NOTE Confidence: 0.874370403333333

00:11:26.890 --> 00:11:29.284 The air flow there they have

NOTE Confidence: 0.874370403333333

00:11:29.284 --> 00:11:30.880 excessive anterior facial height.

NOTE Confidence: 0.874370403333333

00:11:30.880 --> 00:11:33.526 They the especially the lower part of
NOTE Confidence: 0.8743704033333333

00:11:33.526 --> 00:11:36.630 the face tends to be become much longer
NOTE Confidence: 0.8743704033333333

00:11:36.630 --> 00:11:39.620 and their lips therefore is not competent.
NOTE Confidence: 0.8743704033333333

00:11:39.620 --> 00:11:41.663 A lot of times there as they try to
NOTE Confidence: 0.8743704033333333

00:11:41.663 --> 00:11:43.338 bring their lips together you see
NOTE Confidence: 0.8743704033333333

00:11:43.338 --> 00:11:45.374 dimpling on the on the chin there's
NOTE Confidence: 0.8743704033333333

00:11:45.374 --> 00:11:47.432 mentalis strain going on and but at
NOTE Confidence: 0.8743704033333333

00:11:47.432 --> 00:11:49.830 rest every time you look at them their
NOTE Confidence: 0.8743704033333333

00:11:49.830 --> 00:11:52.359 their lips are not comfortably together.
NOTE Confidence: 0.8743704033333333

00:11:52.360 --> 00:11:52.960 And Umm,
NOTE Confidence: 0.8743704033333333

00:11:52.960 --> 00:11:54.460 there's a flared external Canaries
NOTE Confidence: 0.8743704033333333

00:11:54.460 --> 00:11:56.532 and what we call the steep mandibular
NOTE Confidence: 0.8743704033333333

00:11:56.532 --> 00:11:58.880 plane is if you look here on the
NOTE Confidence: 0.8743704033333333

00:11:58.880 --> 00:12:00.116 on the lateral cephalogram,
NOTE Confidence: 0.8743704033333333

00:12:00.120 --> 00:12:01.744 you could see that too that this
NOTE Confidence: 0.8743704033333333

00:12:01.744 --> 00:12:03.029 mandibular plane is very stable.

NOTE Confidence: 0.8743704033333333

00:12:03.030 --> 00:12:05.158 Normally the the angle should be much,

NOTE Confidence: 0.8743704033333333

00:12:05.160 --> 00:12:06.424 much flatter this way.

NOTE Confidence: 0.8743704033333333

00:12:06.424 --> 00:12:08.722 So and I'll explain in a little

NOTE Confidence: 0.8743704033333333

00:12:08.722 --> 00:12:11.032 bit why all of this happens in

NOTE Confidence: 0.8743704033333333

00:12:11.032 --> 00:12:13.104 response to being a mouth breather

NOTE Confidence: 0.8743704033333333

00:12:13.104 --> 00:12:15.240 and not you know having the normal

NOTE Confidence: 0.8743704033333333

00:12:15.240 --> 00:12:16.700 growth pattern that we expect.

NOTE Confidence: 0.8743704033333333

00:12:16.700 --> 00:12:18.525 Now intraorally you know they

NOTE Confidence: 0.8743704033333333

00:12:18.525 --> 00:12:21.094 tend to have large over over jets

NOTE Confidence: 0.8743704033333333

00:12:21.094 --> 00:12:23.110 here they tend to have again.

NOTE Confidence: 0.8743704033333333

00:12:23.110 --> 00:12:25.570 Very narrow upper arches even narrower

NOTE Confidence: 0.8743704033333333

00:12:25.570 --> 00:12:28.709 in this I can show you pictures.

NOTE Confidence: 0.8743704033333333

00:12:28.710 --> 00:12:30.726 Much narrower than that you can tell,

NOTE Confidence: 0.8743704033333333

00:12:30.730 --> 00:12:32.520 and the palatal volts tends

NOTE Confidence: 0.8743704033333333

00:12:32.520 --> 00:12:33.952 to be pretty deep.

NOTE Confidence: 0.683912578

00:12:37.810 --> 00:12:41.010 Now, Umm, there's an experimental,
NOTE Confidence: 0.683912578

00:12:41.010 --> 00:12:43.490 I guess a paper out there that actually
NOTE Confidence: 0.683912578

00:12:43.490 --> 00:12:46.131 shows that when where there is an
NOTE Confidence: 0.683912578

00:12:46.131 --> 00:12:48.086 instant nasal blockage automatically and
NOTE Confidence: 0.683912578

00:12:48.149 --> 00:12:50.259 almost instantly there's five degree
NOTE Confidence: 0.683912578

00:12:50.259 --> 00:12:52.822 change in the cranial vertebral angle.
NOTE Confidence: 0.683912578

00:12:52.822 --> 00:12:54.630 So for mouth breathers,
NOTE Confidence: 0.683912578

00:12:54.630 --> 00:12:56.580 this this can be sort of, again,
NOTE Confidence: 0.683912578

00:12:56.580 --> 00:12:59.032 they're not necessarily 100% mouth breathers.
NOTE Confidence: 0.683912578

00:12:59.032 --> 00:13:00.748 There may also always be some
NOTE Confidence: 0.683912578

00:13:00.748 --> 00:13:02.567 percentage of nasal breathing going on.
NOTE Confidence: 0.683912578

00:13:02.570 --> 00:13:04.845 But with with with the effect of
NOTE Confidence: 0.683912578

00:13:04.845 --> 00:13:06.103 mouth breathing, what the what
NOTE Confidence: 0.683912578

00:13:06.103 --> 00:13:07.309 these patients are trying to do,
NOTE Confidence: 0.683912578

00:13:07.310 --> 00:13:08.862 they're lowering their mandibles.
NOTE Confidence: 0.683912578

00:13:08.862 --> 00:13:11.190 Of tongues and they're extending their

NOTE Confidence: 0.683912578

00:13:11.246 --> 00:13:12.992 heads forward and the posterior teeth

NOTE Confidence: 0.683912578

00:13:12.992 --> 00:13:15.244 then are sort of coming apart from each

NOTE Confidence: 0.683912578

00:13:15.244 --> 00:13:17.607 other as the as the mouth is sort of

NOTE Confidence: 0.683912578

00:13:17.607 --> 00:13:20.180 held open and the mandible is is held down.

NOTE Confidence: 0.683912578

00:13:20.180 --> 00:13:22.070 Now there is really nothing stopping the

NOTE Confidence: 0.683912578

00:13:22.070 --> 00:13:23.782 back teeth from necessarily erupting more

NOTE Confidence: 0.683912578

00:13:23.782 --> 00:13:26.260 and that's what we call the Super eruption.

NOTE Confidence: 0.683912578

00:13:26.260 --> 00:13:28.199 So as these back teeth are now

NOTE Confidence: 0.683912578

00:13:28.199 --> 00:13:29.767 erupting more because the jaws

NOTE Confidence: 0.683912578

00:13:29.767 --> 00:13:31.119 weren't really held together,

NOTE Confidence: 0.683912578

00:13:31.120 --> 00:13:33.238 that's sort of the vicious cycle

NOTE Confidence: 0.683912578

00:13:33.238 --> 00:13:35.368 there now their teeth that are

NOTE Confidence: 0.683912578

00:13:35.368 --> 00:13:37.014 erupted more and therefore even

NOTE Confidence: 0.683912578

00:13:37.014 --> 00:13:39.338 if the the job wants to rotate.

NOTE Confidence: 0.683912578

00:13:39.340 --> 00:13:40.072 Close. It can't.

NOTE Confidence: 0.683912578

00:13:40.072 --> 00:13:41.048 It's in the way.
NOTE Confidence: 0.683912578

00:13:41.050 --> 00:13:43.492 So the mandible itself is rotated
NOTE Confidence: 0.683912578

00:13:43.492 --> 00:13:45.120 down and back and.
NOTE Confidence: 0.683912578

00:13:45.120 --> 00:13:46.782 The opening the bite would then
NOTE Confidence: 0.683912578

00:13:46.782 --> 00:13:48.463 translate into an upfront where the
NOTE Confidence: 0.683912578

00:13:48.463 --> 00:13:50.011 back that's come down together up
NOTE Confidence: 0.683912578

00:13:50.011 --> 00:13:51.922 front you can see that maybe the front
NOTE Confidence: 0.683912578

00:13:51.922 --> 00:13:53.816 teeth will not be touching and then
NOTE Confidence: 0.683912578

00:13:53.816 --> 00:13:55.476 they'll have an increased overjet.
NOTE Confidence: 0.683912578

00:13:55.480 --> 00:13:57.816 And there there has to be then more
NOTE Confidence: 0.683912578

00:13:57.816 --> 00:13:59.367 stretching more pressure coming from
NOTE Confidence: 0.683912578

00:13:59.367 --> 00:14:01.488 the from the cheeks and the lips
NOTE Confidence: 0.683912578

00:14:01.550 --> 00:14:03.440 to just just bring them together.
NOTE Confidence: 0.683912578

00:14:03.440 --> 00:14:05.456 And a lot of times if you could if
NOTE Confidence: 0.683912578

00:14:05.456 --> 00:14:07.401 you could imagine that you know a
NOTE Confidence: 0.683912578

00:14:07.401 --> 00:14:09.699 child that may be sucking on their

NOTE Confidence: 0.683912578

00:14:09.699 --> 00:14:11.584 thumb habitually then just this

NOTE Confidence: 0.683912578

00:14:11.584 --> 00:14:13.672 sucking pattern and and the way

NOTE Confidence: 0.683912578

00:14:13.672 --> 00:14:15.670 that the that the cheeks are.

NOTE Confidence: 0.683912578

00:14:15.670 --> 00:14:18.070 Sort of going through these contractions,

NOTE Confidence: 0.683912578

00:14:18.070 --> 00:14:20.620 that tends to again affect

NOTE Confidence: 0.683912578

00:14:20.620 --> 00:14:23.170 the the position or the,

NOTE Confidence: 0.683912578

00:14:23.170 --> 00:14:24.675 I guess the the way that the

NOTE Confidence: 0.683912578

00:14:24.675 --> 00:14:26.579 upper jaw is shaped and that way

NOTE Confidence: 0.683912578

00:14:26.579 --> 00:14:27.783 especially at the corners,

NOTE Confidence: 0.683912578

00:14:27.790 --> 00:14:30.326 it tends to just never grow wide enough.

NOTE Confidence: 0.683912578

00:14:30.330 --> 00:14:32.388 And again that sort of continues

NOTE Confidence: 0.683912578

00:14:32.388 --> 00:14:35.006 on with the with the pattern that

NOTE Confidence: 0.683912578

00:14:35.006 --> 00:14:36.566 I was just explaining.

NOTE Confidence: 0.683912578

00:14:36.570 --> 00:14:37.068 Here too,

NOTE Confidence: 0.683912578

00:14:37.068 --> 00:14:38.562 and these kids go from thumbsucking

NOTE Confidence: 0.683912578

00:14:38.562 --> 00:14:40.143 to just being mouth breathers and
NOTE Confidence: 0.683912578

00:14:40.143 --> 00:14:41.691 then their tongue is going to
NOTE Confidence: 0.683912578

00:14:41.746 --> 00:14:43.108 be sitting in that space too.
NOTE Confidence: 0.683912578

00:14:43.110 --> 00:14:44.085 So it all,
NOTE Confidence: 0.683912578

00:14:44.085 --> 00:14:46.035 it all affects their long term
NOTE Confidence: 0.683912578

00:14:46.035 --> 00:14:48.432 how how their face is going to
NOTE Confidence: 0.683912578

00:14:48.432 --> 00:14:50.709 grow into looking a certain way.
NOTE Confidence: 0.683912578

00:14:50.710 --> 00:14:52.110 So if you can look at it and
NOTE Confidence: 0.683912578

00:14:52.110 --> 00:14:53.370 how they affect each other,
NOTE Confidence: 0.683912578

00:14:53.370 --> 00:14:55.434 if you could think of it as the
NOTE Confidence: 0.683912578

00:14:55.434 --> 00:14:57.407 obstruction of the airway happens first,
NOTE Confidence: 0.683912578

00:14:57.410 --> 00:15:00.198 maybe for whatever reason,
NOTE Confidence: 0.683912578

00:15:00.200 --> 00:15:02.145 then there is enormous muscular
NOTE Confidence: 0.683912578

00:15:02.145 --> 00:15:04.090 feedback that causes the postural
NOTE Confidence: 0.683912578

00:15:04.155 --> 00:15:06.057 change of the mandible sort of
NOTE Confidence: 0.683912578

00:15:06.057 --> 00:15:07.870 rotating down the head flexing.

NOTE Confidence: 0.683912578
00:15:07.870 --> 00:15:08.173 Uh,
NOTE Confidence: 0.683912578
00:15:08.173 --> 00:15:08.779 forward tilting.
NOTE Confidence: 0.683912578
00:15:08.779 --> 00:15:10.597 And then there is the differential
NOTE Confidence: 0.683912578
00:15:10.597 --> 00:15:11.974 forces on the skeleton because
NOTE Confidence: 0.683912578
00:15:11.974 --> 00:15:13.780 of that as this stretches on the
NOTE Confidence: 0.683912578
00:15:13.780 --> 00:15:15.130 on the cheeks and the tissues
NOTE Confidence: 0.683912578
00:15:15.130 --> 00:15:16.196 around it is happening.
NOTE Confidence: 0.683912578
00:15:16.196 --> 00:15:18.512 And that really is what causes
NOTE Confidence: 0.683912578
00:15:18.512 --> 00:15:19.670 the morphological change
NOTE Confidence: 0.859311545
00:15:19.730 --> 00:15:21.872 because we believe in the hypothesis
NOTE Confidence: 0.859311545
00:15:21.872 --> 00:15:23.738 of the functional matrix theory
NOTE Confidence: 0.859311545
00:15:23.738 --> 00:15:25.638 where the information is coming,
NOTE Confidence: 0.859311545
00:15:25.640 --> 00:15:26.875 the blueprint is coming from
NOTE Confidence: 0.859311545
00:15:26.875 --> 00:15:27.863 the soft tissues around.
NOTE Confidence: 0.859311545
00:15:27.870 --> 00:15:29.070 So if that's really true,
NOTE Confidence: 0.859311545

00:15:29.070 --> 00:15:30.589 which we do see all the time,
NOTE Confidence: 0.859311545

00:15:30.590 --> 00:15:32.358 then that sort of goes hand in hand
NOTE Confidence: 0.859311545

00:15:32.358 --> 00:15:34.069 with then affecting the obstruction of
NOTE Confidence: 0.859311545

00:15:34.069 --> 00:15:36.165 the airway because now the tissue is
NOTE Confidence: 0.859311545

00:15:36.165 --> 00:15:37.869 not growing as much as it should be.
NOTE Confidence: 0.859311545

00:15:37.870 --> 00:15:39.575 That the mandible that's rotated
NOTE Confidence: 0.859311545

00:15:39.575 --> 00:15:40.598 down and back,
NOTE Confidence: 0.859311545

00:15:40.600 --> 00:15:42.784 it's narrowing the airway in the back here.
NOTE Confidence: 0.859311545

00:15:42.790 --> 00:15:44.698 So again this this cycle just
NOTE Confidence: 0.859311545

00:15:44.698 --> 00:15:46.210 keeps continuing on and on.
NOTE Confidence: 0.715429402142857

00:15:48.390 --> 00:15:51.144 Um, so in a newborn and the pharynx is
NOTE Confidence: 0.715429402142857

00:15:51.144 --> 00:15:54.012 very similar to other primates and mammals.
NOTE Confidence: 0.715429402142857

00:15:54.012 --> 00:15:56.820 The uvula and epiglottis are very much in
NOTE Confidence: 0.715429402142857

00:15:56.888 --> 00:15:59.485 close proximity around 18 months of age.
NOTE Confidence: 0.715429402142857

00:15:59.490 --> 00:16:01.464 The with the development of the larynx,
NOTE Confidence: 0.715429402142857

00:16:01.470 --> 00:16:03.662 it's sort of descends down to the C5

NOTE Confidence: 0.715429402142857

00:16:03.662 --> 00:16:06.057 level and that's really because of the

NOTE Confidence: 0.715429402142857

00:16:06.057 --> 00:16:08.608 role of the pharynx information and in

NOTE Confidence: 0.715429402142857

00:16:08.608 --> 00:16:10.708 humans and this lengthening right there,

NOTE Confidence: 0.715429402142857

00:16:10.710 --> 00:16:13.006 I'm sure you you know more about it

NOTE Confidence: 0.715429402142857

00:16:13.006 --> 00:16:15.462 than I would and how how it's now

NOTE Confidence: 0.715429402142857

00:16:15.462 --> 00:16:17.482 more susceptible to obstruction and.

NOTE Confidence: 0.715429402142857

00:16:17.482 --> 00:16:20.050 All the problems that we're going

NOTE Confidence: 0.715429402142857

00:16:20.120 --> 00:16:21.239 to discuss today,

NOTE Confidence: 0.715429402142857

00:16:21.240 --> 00:16:22.800 but then anatomically the regions

NOTE Confidence: 0.715429402142857

00:16:22.800 --> 00:16:25.308 that are that are going to cause these

NOTE Confidence: 0.715429402142857

00:16:25.308 --> 00:16:27.380 blockages in a child versus the adults,

NOTE Confidence: 0.715429402142857

00:16:27.380 --> 00:16:28.364 it's it's very different.

NOTE Confidence: 0.715429402142857

00:16:28.364 --> 00:16:30.120 And again I'm sure you all would

NOTE Confidence: 0.715429402142857

00:16:30.120 --> 00:16:31.500 know this more than I would.

NOTE Confidence: 0.715429402142857

00:16:31.500 --> 00:16:34.132 Where we do tend to see in younger

NOTE Confidence: 0.715429402142857

00:16:34.132 --> 00:16:36.362 children the obstruction being more
NOTE Confidence: 0.715429402142857

00:16:36.362 --> 00:16:38.857 in the higher nasopharyngeal area,
NOTE Confidence: 0.715429402142857

00:16:38.860 --> 00:16:40.236 maybe higher oropharyngeal area
NOTE Confidence: 0.715429402142857

00:16:40.236 --> 00:16:42.300 with the where the adenoids and
NOTE Confidence: 0.715429402142857

00:16:42.360 --> 00:16:44.000 tonsils would be the culprits.
NOTE Confidence: 0.715429402142857

00:16:44.000 --> 00:16:45.904 And then while in adults it would
NOTE Confidence: 0.715429402142857

00:16:45.904 --> 00:16:47.859 be maybe lower oropharyngeal area,
NOTE Confidence: 0.715429402142857

00:16:47.860 --> 00:16:49.654 retro glossal area.
NOTE Confidence: 0.715429402142857

00:16:49.654 --> 00:16:54.850 Would be probably more often encountered.
NOTE Confidence: 0.715429402142857

00:16:54.850 --> 00:16:56.730 So the narrowing as you can see here
NOTE Confidence: 0.715429402142857

00:16:56.730 --> 00:16:58.843 is just an example of enlargement of
NOTE Confidence: 0.715429402142857

00:16:58.843 --> 00:17:00.747 the tonsils and adenoids there versus
NOTE Confidence: 0.715429402142857

00:17:00.747 --> 00:17:02.891 an adult where it would be the blockage
NOTE Confidence: 0.715429402142857

00:17:02.891 --> 00:17:05.506 and little bit lower in the airway.
NOTE Confidence: 0.715429402142857

00:17:05.510 --> 00:17:08.516 So what do we do I guess is orthodontist
NOTE Confidence: 0.715429402142857

00:17:08.516 --> 00:17:11.616 and we go by the recommendations of

NOTE Confidence: 0.715429402142857

00:17:11.616 --> 00:17:14.082 the American Association of PD Atrics

NOTE Confidence: 0.715429402142857

00:17:14.082 --> 00:17:16.098 where you know that they recommend

NOTE Confidence: 0.715429402142857

00:17:16.098 --> 00:17:18.145 that all children or adolescent

NOTE Confidence: 0.715429402142857

00:17:18.145 --> 00:17:20.767 who snow regularly be screened for

NOTE Confidence: 0.715429402142857

00:17:20.767 --> 00:17:22.589 obstructive sleep apnea and because

NOTE Confidence: 0.715429402142857

00:17:22.589 --> 00:17:24.918 we think that at least being in.

NOTE Confidence: 0.715429402142857

00:17:24.918 --> 00:17:27.006 The dental field and seeing children

NOTE Confidence: 0.715429402142857

00:17:27.006 --> 00:17:29.254 maybe every six months for their

NOTE Confidence: 0.715429402142857

00:17:29.254 --> 00:17:31.154 checkups as a pediatric dentist,

NOTE Confidence: 0.715429402142857

00:17:31.160 --> 00:17:32.945 as an orthodontist and we get referred

NOTE Confidence: 0.715429402142857

00:17:32.945 --> 00:17:35.035 to when they when they do see something

NOTE Confidence: 0.715429402142857

00:17:35.035 --> 00:17:36.660 maybe off going on about their,

NOTE Confidence: 0.715429402142857

00:17:36.660 --> 00:17:38.940 their dentition sort of growth

NOTE Confidence: 0.715429402142857

00:17:38.940 --> 00:17:41.220 or even their facial development,

NOTE Confidence: 0.715429402142857

00:17:41.220 --> 00:17:42.100 we get to see them.

NOTE Confidence: 0.715429402142857

00:17:42.100 --> 00:17:43.825 And the recommendation really force
NOTE Confidence: 0.715429402142857

00:17:43.825 --> 00:17:46.005 adonic screening is by the American
NOTE Confidence: 0.715429402142857

00:17:46.005 --> 00:17:47.565 Association of Orthodontics is
NOTE Confidence: 0.715429402142857

00:17:47.565 --> 00:17:49.515 sometime between age of seven.
NOTE Confidence: 0.715429402142857

00:17:49.520 --> 00:17:51.472 We would like to see every child just
NOTE Confidence: 0.715429402142857

00:17:51.472 --> 00:17:53.538 to make sure that even if they're
NOTE Confidence: 0.715429402142857

00:17:53.538 --> 00:17:55.440 really not that many permanent teeth.
NOTE Confidence: 0.715429402142857

00:17:55.440 --> 00:17:56.292 Maybe come in again,
NOTE Confidence: 0.715429402142857

00:17:56.292 --> 00:17:57.570 maybe mainly baby teeth are still
NOTE Confidence: 0.715429402142857

00:17:57.609 --> 00:17:58.239 in their mouths.
NOTE Confidence: 0.715429402142857

00:17:58.240 --> 00:18:00.168 We still would like to see to maybe
NOTE Confidence: 0.715429402142857

00:18:00.168 --> 00:18:01.830 be able to intervene sooner.
NOTE Confidence: 0.715429402142857

00:18:01.830 --> 00:18:05.422 So what we do routinely in our practices
NOTE Confidence: 0.715429402142857

00:18:05.422 --> 00:18:07.568 is that at least at the dental school,
NOTE Confidence: 0.715429402142857

00:18:07.570 --> 00:18:09.803 what we have implemented is that we
NOTE Confidence: 0.715429402142857

00:18:09.803 --> 00:18:11.461 screened for obstructive sleep apnea

NOTE Confidence: 0.715429402142857
00:18:11.461 --> 00:18:13.405 by really virtue of history taking
NOTE Confidence: 0.715429402142857
00:18:13.405 --> 00:18:14.918 their question is that I'm going
NOTE Confidence: 0.715429402142857
00:18:14.918 --> 00:18:16.996 to show you in a bit and clinical
NOTE Confidence: 0.715429402142857
00:18:16.996 --> 00:18:20.027 examination and then if we see red
NOTE Confidence: 0.715429402142857
00:18:20.027 --> 00:18:22.210 flags that we think that there
NOTE Confidence: 0.715429402142857
00:18:22.210 --> 00:18:26.040 needs to be a sort of more.
NOTE Confidence: 0.715429402142857
00:18:26.040 --> 00:18:27.648 You know, figuring out really what it is,
NOTE Confidence: 0.715429402142857
00:18:27.650 --> 00:18:29.750 we make a referral for polysomnography
NOTE Confidence: 0.715429402142857
00:18:29.750 --> 00:18:31.490 by you all or Umm,
NOTE Confidence: 0.715429402142857
00:18:31.490 --> 00:18:32.086 you know,
NOTE Confidence: 0.715429402142857
00:18:32.086 --> 00:18:34.172 again having you involved in it and
NOTE Confidence: 0.715429402142857
00:18:34.172 --> 00:18:36.295 figuring out what's best for the patient.
NOTE Confidence: 0.715429402142857
00:18:36.300 --> 00:18:37.692 And then alternate testing
NOTE Confidence: 0.715429402142857
00:18:37.692 --> 00:18:39.780 this day and age with probably
NOTE Confidence: 0.784110833478261
00:18:39.845 --> 00:18:42.365 sonography being very difficult to sign up
NOTE Confidence: 0.784110833478261

00:18:42.365 --> 00:18:45.039 our patients for financially or otherwise,
NOTE Confidence: 0.784110833478261

00:18:45.040 --> 00:18:48.082 then maybe in a home sleep test and such.
NOTE Confidence: 0.784110833478261

00:18:48.090 --> 00:18:50.862 So we start out as part of our medical
NOTE Confidence: 0.784110833478261

00:18:50.862 --> 00:18:53.082 history taking for our patients every
NOTE Confidence: 0.784110833478261

00:18:53.082 --> 00:18:55.626 new patients that we get, you know,
NOTE Confidence: 0.784110833478261

00:18:55.626 --> 00:18:57.714 probably under the age of 18.
NOTE Confidence: 0.784110833478261

00:18:57.720 --> 00:18:59.995 We use the Bears questionnaire that I'm
NOTE Confidence: 0.784110833478261

00:18:59.995 --> 00:19:02.656 sure you're all familiar with to go over
NOTE Confidence: 0.784110833478261

00:19:02.656 --> 00:19:05.109 any bedtime problems that they may have any.
NOTE Confidence: 0.784110833478261

00:19:05.110 --> 00:19:07.696 So here's the here's the breakdown
NOTE Confidence: 0.784110833478261

00:19:07.696 --> 00:19:09.950 of the questions right there.
NOTE Confidence: 0.784110833478261

00:19:09.950 --> 00:19:12.169 But again, we have the toddler preschoolers,
NOTE Confidence: 0.784110833478261

00:19:12.170 --> 00:19:13.526 their parents are answering those questions
NOTE Confidence: 0.784110833478261

00:19:13.526 --> 00:19:15.119 if they have any bedtime problems,
NOTE Confidence: 0.784110833478261

00:19:15.120 --> 00:19:17.100 any excessive daytime sleepiness
NOTE Confidence: 0.784110833478261

00:19:17.100 --> 00:19:19.080 awakening during the night.

NOTE Confidence: 0.784110833478261
00:19:19.080 --> 00:19:21.165 Or any irregularity during sleep
NOTE Confidence: 0.784110833478261
00:19:21.165 --> 00:19:22.833 and of course snoring.
NOTE Confidence: 0.784110833478261
00:19:22.840 --> 00:19:24.964 And then we have the same set of questions
NOTE Confidence: 0.784110833478261
00:19:24.964 --> 00:19:27.022 that the child or the parent for some of
NOTE Confidence: 0.784110833478261
00:19:27.022 --> 00:19:28.843 them can answer between the ages of 16
NOTE Confidence: 0.784110833478261
00:19:28.843 --> 00:19:31.880 and 12 and for adolescence of 13 to 18.
NOTE Confidence: 0.784110833478261
00:19:31.880 --> 00:19:33.816 The child tends to answer all of those
NOTE Confidence: 0.784110833478261
00:19:33.816 --> 00:19:35.045 questions except for the question
NOTE Confidence: 0.784110833478261
00:19:35.045 --> 00:19:36.676 for the snoring that we would expect
NOTE Confidence: 0.784110833478261
00:19:36.723 --> 00:19:37.559 the parent to know,
NOTE Confidence: 0.784110833478261
00:19:37.560 --> 00:19:40.296 hopefully be able to hear and let us know.
NOTE Confidence: 0.784110833478261
00:19:40.300 --> 00:19:43.072 And then if there are any yeses to that,
NOTE Confidence: 0.784110833478261
00:19:43.080 --> 00:19:44.958 to that on their medical history,
NOTE Confidence: 0.784110833478261
00:19:44.960 --> 00:19:47.151 we then sort of give them the
NOTE Confidence: 0.784110833478261
00:19:47.151 --> 00:19:48.444 pediatric Sleep Questionnaire that
NOTE Confidence: 0.784110833478261

00:19:48.444 --> 00:19:50.220 I'm sure you're all familiar with.
NOTE Confidence: 0.784110833478261

00:19:50.220 --> 00:19:53.735 It's high validity and you
NOTE Confidence: 0.784110833478261

00:19:53.735 --> 00:19:55.844 know specificity and.
NOTE Confidence: 0.784110833478261

00:19:55.850 --> 00:19:57.682 Sensitivity that was sort
NOTE Confidence: 0.784110833478261

00:19:57.682 --> 00:19:59.514 of validated against PSG.
NOTE Confidence: 0.784110833478261

00:19:59.520 --> 00:20:01.473 So we used that again routinely for
NOTE Confidence: 0.784110833478261

00:20:01.473 --> 00:20:03.871 anyone who has answered yes to any of
NOTE Confidence: 0.784110833478261

00:20:03.871 --> 00:20:06.038 the of the Bears questionnaires and then
NOTE Confidence: 0.784110833478261

00:20:06.038 --> 00:20:08.446 we'll go from there for any further question.
NOTE Confidence: 0.784110833478261

00:20:08.450 --> 00:20:09.998 I'm not going to go over
NOTE Confidence: 0.784110833478261

00:20:09.998 --> 00:20:11.030 each segments of these.
NOTE Confidence: 0.784110833478261

00:20:11.030 --> 00:20:12.070 I'm sure you've seen them,
NOTE Confidence: 0.784110833478261

00:20:12.070 --> 00:20:15.300 but again that's Doctor Shervin.
NOTE Confidence: 0.784110833478261

00:20:15.300 --> 00:20:16.581 But paper there,
NOTE Confidence: 0.784110833478261

00:20:16.581 --> 00:20:20.414 the next step for us is to clinically
NOTE Confidence: 0.784110833478261

00:20:20.414 --> 00:20:23.914 examine these patients and being you

NOTE Confidence: 0.784110833478261
00:20:23.914 --> 00:20:25.853 know working in the in the mouth,
NOTE Confidence: 0.784110833478261
00:20:25.860 --> 00:20:27.648 it's very easy for us to
NOTE Confidence: 0.784110833478261
00:20:27.648 --> 00:20:28.840 check out their tonsils.
NOTE Confidence: 0.784110833478261
00:20:28.840 --> 00:20:31.606 So we look for tonsillar hypertrophy
NOTE Confidence: 0.784110833478261
00:20:31.606 --> 00:20:33.897 and understanding that we're working
NOTE Confidence: 0.784110833478261
00:20:33.897 --> 00:20:36.111 with children at an age where
NOTE Confidence: 0.784110833478261
00:20:36.111 --> 00:20:38.463 you know there is some shrinkage
NOTE Confidence: 0.784110833478261
00:20:38.463 --> 00:20:41.193 expected to happen as they get older.
NOTE Confidence: 0.784110833478261
00:20:41.200 --> 00:20:43.568 But then also do we want to make
NOTE Confidence: 0.784110833478261
00:20:43.568 --> 00:20:45.592 sure that it's not you know again?
NOTE Confidence: 0.784110833478261
00:20:45.592 --> 00:20:47.176 Putting all of it together with
NOTE Confidence: 0.784110833478261
00:20:47.176 --> 00:20:48.662 their answers to the questioner
NOTE Confidence: 0.784110833478261
00:20:48.662 --> 00:20:50.127 and what we see clinically,
NOTE Confidence: 0.784110833478261
00:20:50.130 --> 00:20:51.957 then we make the we would like to be
NOTE Confidence: 0.784110833478261
00:20:51.957 --> 00:20:53.909 able to make the appropriate referrals,
NOTE Confidence: 0.784110833478261

00:20:53.910 --> 00:20:56.226 so then we go by them.
NOTE Confidence: 0.784110833478261

00:20:56.230 --> 00:20:58.414 By the scale of the bronsky scale
NOTE Confidence: 0.784110833478261

00:20:58.414 --> 00:21:00.619 here where I'm sure again you know
NOTE Confidence: 0.784110833478261

00:21:00.619 --> 00:21:03.150 all the way from grade one to four
NOTE Confidence: 0.784110833478261

00:21:03.150 --> 00:21:05.142 with the kissing tonsils and then
NOTE Confidence: 0.784110833478261

00:21:05.142 --> 00:21:07.710 three and four where is where really
NOTE Confidence: 0.784110833478261

00:21:07.710 --> 00:21:10.373 we're more worried and we added to
NOTE Confidence: 0.784110833478261

00:21:10.373 --> 00:21:12.774 all of our other findings and make
NOTE Confidence: 0.784110833478261

00:21:12.774 --> 00:21:15.995 the referrals and then we'll do the
NOTE Confidence: 0.784110833478261

00:21:15.995 --> 00:21:17.857 Mallampati Friedman sort of scaling
NOTE Confidence: 0.784110833478261

00:21:17.857 --> 00:21:20.432 too just to see how much again orphan
NOTE Confidence: 0.784110833478261

00:21:20.432 --> 00:21:23.120 jail crowding we have and for the child
NOTE Confidence: 0.784110833478261

00:21:23.120 --> 00:21:25.884 and you know how that's all affect how,
NOTE Confidence: 0.784110833478261

00:21:25.890 --> 00:21:26.224 how.
NOTE Confidence: 0.784110833478261

00:21:26.224 --> 00:21:27.894 That really translates into what
NOTE Confidence: 0.784110833478261

00:21:27.894 --> 00:21:29.748 we're seeing from their questionnaires

NOTE Confidence: 0.784110833478261

00:21:29.748 --> 00:21:31.588 and their chief complaints.

NOTE Confidence: 0.807801268888889

00:21:31.590 --> 00:21:34.110 And Umm, we do hear a lot of bruxism,

NOTE Confidence: 0.807801268888889

00:21:34.110 --> 00:21:36.245 actually complaints from the patients

NOTE Confidence: 0.807801268888889

00:21:36.245 --> 00:21:39.130 and a lot more from children.

NOTE Confidence: 0.807801268888889

00:21:39.130 --> 00:21:41.757 We we tend to see it obviously in a

NOTE Confidence: 0.807801268888889

00:21:41.757 --> 00:21:43.640 higher prevalence than in the in the

NOTE Confidence: 0.807801268888889

00:21:43.699 --> 00:21:45.979 children and how sort of as they grow

NOTE Confidence: 0.807801268888889

00:21:45.979 --> 00:21:47.608 into adolescence and then adulthood,

NOTE Confidence: 0.807801268888889

00:21:47.610 --> 00:21:49.560 at least the nighttime bruxism,

NOTE Confidence: 0.807801268888889

00:21:49.560 --> 00:21:52.327 the sleep bruxism tends to become

NOTE Confidence: 0.807801268888889

00:21:52.327 --> 00:21:55.106 less prevalent as opposed to the wake

NOTE Confidence: 0.807801268888889

00:21:55.106 --> 00:21:57.904 time bruxism that is lower in the in

NOTE Confidence: 0.807801268888889

00:21:57.904 --> 00:21:59.910 the childhood ages and then it sort

NOTE Confidence: 0.807801268888889

00:21:59.910 --> 00:22:01.675 of increases in the adulthood, so.

NOTE Confidence: 0.807801268888889

00:22:01.675 --> 00:22:03.700 We do ask for that.

NOTE Confidence: 0.807801268888889

00:22:03.700 --> 00:22:04.880 We do see that.
NOTE Confidence: 0.807801268888889

00:22:04.880 --> 00:22:07.472 We do look for signs of any wear
NOTE Confidence: 0.807801268888889

00:22:07.472 --> 00:22:09.698 and attrition on the teeth that
NOTE Confidence: 0.807801268888889

00:22:09.698 --> 00:22:11.879 could be caused by bruxism.
NOTE Confidence: 0.807801268888889

00:22:11.880 --> 00:22:14.256 Any white coating on the tongue
NOTE Confidence: 0.807801268888889

00:22:14.256 --> 00:22:16.680 where the popular overgrown and you
NOTE Confidence: 0.807801268888889

00:22:16.680 --> 00:22:18.600 could see the projections there.
NOTE Confidence: 0.807801268888889

00:22:18.600 --> 00:22:19.979 And we do look for their tongues.
NOTE Confidence: 0.807801268888889

00:22:19.980 --> 00:22:22.752 There is some evidence of you
NOTE Confidence: 0.807801268888889

00:22:22.752 --> 00:22:24.600 know having an ankyloglossia,
NOTE Confidence: 0.807801268888889

00:22:24.600 --> 00:22:26.920 the the short lingual frenum.
NOTE Confidence: 0.807801268888889

00:22:26.920 --> 00:22:28.470 There's really no robust evidence
NOTE Confidence: 0.807801268888889

00:22:28.470 --> 00:22:30.890 on that and how that affects sleep,
NOTE Confidence: 0.807801268888889

00:22:30.890 --> 00:22:31.946 disordered breathing, but.
NOTE Confidence: 0.807801268888889

00:22:31.946 --> 00:22:34.058 There has been here and there
NOTE Confidence: 0.807801268888889

00:22:34.058 --> 00:22:36.148 some articles that show that maybe

NOTE Confidence: 0.807801268888889
00:22:36.148 --> 00:22:38.199 doing some treatment for for that
NOTE Confidence: 0.807801268888889
00:22:38.199 --> 00:22:40.101 and releasing it can help with
NOTE Confidence: 0.807801268888889
00:22:40.101 --> 00:22:42.554 the tongue movement and hence with
NOTE Confidence: 0.807801268888889
00:22:42.554 --> 00:22:45.044 with snoring or sleep apnea.
NOTE Confidence: 0.807801268888889
00:22:45.050 --> 00:22:45.470 But again,
NOTE Confidence: 0.807801268888889
00:22:45.470 --> 00:22:47.609 because we see a lot of this and in the
NOTE Confidence: 0.807801268888889
00:22:47.609 --> 00:22:49.249 Brexiters and we see a lot of this,
NOTE Confidence: 0.807801268888889
00:22:49.250 --> 00:22:50.950 these coating of the tongue
NOTE Confidence: 0.807801268888889
00:22:50.950 --> 00:22:52.549 in the mouth breathing again,
NOTE Confidence: 0.807801268888889
00:22:52.549 --> 00:22:54.222 we we tend to again have have
NOTE Confidence: 0.807801268888889
00:22:54.222 --> 00:22:55.787 a way of looking for it.
NOTE Confidence: 0.807801268888889
00:22:55.790 --> 00:22:57.974 And then we have the comparison of
NOTE Confidence: 0.807801268888889
00:22:57.974 --> 00:23:00.463 having a very narrow arch where again
NOTE Confidence: 0.807801268888889
00:23:00.463 --> 00:23:03.210 there's crowded space for for the tongue.
NOTE Confidence: 0.807801268888889
00:23:03.210 --> 00:23:05.050 And the argument is that if the tongue
NOTE Confidence: 0.807801268888889

00:23:05.050 --> 00:23:06.506 doesn't have much space to sit in,
NOTE Confidence: 0.807801268888889

00:23:06.510 --> 00:23:09.502 then it tends to sort of fall backwards
NOTE Confidence: 0.807801268888889

00:23:09.502 --> 00:23:10.931 posteriorly towards the oropharyngeal
NOTE Confidence: 0.807801268888889

00:23:10.931 --> 00:23:13.878 area and sort of narrow the airway
NOTE Confidence: 0.807801268888889

00:23:13.878 --> 00:23:16.419 there as opposed to having the.
NOTE Confidence: 0.807801268888889

00:23:16.420 --> 00:23:18.070 Wider arch here and having ample
NOTE Confidence: 0.807801268888889

00:23:18.070 --> 00:23:19.740 room for the for the time.
NOTE Confidence: 0.807801268888889

00:23:19.740 --> 00:23:21.516 But then again I just want to point
NOTE Confidence: 0.807801268888889

00:23:21.516 --> 00:23:23.146 out here too that there's only so
NOTE Confidence: 0.807801268888889

00:23:23.146 --> 00:23:25.038 far that we can push the teeth out.
NOTE Confidence: 0.807801268888889

00:23:25.040 --> 00:23:26.570 So just just widening the arch
NOTE Confidence: 0.807801268888889

00:23:26.570 --> 00:23:28.456 and pushing the teeth out is not
NOTE Confidence: 0.807801268888889

00:23:28.456 --> 00:23:29.806 the answer for everyone because
NOTE Confidence: 0.807801268888889

00:23:29.806 --> 00:23:31.529 there's only so much bone and we
NOTE Confidence: 0.807801268888889

00:23:31.529 --> 00:23:33.224 can't really grow bone out in the
NOTE Confidence: 0.807801268888889

00:23:33.224 --> 00:23:34.634 outer side of these teeth.

NOTE Confidence: 0.807801268888889
00:23:34.640 --> 00:23:36.936 If we do push them far out and
NOTE Confidence: 0.807801268888889
00:23:36.936 --> 00:23:38.470 there's initially there may not
NOTE Confidence: 0.807801268888889
00:23:38.470 --> 00:23:40.264 be any symptom any problems but
NOTE Confidence: 0.807801268888889
00:23:40.264 --> 00:23:42.385 then over time you you're going to
NOTE Confidence: 0.807801268888889
00:23:42.385 --> 00:23:44.499 notice that what we don't see is
NOTE Confidence: 0.807801268888889
00:23:44.499 --> 00:23:46.064 that there's thin bone underneath
NOTE Confidence: 0.807801268888889
00:23:46.064 --> 00:23:47.330 and fenestrations and sort of.
NOTE Confidence: 0.807801268888889
00:23:47.330 --> 00:23:47.576 Again,
NOTE Confidence: 0.807801268888889
00:23:47.576 --> 00:23:49.544 holes created in the bone that we do
NOTE Confidence: 0.807801268888889
00:23:49.544 --> 00:23:51.367 not see and is covered by by gum,
NOTE Confidence: 0.807801268888889
00:23:51.370 --> 00:23:53.785 but as they age and recession happens,
NOTE Confidence: 0.807801268888889
00:23:53.790 --> 00:23:55.568 then all these problems sort of arise.
NOTE Confidence: 0.807801268888889
00:23:55.570 --> 00:23:58.055 So again pushing the teeth out is
NOTE Confidence: 0.807801268888889
00:23:58.055 --> 00:24:00.406 not the answer and you know I'm
NOTE Confidence: 0.807801268888889
00:24:00.406 --> 00:24:02.706 going to go over some of the
NOTE Confidence: 0.807801268888889

00:24:02.706 --> 00:24:04.736 alternatives that we have to.
NOTE Confidence: 0.807801268888889

00:24:04.740 --> 00:24:06.210 And and like I said,
NOTE Confidence: 0.807801268888889

00:24:06.210 --> 00:24:08.124 we look for tooth grinding against
NOTE Confidence: 0.807801268888889

00:24:08.124 --> 00:24:09.400 sleep related breakfast that
NOTE Confidence: 0.807801268888889

00:24:09.456 --> 00:24:10.466 may affect up to 50%
NOTE Confidence: 0.882467125714286

00:24:10.470 --> 00:24:12.010 of children. Most of the time we're
NOTE Confidence: 0.882467125714286

00:24:12.010 --> 00:24:13.430 telling the parents that do not worry,
NOTE Confidence: 0.882467125714286

00:24:13.430 --> 00:24:16.198 it's part of their.
NOTE Confidence: 0.882467125714286

00:24:16.200 --> 00:24:18.160 The stage they're in now and they're
NOTE Confidence: 0.882467125714286

00:24:18.160 --> 00:24:20.578 going to grow out of it because fifty
NOTE Confidence: 0.882467125714286

00:24:20.578 --> 00:24:22.599 turns into 15 into adolescence and Umm,
NOTE Confidence: 0.882467125714286

00:24:22.600 --> 00:24:25.064 but the sleep bruxism risk is 4 times
NOTE Confidence: 0.882467125714286

00:24:25.064 --> 00:24:27.198 higher in children who have OSA.
NOTE Confidence: 0.882467125714286

00:24:27.200 --> 00:24:29.036 So that's why we still pay attention to it,
NOTE Confidence: 0.882467125714286

00:24:29.040 --> 00:24:30.936 although the percentage is so high.
NOTE Confidence: 0.882467125714286

00:24:30.940 --> 00:24:34.420 But in the context of having all these

NOTE Confidence: 0.882467125714286
00:24:34.420 --> 00:24:36.400 other symptoms and all the other,
NOTE Confidence: 0.882467125714286
00:24:36.400 --> 00:24:38.297 you know the way that their answer
NOTE Confidence: 0.882467125714286
00:24:38.297 --> 00:24:39.839 is that their questionnaires and
NOTE Confidence: 0.882467125714286
00:24:39.839 --> 00:24:42.170 what we see clinically then it there
NOTE Confidence: 0.882467125714286
00:24:42.170 --> 00:24:44.229 may be something valid to it because
NOTE Confidence: 0.882467125714286
00:24:44.229 --> 00:24:46.580 also too what we see as part of the.
NOTE Confidence: 0.882467125714286
00:24:46.580 --> 00:24:49.088 The categories that's that the International
NOTE Confidence: 0.882467125714286
00:24:49.088 --> 00:24:51.030 Classification of Sleep Disorders has,
NOTE Confidence: 0.882467125714286
00:24:51.030 --> 00:24:52.041 has sent out.
NOTE Confidence: 0.882467125714286
00:24:52.041 --> 00:24:54.063 We see the sleep related breathing
NOTE Confidence: 0.882467125714286
00:24:54.063 --> 00:24:55.510 disorders and sleep bruxism,
NOTE Confidence: 0.882467125714286
00:24:55.510 --> 00:24:56.938 they're they're both underneath
NOTE Confidence: 0.882467125714286
00:24:56.938 --> 00:24:58.009 the same umbrella.
NOTE Confidence: 0.882467125714286
00:24:58.010 --> 00:25:01.190 So again they're very close, they're there.
NOTE Confidence: 0.882467125714286
00:25:01.190 --> 00:25:03.310 It's not that which one, if,
NOTE Confidence: 0.882467125714286

00:25:03.310 --> 00:25:04.850 if there is any cause and effect,
NOTE Confidence: 0.882467125714286

00:25:04.850 --> 00:25:06.830 if if sleep related breathing,
NOTE Confidence: 0.882467125714286

00:25:06.830 --> 00:25:08.420 if obstructive sleep apnea is
NOTE Confidence: 0.882467125714286

00:25:08.420 --> 00:25:10.400 causing sleep racism or vice versa.
NOTE Confidence: 0.882467125714286

00:25:10.400 --> 00:25:11.980 But there's so many commonalities
NOTE Confidence: 0.882467125714286

00:25:11.980 --> 00:25:14.085 between the two and so much overlap
NOTE Confidence: 0.882467125714286

00:25:14.085 --> 00:25:16.620 that we do tend to see a lot of bruxism.
NOTE Confidence: 0.882467125714286

00:25:16.620 --> 00:25:19.470 And um, apneic patients too.
NOTE Confidence: 0.882467125714286

00:25:19.470 --> 00:25:22.530 So they both have been associated,
NOTE Confidence: 0.882467125714286

00:25:22.530 --> 00:25:24.610 but there's no cause and effect between them.
NOTE Confidence: 0.882467125714286

00:25:24.610 --> 00:25:26.548 So the hypothesis is that there's
NOTE Confidence: 0.882467125714286

00:25:26.548 --> 00:25:27.517 this rhythmic muscle,
NOTE Confidence: 0.882467125714286

00:25:27.520 --> 00:25:29.212 masticatory muscle activities that
NOTE Confidence: 0.882467125714286

00:25:29.212 --> 00:25:31.750 may help reinstate the airway patency
NOTE Confidence: 0.882467125714286

00:25:31.809 --> 00:25:33.629 following an obstructive event.
NOTE Confidence: 0.882467125714286

00:25:33.630 --> 00:25:36.542 Or another is that it's a physiological

NOTE Confidence: 0.882467125714286

00:25:36.542 --> 00:25:38.610 motor event that lubricates

NOTE Confidence: 0.882467125714286

00:25:38.610 --> 00:25:40.839 the oropharyngeal structures.

NOTE Confidence: 0.882467125714286

00:25:40.840 --> 00:25:41.692 So again,

NOTE Confidence: 0.882467125714286

00:25:41.692 --> 00:25:44.248 it it happens as there's mouth

NOTE Confidence: 0.882467125714286

00:25:44.248 --> 00:25:45.410 breathing going on,

NOTE Confidence: 0.882467125714286

00:25:45.410 --> 00:25:47.720 but at the same time they're

NOTE Confidence: 0.882467125714286

00:25:47.720 --> 00:25:50.030 both more common when sleeping.

NOTE Confidence: 0.882467125714286

00:25:50.030 --> 00:25:53.768 Supine position for both of them,

NOTE Confidence: 0.882467125714286

00:25:53.770 --> 00:25:55.518 the masticatory muscle activity

NOTE Confidence: 0.882467125714286

00:25:55.518 --> 00:25:58.140 that's happening in the sleep disorder

NOTE Confidence: 0.882467125714286

00:25:58.210 --> 00:26:00.346 breathing and apnea event and the

NOTE Confidence: 0.882467125714286

00:26:00.346 --> 00:26:02.581 sleep bruxism they both occur during,

NOTE Confidence: 0.882467125714286

00:26:02.581 --> 00:26:05.598 it's unclear if the muscle activation in

NOTE Confidence: 0.882467125714286

00:26:05.598 --> 00:26:08.810 apnea is resulting in the sleep racism.

NOTE Confidence: 0.882467125714286

00:26:08.810 --> 00:26:10.038 So in a way,

NOTE Confidence: 0.882467125714286

00:26:10.038 --> 00:26:11.880 is it that the patient stopped
NOTE Confidence: 0.882467125714286

00:26:11.957 --> 00:26:14.399 breathing and now as a defensive
NOTE Confidence: 0.882467125714286

00:26:14.399 --> 00:26:16.820 mechanism the bruxism is happening?
NOTE Confidence: 0.882467125714286

00:26:16.820 --> 00:26:19.052 To wake them up and cause an arousal
NOTE Confidence: 0.882467125714286

00:26:19.052 --> 00:26:21.519 so that they can gasp for air or not.
NOTE Confidence: 0.882467125714286

00:26:21.520 --> 00:26:24.916 But the arousal for an apnea,
NOTE Confidence: 0.882467125714286

00:26:24.920 --> 00:26:27.566 as you know it happens after the
NOTE Confidence: 0.882467125714286

00:26:27.566 --> 00:26:29.784 apnea episode but for the sleep
NOTE Confidence: 0.882467125714286

00:26:29.784 --> 00:26:32.115 bruxism on the PSG we see that
NOTE Confidence: 0.882467125714286

00:26:32.195 --> 00:26:34.024 the the sleep sleep racism,
NOTE Confidence: 0.882467125714286

00:26:34.024 --> 00:26:36.134 which is the muscular activity
NOTE Confidence: 0.882467125714286

00:26:36.134 --> 00:26:38.189 of the of the chin.
NOTE Confidence: 0.882467125714286

00:26:38.190 --> 00:26:40.590 Area that's that's how it would show up.
NOTE Confidence: 0.882467125714286

00:26:40.590 --> 00:26:41.210 It would,
NOTE Confidence: 0.882467125714286

00:26:41.210 --> 00:26:41.830 it would,
NOTE Confidence: 0.882467125714286

00:26:41.830 --> 00:26:44.068 it would occur during the within the

NOTE Confidence: 0.882467125714286

00:26:44.068 --> 00:26:45.928 arousal and both of them patients

NOTE Confidence: 0.882467125714286

00:26:45.928 --> 00:26:48.071 tend to report headaches and tension

NOTE Confidence: 0.882467125714286

00:26:48.071 --> 00:26:49.981 type and migraine headaches have

NOTE Confidence: 0.882467125714286

00:26:49.981 --> 00:26:52.310 both been associated with have been

NOTE Confidence: 0.882467125714286

00:26:52.310 --> 00:26:54.260 associated with both sleep racism

NOTE Confidence: 0.882467125714286

00:26:54.260 --> 00:26:56.443 and sleep disordered breathing and

NOTE Confidence: 0.882467125714286

00:26:56.443 --> 00:26:59.041 children with sleep racism report three

NOTE Confidence: 0.882467125714286

00:26:59.106 --> 00:27:00.961 times more headaches than children

NOTE Confidence: 0.882467125714286

00:27:00.961 --> 00:27:03.104 who don't have bruxism at night.

NOTE Confidence: 0.882467125714286

00:27:03.104 --> 00:27:05.376 30 to 50% of the adults that have

NOTE Confidence: 0.882467125714286

00:27:05.376 --> 00:27:07.577 sleep bruxism complain of headaches.

NOTE Confidence: 0.882467125714286

00:27:07.580 --> 00:27:08.976 And this repetitive rhythmic

NOTE Confidence: 0.882467125714286

00:27:08.976 --> 00:27:10.721 contractions of the mass auditory

NOTE Confidence: 0.882467125714286

00:27:10.721 --> 00:27:12.479 muscles may be the cause of

NOTE Confidence: 0.882467125714286

00:27:12.479 --> 00:27:13.563 these tension type headaches.

NOTE Confidence: 0.865088025333333

00:27:13.570 --> 00:27:16.386 But again, there's no robust evidence in the
NOTE Confidence: 0.865088025333333

00:27:16.386 --> 00:27:18.678 literature that can confirm that for sure.
NOTE Confidence: 0.865088025333333

00:27:18.680 --> 00:27:20.068 And again, sleep disorder
NOTE Confidence: 0.865088025333333

00:27:20.068 --> 00:27:21.803 breathing is also to associated
NOTE Confidence: 0.865088025333333

00:27:21.803 --> 00:27:23.779 with sleep bruxism and headaches.
NOTE Confidence: 0.865088025333333

00:27:23.780 --> 00:27:27.180 Now could it be because of the fragmentation
NOTE Confidence: 0.865088025333333

00:27:27.180 --> 00:27:30.437 because of the hypoxemia and hypercapnia?
NOTE Confidence: 0.865088025333333

00:27:30.440 --> 00:27:32.533 Or again, as you see they're sort
NOTE Confidence: 0.865088025333333

00:27:32.533 --> 00:27:34.370 of all related to each other.
NOTE Confidence: 0.865088025333333

00:27:34.370 --> 00:27:36.344 And the way that we would manage
NOTE Confidence: 0.865088025333333

00:27:36.344 --> 00:27:38.351 this would be we generally would
NOTE Confidence: 0.865088025333333

00:27:38.351 --> 00:27:40.673 give the patient some an occlusal
NOTE Confidence: 0.865088025333333

00:27:40.673 --> 00:27:43.052 splint to essentially protect their
NOTE Confidence: 0.865088025333333

00:27:43.052 --> 00:27:46.058 teeth from further wear and there's
NOTE Confidence: 0.865088025333333

00:27:46.058 --> 00:27:48.231 pharmacotherapy that you would probably
NOTE Confidence: 0.865088025333333

00:27:48.231 --> 00:27:50.786 know more about than I do Botox,

NOTE Confidence: 0.865088025333333

00:27:50.790 --> 00:27:53.112 you know to some extent can

NOTE Confidence: 0.865088025333333

00:27:53.112 --> 00:27:54.660 help and physical therapy.

NOTE Confidence: 0.865088025333333

00:27:54.660 --> 00:27:55.343 Hypnotherapy,

NOTE Confidence: 0.865088025333333

00:27:55.343 --> 00:27:57.392 cognitive behavioral therapy,

NOTE Confidence: 0.865088025333333

00:27:57.392 --> 00:28:00.690 and ultimately, sleep hygiene.

NOTE Confidence: 0.865088025333333

00:28:00.690 --> 00:28:04.953 So let's move on to another diagnostic

NOTE Confidence: 0.865088025333333

00:28:04.953 --> 00:28:09.022 sort of arsenal that we use as

NOTE Confidence: 0.865088025333333

00:28:09.022 --> 00:28:12.202 a lateral cephalogram or a CBCT.

NOTE Confidence: 0.865088025333333

00:28:12.210 --> 00:28:14.140 That would really show us

NOTE Confidence: 0.865088025333333

00:28:14.140 --> 00:28:16.599 statically in the moment with the

NOTE Confidence: 0.865088025333333

00:28:16.599 --> 00:28:18.399 patient actually sitting up,

NOTE Confidence: 0.865088025333333

00:28:18.400 --> 00:28:19.594 which really has very little to

NOTE Confidence: 0.865088025333333

00:28:19.594 --> 00:28:20.878 do with what they would look

NOTE Confidence: 0.865088025333333

00:28:20.878 --> 00:28:22.216 like when they're on their backs.

NOTE Confidence: 0.865088025333333

00:28:22.220 --> 00:28:24.360 And while sleeping with the

NOTE Confidence: 0.865088025333333

00:28:24.360 --> 00:28:26.072 muscle tonicity very different,
NOTE Confidence: 0.865088025333333

00:28:26.080 --> 00:28:28.568 just gives us a general idea of the
NOTE Confidence: 0.865088025333333

00:28:28.568 --> 00:28:30.969 size and the shape of the airway.
NOTE Confidence: 0.865088025333333

00:28:30.970 --> 00:28:33.994 So there's a position paper by the
NOTE Confidence: 0.865088025333333

00:28:33.994 --> 00:28:36.353 American Association of Oral Maxifacial
NOTE Confidence: 0.865088025333333

00:28:36.353 --> 00:28:39.276 Radiology back in 2013 that actually
NOTE Confidence: 0.865088025333333

00:28:39.276 --> 00:28:43.250 and they came up with the with this,
NOTE Confidence: 0.865088025333333

00:28:43.250 --> 00:28:45.134 with this position paper saying that
NOTE Confidence: 0.865088025333333

00:28:45.134 --> 00:28:47.233 there despite there is a number of
NOTE Confidence: 0.865088025333333

00:28:47.233 --> 00:28:49.423 publications and the use of cold beam CT
NOTE Confidence: 0.865088025333333

00:28:49.423 --> 00:28:51.565 and specifically in orthodontics what I do,
NOTE Confidence: 0.865088025333333

00:28:51.570 --> 00:28:53.380 but there is no benefit
NOTE Confidence: 0.865088025333333

00:28:53.380 --> 00:28:54.466 for airway assessment.
NOTE Confidence: 0.865088025333333

00:28:54.470 --> 00:28:57.620 So in a sense we can't really justify or
NOTE Confidence: 0.865088025333333

00:28:57.620 --> 00:29:01.063 be able to make a diagnosis based on it.
NOTE Confidence: 0.865088025333333

00:29:01.070 --> 00:29:02.318 Ultimately it's the uh,

NOTE Confidence: 0.865088025333333
00:29:02.318 --> 00:29:04.640 I guess PSG that we could go by,
NOTE Confidence: 0.865088025333333
00:29:04.640 --> 00:29:06.260 but it gives us an idea.
NOTE Confidence: 0.865088025333333
00:29:06.260 --> 00:29:08.402 And since we do need these X-rays
NOTE Confidence: 0.865088025333333
00:29:08.402 --> 00:29:10.749 anyways a lot of times for our
NOTE Confidence: 0.865088025333333
00:29:10.749 --> 00:29:12.794 purposes of moving teeth, moving jaws,
NOTE Confidence: 0.865088025333333
00:29:12.794 --> 00:29:14.479 and again it's right there,
NOTE Confidence: 0.865088025333333
00:29:14.480 --> 00:29:17.045 we can just take a look and see if
NOTE Confidence: 0.865088025333333
00:29:17.045 --> 00:29:19.452 things are adding up in the in the
NOTE Confidence: 0.865088025333333
00:29:19.452 --> 00:29:21.657 shape and size of the airway too.
NOTE Confidence: 0.865088025333333
00:29:21.660 --> 00:29:23.740 The limitations are are that,
NOTE Confidence: 0.865088025333333
00:29:23.740 --> 00:29:25.408 but the problem with these is
NOTE Confidence: 0.865088025333333
00:29:25.408 --> 00:29:26.939 that they're very useful for us,
NOTE Confidence: 0.865088025333333
00:29:26.940 --> 00:29:27.828 as again as orthodontist,
NOTE Confidence: 0.865088025333333
00:29:27.828 --> 00:29:29.396 to see where the where the jaws
NOTE Confidence: 0.865088025333333
00:29:29.396 --> 00:29:30.740 need to be moved to where the
NOTE Confidence: 0.865088025333333

00:29:30.740 --> 00:29:31.809 teeth need to be moved to,
NOTE Confidence: 0.865088025333333
00:29:31.810 --> 00:29:33.868 what are our limitations to how
NOTE Confidence: 0.865088025333333
00:29:33.868 --> 00:29:36.540 far we can we can move things.
NOTE Confidence: 0.865088025333333
00:29:36.540 --> 00:29:38.205 But there's lack of standardization
NOTE Confidence: 0.865088025333333
00:29:38.205 --> 00:29:40.571 of the head and tongue posture as
NOTE Confidence: 0.865088025333333
00:29:40.571 --> 00:29:42.497 these are taking and that's what's
NOTE Confidence: 0.865088025333333
00:29:42.497 --> 00:29:44.639 really the head being flexed or not.
NOTE Confidence: 0.865088025333333
00:29:44.640 --> 00:29:46.860 And the tongue being, you know,
NOTE Confidence: 0.865088025333333
00:29:46.860 --> 00:29:48.379 placed on the roof of the mouth
NOTE Confidence: 0.865088025333333
00:29:48.379 --> 00:29:49.519 versus in between the teeth.
NOTE Confidence: 0.865088025333333
00:29:49.520 --> 00:29:51.018 All of these will affect the airway.
NOTE Confidence: 0.865088025333333
00:29:51.020 --> 00:29:52.564 And again, that's why we can't really count.
NOTE Confidence: 0.865088025333333
00:29:52.570 --> 00:29:54.852 On the way that the airway looks
NOTE Confidence: 0.865088025333333
00:29:54.852 --> 00:29:57.131 on these X-rays and there's a
NOTE Confidence: 0.865088025333333
00:29:57.131 --> 00:29:59.171 great intra and inter examiner
NOTE Confidence: 0.865088025333333
00:29:59.171 --> 00:30:01.220 reliability for the airway volume

NOTE Confidence: 0.865088025333333

00:30:01.220 --> 00:30:03.880 and maximum cross section area.

NOTE Confidence: 0.865088025333333

00:30:03.880 --> 00:30:05.816 So there's lack of it I should say.

NOTE Confidence: 0.865088025333333

00:30:05.820 --> 00:30:07.844 And then there's the and there is lack

NOTE Confidence: 0.865088025333333

00:30:07.844 --> 00:30:09.911 of an established protocol also to

NOTE Confidence: 0.865088025333333

00:30:09.911 --> 00:30:12.155 for the standardization of these the

NOTE Confidence: 0.840520689

00:30:12.221 --> 00:30:13.716 the measurement on the on

NOTE Confidence: 0.840520689

00:30:13.716 --> 00:30:15.211 the softwares that we use.

NOTE Confidence: 0.840520689

00:30:15.220 --> 00:30:17.201 So, so when we go to different

NOTE Confidence: 0.840520689

00:30:17.201 --> 00:30:18.647 softwares depending on the threshold

NOTE Confidence: 0.840520689

00:30:18.647 --> 00:30:20.574 that we pick for soft tissue

NOTE Confidence: 0.840520689

00:30:20.574 --> 00:30:22.709 versus heart tissue and airway.

NOTE Confidence: 0.840520689

00:30:22.710 --> 00:30:24.488 Every software is going to have some,

NOTE Confidence: 0.840520689

00:30:24.490 --> 00:30:26.218 some level of discrepancy.

NOTE Confidence: 0.840520689

00:30:26.218 --> 00:30:27.898 Every, every patient's bone thickness

NOTE Confidence: 0.840520689

00:30:27.898 --> 00:30:29.458 may be different soft tissue.

NOTE Confidence: 0.840520689

00:30:29.460 --> 00:30:31.020 So there's always a little bit
NOTE Confidence: 0.840520689

00:30:31.020 --> 00:30:33.060 of an error to really know the
NOTE Confidence: 0.840520689

00:30:33.060 --> 00:30:34.615 exact volume for for these.
NOTE Confidence: 0.840520689

00:30:34.620 --> 00:30:36.594 But on average the volume of the
NOTE Confidence: 0.840520689

00:30:36.594 --> 00:30:38.428 fringer airway has been reported to
NOTE Confidence: 0.840520689

00:30:38.428 --> 00:30:40.288 be maybe about 20 cubic centimeters
NOTE Confidence: 0.840520689

00:30:40.288 --> 00:30:42.675 and the mean volume of the superior
NOTE Confidence: 0.840520689

00:30:42.675 --> 00:30:44.618 component versus the inferior component
NOTE Confidence: 0.840520689

00:30:44.618 --> 00:30:48.734 being around 9 versus versus 12 there.
NOTE Confidence: 0.840520689

00:30:48.740 --> 00:30:50.650 So.
NOTE Confidence: 0.840520689

00:30:50.650 --> 00:30:52.312 Let's move on with police and
NOTE Confidence: 0.840520689

00:30:52.312 --> 00:30:54.547 don't want to go over because I
NOTE Confidence: 0.840520689

00:30:54.547 --> 00:30:56.317 haven't gotten to treatment yet.
NOTE Confidence: 0.840520689

00:30:56.320 --> 00:30:57.964 But polysomnography again ultimately
NOTE Confidence: 0.840520689

00:30:57.964 --> 00:31:01.268 gold standard that we go by and based
NOTE Confidence: 0.840520689

00:31:01.268 --> 00:31:03.578 on that and in collaboration with

NOTE Confidence: 0.840520689

00:31:03.578 --> 00:31:05.640 sleep physicians such as yourselves,

NOTE Confidence: 0.840520689

00:31:05.640 --> 00:31:06.935 we come up with a treatment plan.

NOTE Confidence: 0.840520689

00:31:06.940 --> 00:31:09.470 Now the idea is that we we do want to

NOTE Confidence: 0.840520689

00:31:09.539 --> 00:31:11.835 work as a team because we don't want

NOTE Confidence: 0.840520689

00:31:11.835 --> 00:31:14.600 to be like these people and touching,

NOTE Confidence: 0.840520689

00:31:14.600 --> 00:31:15.164 you know,

NOTE Confidence: 0.840520689

00:31:15.164 --> 00:31:17.680 a certain part of what we are good at.

NOTE Confidence: 0.840520689

00:31:17.680 --> 00:31:19.948 I don't want to be the orthodontist

NOTE Confidence: 0.840520689

00:31:19.948 --> 00:31:21.460 that expands every child's.

NOTE Confidence: 0.840520689

00:31:21.460 --> 00:31:23.116 With the with the sleep disorder

NOTE Confidence: 0.840520689

00:31:23.116 --> 00:31:24.796 breathing with an expansion and not

NOTE Confidence: 0.840520689

00:31:24.796 --> 00:31:26.106 really make the correct referral

NOTE Confidence: 0.840520689

00:31:26.106 --> 00:31:27.704 same as probably you know every

NOTE Confidence: 0.840520689

00:31:27.704 --> 00:31:28.716 pulmonologist doesn't want to

NOTE Confidence: 0.840520689

00:31:28.716 --> 00:31:30.360 be the one just giving the CPAP.

NOTE Confidence: 0.840520689

00:31:30.360 --> 00:31:32.559 Well there may be you know adenoids involved.

NOTE Confidence: 0.840520689

00:31:32.560 --> 00:31:36.196 So let's go over again adenoidectomy,

NOTE Confidence: 0.840520689

00:31:36.200 --> 00:31:37.544 I'm not going to go over to you

NOTE Confidence: 0.840520689

00:31:37.544 --> 00:31:38.856 all know more about it than me.

NOTE Confidence: 0.840520689

00:31:38.860 --> 00:31:40.660 But the effect of it and how it

NOTE Confidence: 0.840520689

00:31:40.660 --> 00:31:41.957 affects the growth and development

NOTE Confidence: 0.840520689

00:31:41.957 --> 00:31:44.311 of the face that I was very early on

NOTE Confidence: 0.840520689

00:31:44.311 --> 00:31:46.159 in the lecture I was going over it.

NOTE Confidence: 0.840520689

00:31:46.160 --> 00:31:48.005 It's been shown that Adenoidectomy

NOTE Confidence: 0.840520689

00:31:48.005 --> 00:31:50.276 now results in a normal airway

NOTE Confidence: 0.840520689

00:31:50.276 --> 00:31:52.076 now having a normal airway.

NOTE Confidence: 0.840520689

00:31:52.080 --> 00:31:54.950 Being the blueprint for the growth of

NOTE Confidence: 0.840520689

00:31:54.950 --> 00:31:56.938 the skeletal craniofacial skeleton then

NOTE Confidence: 0.840520689

00:31:56.938 --> 00:32:00.090 leads to a less extended posture of the head.

NOTE Confidence: 0.840520689

00:32:00.090 --> 00:32:02.205 And then there has been and there has been,

NOTE Confidence: 0.840520689

00:32:02.210 --> 00:32:04.576 it has been shown that the children

NOTE Confidence: 0.840520689

00:32:04.576 --> 00:32:05.590 who underwent adenotonsillectomy,

NOTE Confidence: 0.840520689

00:32:05.590 --> 00:32:07.660 they showed an additional 3 millimeters

NOTE Confidence: 0.840520689

00:32:07.660 --> 00:32:09.690 forward and downward movement of the chin.

NOTE Confidence: 0.840520689

00:32:09.690 --> 00:32:11.550 So their their jaws are growing

NOTE Confidence: 0.840520689

00:32:11.550 --> 00:32:12.790 downward and forward more.

NOTE Confidence: 0.840520689

00:32:12.790 --> 00:32:14.285 And that's significant enough for

NOTE Confidence: 0.840520689

00:32:14.285 --> 00:32:16.690 for us to see after this procedure.

NOTE Confidence: 0.840520689

00:32:16.690 --> 00:32:18.813 So that goes to say that if, if,

NOTE Confidence: 0.840520689

00:32:18.813 --> 00:32:20.628 if, there was no intervention,

NOTE Confidence: 0.840520689

00:32:20.630 --> 00:32:22.830 if the if the adenoidectomy.

NOTE Confidence: 0.840520689

00:32:22.830 --> 00:32:23.829 Was not done.

NOTE Confidence: 0.840520689

00:32:23.829 --> 00:32:25.161 Then these children would

NOTE Confidence: 0.840520689

00:32:25.161 --> 00:32:27.259 essentially end up with smaller jaws.

NOTE Confidence: 0.840520689

00:32:27.260 --> 00:32:28.650 Now this would be affected,

NOTE Confidence: 0.840520689

00:32:28.650 --> 00:32:29.739 affecting their bites.

NOTE Confidence: 0.840520689

00:32:29.739 --> 00:32:32.252 It would be affecting their, you know,
NOTE Confidence: 0.840520689

00:32:32.252 --> 00:32:33.636 their profiles, their aesthetic,
NOTE Confidence: 0.840520689

00:32:33.640 --> 00:32:35.634 look up their faces and then, you know,
NOTE Confidence: 0.840520689

00:32:35.634 --> 00:32:36.936 later in life maybe that would,
NOTE Confidence: 0.840520689

00:32:36.940 --> 00:32:37.500 you know,
NOTE Confidence: 0.840520689

00:32:37.500 --> 00:32:39.460 turn out to be a surgical treatment
NOTE Confidence: 0.840520689

00:32:39.460 --> 00:32:41.204 if it's significant enough to
NOTE Confidence: 0.840520689

00:32:41.204 --> 00:32:43.304 the patient or to their function.
NOTE Confidence: 0.840520689

00:32:43.310 --> 00:32:44.117 And I mean,
NOTE Confidence: 0.840520689

00:32:44.117 --> 00:32:45.731 obviously you all know better than
NOTE Confidence: 0.840520689

00:32:45.731 --> 00:32:47.649 me the improvement in cognition,
NOTE Confidence: 0.840520689

00:32:47.650 --> 00:32:50.458 IQ test and quality of life.
NOTE Confidence: 0.840520689

00:32:50.460 --> 00:32:52.206 And CPAP again,
NOTE Confidence: 0.840520689

00:32:52.206 --> 00:32:55.698 very effective treatment for persistent OSA.
NOTE Confidence: 0.893731816

00:32:55.700 --> 00:32:57.560 It's unfortunately, as you know,
NOTE Confidence: 0.893731816

00:32:57.560 --> 00:33:00.830 it's not always tolerated in children.

NOTE Confidence: 0.893731816

00:33:00.830 --> 00:33:01.763 And it's expensive.

NOTE Confidence: 0.893731816

00:33:01.763 --> 00:33:03.490 Adherence is a problem, anxiety,

NOTE Confidence: 0.893731816

00:33:03.490 --> 00:33:05.410 sleep disruption and such.

NOTE Confidence: 0.893731816

00:33:05.410 --> 00:33:07.386 But now the same way that we were

NOTE Confidence: 0.893731816

00:33:07.386 --> 00:33:09.254 talking about how the soft tissue is

NOTE Confidence: 0.893731816

00:33:09.254 --> 00:33:11.100 affecting the growth of the skeleton.

NOTE Confidence: 0.893731816

00:33:11.100 --> 00:33:13.110 If you could imagine having the

NOTE Confidence: 0.893731816

00:33:13.110 --> 00:33:15.551 CPAP on with where it's placed and

NOTE Confidence: 0.893731816

00:33:15.551 --> 00:33:17.945 where it's strapped on now in turn,

NOTE Confidence: 0.893731816

00:33:17.950 --> 00:33:19.432 that the pressure that it that

NOTE Confidence: 0.893731816

00:33:19.432 --> 00:33:21.086 it has for a sustained amount

NOTE Confidence: 0.893731816

00:33:21.086 --> 00:33:23.214 of time over the amount of time

NOTE Confidence: 0.893731816

00:33:23.214 --> 00:33:25.189 that the that the child's in bed.

NOTE Confidence: 0.893731816

00:33:25.190 --> 00:33:27.080 So let's say a good, I don't know,

NOTE Confidence: 0.893731816

00:33:27.080 --> 00:33:28.536 four or five, 6810 hours,

NOTE Confidence: 0.893731816

00:33:28.536 --> 00:33:30.294 the amount of time that the
NOTE Confidence: 0.893731816

00:33:30.294 --> 00:33:31.480 child can actually.
NOTE Confidence: 0.893731816

00:33:31.480 --> 00:33:32.976 Tolerated and wear it.
NOTE Confidence: 0.893731816

00:33:32.976 --> 00:33:35.220 Now this will directly affect further
NOTE Confidence: 0.893731816

00:33:35.285 --> 00:33:37.573 growth of the of the jaws because it's
NOTE Confidence: 0.893731816

00:33:37.573 --> 00:33:39.836 sort of holding it by holding the
NOTE Confidence: 0.893731816

00:33:39.836 --> 00:33:42.016 soft tissue back and hence having an
NOTE Confidence: 0.893731816

00:33:42.016 --> 00:33:44.880 effect on the on the growth of the skeleton.
NOTE Confidence: 0.893731816

00:33:44.880 --> 00:33:47.050 So there has been significant
NOTE Confidence: 0.893731816

00:33:47.050 --> 00:33:47.918 maxillary retrovision.
NOTE Confidence: 0.893731816

00:33:47.920 --> 00:33:49.192 The upper jaw does not grow
NOTE Confidence: 0.893731816

00:33:49.192 --> 00:33:50.799 as much as the control screw.
NOTE Confidence: 0.893731816

00:33:50.800 --> 00:33:52.180 So if you look here, this is the,
NOTE Confidence: 0.893731816

00:33:52.180 --> 00:33:53.280 this is the control group,
NOTE Confidence: 0.893731816

00:33:53.280 --> 00:33:55.331 this is normal growth of the maxilla
NOTE Confidence: 0.893731816

00:33:55.331 --> 00:33:57.257 down and forward and this is after,

NOTE Confidence: 0.893731816

00:33:57.260 --> 00:33:59.920 you know this is the the child with the CPAP,

NOTE Confidence: 0.893731816

00:33:59.920 --> 00:34:00.910 there's counterclockwise.

NOTE Confidence: 0.893731816

00:34:00.910 --> 00:34:03.880 Clipping of the palatal plane so.

NOTE Confidence: 0.893731816

00:34:03.880 --> 00:34:04.160 Again,

NOTE Confidence: 0.893731816

00:34:04.160 --> 00:34:05.560 the powerful plane should be

NOTE Confidence: 0.893731816

00:34:05.560 --> 00:34:07.272 coming down and forward and you

NOTE Confidence: 0.893731816

00:34:07.272 --> 00:34:08.627 see this tipping down happening.

NOTE Confidence: 0.893731816

00:34:08.630 --> 00:34:10.590 The backside is coming down in the

NOTE Confidence: 0.893731816

00:34:10.590 --> 00:34:12.799 front side is sort of held up and

NOTE Confidence: 0.893731816

00:34:12.799 --> 00:34:14.743 you know dentally to then which may

NOTE Confidence: 0.893731816

00:34:14.743 --> 00:34:16.738 not be as significant for you all,

NOTE Confidence: 0.893731816

00:34:16.740 --> 00:34:18.555 but again being an orthodontist

NOTE Confidence: 0.893731816

00:34:18.555 --> 00:34:21.571 for us there is this flaring or the

NOTE Confidence: 0.893731816

00:34:21.571 --> 00:34:24.210 torquing of the upper incisors as well.

NOTE Confidence: 0.893731816

00:34:24.210 --> 00:34:25.570 So what do we do?

NOTE Confidence: 0.893731816

00:34:25.570 --> 00:34:27.475 A lot of times, again, as an orthodontist,
NOTE Confidence: 0.893731816

00:34:27.475 --> 00:34:29.400 there are sort of what we look
NOTE Confidence: 0.893731816

00:34:29.455 --> 00:34:30.829 for is if this is really,
NOTE Confidence: 0.893731816

00:34:30.830 --> 00:34:32.570 truly a problem within the skeleton,
NOTE Confidence: 0.893731816

00:34:32.570 --> 00:34:34.490 if the maxilla is really narrow,
NOTE Confidence: 0.893731816

00:34:34.490 --> 00:34:36.050 and who caused it? It?
NOTE Confidence: 0.893731816

00:34:36.050 --> 00:34:37.646 Was it the chicken or the egg?
NOTE Confidence: 0.893731816

00:34:37.650 --> 00:34:38.236 That aside,
NOTE Confidence: 0.893731816

00:34:38.236 --> 00:34:40.580 now we we use what we call a
NOTE Confidence: 0.893731816

00:34:40.661 --> 00:34:42.569 rapid maxillary expansion.
NOTE Confidence: 0.893731816

00:34:42.570 --> 00:34:44.778 Now that what it does is it just
NOTE Confidence: 0.893731816

00:34:44.778 --> 00:34:46.428 articulates the maxillary and the
NOTE Confidence: 0.893731816

00:34:46.428 --> 00:34:48.843 palatal bones and it moves them laterally.
NOTE Confidence: 0.893731816

00:34:48.850 --> 00:34:50.742 Now there's because there's
NOTE Confidence: 0.893731816

00:34:50.742 --> 00:34:52.634 this pyramidal shaped expansion
NOTE Confidence: 0.893731816

00:34:52.634 --> 00:34:54.149 that's happening we have.

NOTE Confidence: 0.893731816

00:34:54.150 --> 00:34:55.893 We have the fulcrum being if you

NOTE Confidence: 0.893731816

00:34:55.893 --> 00:34:57.402 could imagine that the nasal area

NOTE Confidence: 0.893731816

00:34:57.402 --> 00:34:58.812 and the the inferior part sort

NOTE Confidence: 0.893731816

00:34:58.812 --> 00:35:00.417 of comes apart makes it wider.

NOTE Confidence: 0.893731816

00:35:00.420 --> 00:35:02.177 And then also to if you're looking

NOTE Confidence: 0.893731816

00:35:02.177 --> 00:35:04.084 at the axial view here the anterior

NOTE Confidence: 0.893731816

00:35:04.084 --> 00:35:06.038 part tends to widen more and the

NOTE Confidence: 0.893731816

00:35:06.038 --> 00:35:07.598 back part tends to widen less.

NOTE Confidence: 0.893731816

00:35:07.600 --> 00:35:10.664 But All in all this will cause a

NOTE Confidence: 0.893731816

00:35:10.664 --> 00:35:12.977 narrow maxilla to to become wider

NOTE Confidence: 0.893731816

00:35:12.980 --> 00:35:14.821 in a sense and because right above

NOTE Confidence: 0.893731816

00:35:14.821 --> 00:35:16.949 it it's the nasal cavity then the

NOTE Confidence: 0.893731816

00:35:16.949 --> 00:35:18.869 we're increasing the volume of the

NOTE Confidence: 0.893731816

00:35:18.931 --> 00:35:21.075 of the nose too and I'll show you

NOTE Confidence: 0.893731816

00:35:21.075 --> 00:35:22.755 some articles on that and and some

NOTE Confidence: 0.893731816

00:35:22.755 --> 00:35:24.290 of actually the work that we did.
NOTE Confidence: 0.893731816

00:35:24.290 --> 00:35:28.196 Here so just a quick don't know
NOTE Confidence: 0.893731816

00:35:28.196 --> 00:35:30.280 if this video will. Works.
NOTE Confidence: 0.828476503809524

00:35:33.480 --> 00:35:35.752 Be not. OK, let's say this was just
NOTE Confidence: 0.828476503809524

00:35:35.752 --> 00:35:38.408 going to show you how the how the
NOTE Confidence: 0.828476503809524

00:35:38.408 --> 00:35:40.210 over superimposition of the bonus,
NOTE Confidence: 0.828476503809524

00:35:40.210 --> 00:35:43.306 but I have some static screenshots of it.
NOTE Confidence: 0.828476503809524

00:35:43.310 --> 00:35:45.081 So if you look at the green
NOTE Confidence: 0.828476503809524

00:35:45.081 --> 00:35:46.923 and here that's the after the
NOTE Confidence: 0.828476503809524

00:35:46.923 --> 00:35:48.618 yellow was the before expansion,
NOTE Confidence: 0.828476503809524

00:35:48.620 --> 00:35:49.940 so that's where the teeth were,
NOTE Confidence: 0.828476503809524

00:35:49.940 --> 00:35:51.718 but did the expansion and that's how
NOTE Confidence: 0.828476503809524

00:35:51.718 --> 00:35:54.066 the jaw sort of widened and along with
NOTE Confidence: 0.828476503809524

00:35:54.066 --> 00:35:55.860 that the teeth traveled outwardly too.
NOTE Confidence: 0.828476503809524

00:35:55.860 --> 00:35:57.532 So you see the red being the most
NOTE Confidence: 0.828476503809524

00:35:57.532 --> 00:35:59.170 amount of movement versus the blue

NOTE Confidence: 0.828476503809524
00:35:59.170 --> 00:36:00.630 the least amount of movement.
NOTE Confidence: 0.828476503809524
00:36:00.630 --> 00:36:02.527 You see how most of the movement
NOTE Confidence: 0.828476503809524
00:36:02.527 --> 00:36:04.232 is happening here as opposed to
NOTE Confidence: 0.828476503809524
00:36:04.232 --> 00:36:05.894 up there and again the widening.
NOTE Confidence: 0.828476503809524
00:36:05.900 --> 00:36:08.050 And the posterior as well.
NOTE Confidence: 0.828476503809524
00:36:08.050 --> 00:36:09.658 And because again all of this
NOTE Confidence: 0.828476503809524
00:36:09.658 --> 00:36:11.110 is connected to each other,
NOTE Confidence: 0.828476503809524
00:36:11.110 --> 00:36:13.526 I would like to show you how the
NOTE Confidence: 0.828476503809524
00:36:13.526 --> 00:36:15.855 widening in the upper arch has
NOTE Confidence: 0.828476503809524
00:36:15.855 --> 00:36:17.503 actually caused the increase.
NOTE Confidence: 0.828476503809524
00:36:17.510 --> 00:36:19.286 As you can see here in the red
NOTE Confidence: 0.828476503809524
00:36:19.286 --> 00:36:21.487 here in the even the sinuses and
NOTE Confidence: 0.828476503809524
00:36:21.487 --> 00:36:23.182 the oropharyngeal area here right
NOTE Confidence: 0.828476503809524
00:36:23.244 --> 00:36:24.180 behind the tank.
NOTE Confidence: 0.828476503809524
00:36:24.180 --> 00:36:25.104 So this is,
NOTE Confidence: 0.828476503809524

00:36:25.104 --> 00:36:26.849 this is the cross-sectional view of
NOTE Confidence: 0.828476503809524

00:36:26.849 --> 00:36:29.044 the airway and you can see just by
NOTE Confidence: 0.828476503809524

00:36:29.044 --> 00:36:30.852 widening of the air of the upper arch.
NOTE Confidence: 0.828476503809524

00:36:30.860 --> 00:36:32.900 The idea is that now the tank has
NOTE Confidence: 0.828476503809524

00:36:32.900 --> 00:36:35.036 more room to sit up above where it
NOTE Confidence: 0.828476503809524

00:36:35.036 --> 00:36:37.159 really should be on the roof of the
NOTE Confidence: 0.828476503809524

00:36:37.159 --> 00:36:39.572 mouth and that's why we see this increase.
NOTE Confidence: 0.828476503809524

00:36:39.572 --> 00:36:40.454 And Umm.
NOTE Confidence: 0.828476503809524

00:36:40.454 --> 00:36:42.218 The fragile space there.
NOTE Confidence: 0.828476503809524

00:36:42.220 --> 00:36:44.518 Here's some examples of what these
NOTE Confidence: 0.828476503809524

00:36:44.518 --> 00:36:46.420 palatal expanders would look like.
NOTE Confidence: 0.828476503809524

00:36:46.420 --> 00:36:48.045 And there are many different
NOTE Confidence: 0.828476503809524

00:36:48.045 --> 00:36:49.020 designs depending on,
NOTE Confidence: 0.828476503809524

00:36:49.020 --> 00:36:49.612 you know,
NOTE Confidence: 0.828476503809524

00:36:49.612 --> 00:36:51.388 the teeth that are there depending
NOTE Confidence: 0.828476503809524

00:36:51.388 --> 00:36:53.857 on if we need any bone supported or

NOTE Confidence: 0.828476503809524
00:36:53.857 --> 00:36:55.839 just tooth support is good and so.
NOTE Confidence: 0.828476503809524
00:36:55.840 --> 00:36:57.952 But what they all have in common is
NOTE Confidence: 0.828476503809524
00:36:57.952 --> 00:37:00.242 this Jack screw in the middle that
NOTE Confidence: 0.828476503809524
00:37:00.242 --> 00:37:02.278 tends to cause significant amount of
NOTE Confidence: 0.828476503809524
00:37:02.278 --> 00:37:04.168 force that then and has the ability
NOTE Confidence: 0.828476503809524
00:37:04.168 --> 00:37:06.760 to open the sutures and growing children.
NOTE Confidence: 0.828476503809524
00:37:06.760 --> 00:37:09.376 Now again we have a limited window of
NOTE Confidence: 0.828476503809524
00:37:09.376 --> 00:37:11.327 opportunity now after a certain age.
NOTE Confidence: 0.828476503809524
00:37:11.330 --> 00:37:12.875 Because there's so much resistance
NOTE Confidence: 0.828476503809524
00:37:12.875 --> 00:37:14.792 and the actually not so much
NOTE Confidence: 0.828476503809524
00:37:14.792 --> 00:37:16.347 within the mid palatal suture,
NOTE Confidence: 0.828476503809524
00:37:16.350 --> 00:37:19.080 but further back in the terrago maxillary
NOTE Confidence: 0.828476503809524
00:37:19.080 --> 00:37:21.174 area and the zygomatic buttress,
NOTE Confidence: 0.828476503809524
00:37:21.174 --> 00:37:23.304 then it becomes almost impossible
NOTE Confidence: 0.828476503809524
00:37:23.304 --> 00:37:25.623 to use these in adults and be
NOTE Confidence: 0.828476503809524

00:37:25.623 --> 00:37:27.200 able to really crack them open.
NOTE Confidence: 0.828476503809524

00:37:27.200 --> 00:37:28.520 And that's when we need to
NOTE Confidence: 0.828476503809524

00:37:28.520 --> 00:37:29.848 do an additional surgery,
NOTE Confidence: 0.828476503809524

00:37:29.850 --> 00:37:32.167 release those sutures and then do the
NOTE Confidence: 0.828476503809524

00:37:32.167 --> 00:37:35.360 same type of expansion to widen the the arch.
NOTE Confidence: 0.828476503809524

00:37:35.360 --> 00:37:37.922 And that has been shown to that
NOTE Confidence: 0.828476503809524

00:37:37.922 --> 00:37:40.285 the nasal cavity and orphans and
NOTE Confidence: 0.828476503809524

00:37:40.285 --> 00:37:43.060 can expand about 11% and for each
NOTE Confidence: 0.828476503809524

00:37:43.060 --> 00:37:45.040 millimeter of expansion the airway
NOTE Confidence: 0.828476503809524

00:37:45.111 --> 00:37:47.006 volume increased about 2.4%.
NOTE Confidence: 0.828476503809524

00:37:47.006 --> 00:37:48.836 And this is a very,
NOTE Confidence: 0.828476503809524

00:37:48.840 --> 00:37:49.161 Umm,
NOTE Confidence: 0.828476503809524

00:37:49.161 --> 00:37:51.087 I thought a very interesting article
NOTE Confidence: 0.828476503809524

00:37:51.087 --> 00:37:53.199 that is now you know it's it's
NOTE Confidence: 0.828476503809524

00:37:53.199 --> 00:37:55.140 been a while since it came out,
NOTE Confidence: 0.828476503809524

00:37:55.140 --> 00:37:56.913 but it the the the good thing about it,

NOTE Confidence: 0.828476503809524

00:37:56.920 --> 00:37:58.120 the interesting thing is that

NOTE Confidence: 0.828476503809524

00:37:58.120 --> 00:37:59.942 is that it's a very long term

NOTE Confidence: 0.828476503809524

00:37:59.942 --> 00:38:01.634 follow-up study on children and Umm,

NOTE Confidence: 0.828476503809524

00:38:01.640 --> 00:38:03.838 this is the group with I think

NOTE Confidence: 0.828476503809524

00:38:03.838 --> 00:38:04.720 Doctor Gimeno too.

NOTE Confidence: 0.828476503809524

00:38:04.720 --> 00:38:05.138 Umm.

NOTE Confidence: 0.828476503809524

00:38:05.138 --> 00:38:07.846 Stanford that looked at it on children

NOTE Confidence: 0.828476503809524

00:38:07.846 --> 00:38:10.310 4 to 8 years old that underwent rapid

NOTE Confidence: 0.7887644633333333

00:38:10.373 --> 00:38:11.629 maxillary expansion.

NOTE Confidence: 0.7887644633333333

00:38:11.630 --> 00:38:14.689 The HI decreased from 6 to 4,

NOTE Confidence: 0.7887644633333333

00:38:14.690 --> 00:38:16.242 the oxygen saturation increased

NOTE Confidence: 0.7887644633333333

00:38:16.242 --> 00:38:19.447 from 95 to 97 and a 12 year

NOTE Confidence: 0.7887644633333333

00:38:19.447 --> 00:38:21.823 follow-up study on them showed that

NOTE Confidence: 0.7887644633333333

00:38:21.823 --> 00:38:24.372 the post rapid mixer expansion

NOTE Confidence: 0.7887644633333333

00:38:24.372 --> 00:38:27.670 HIV increase decreased 12 to .4,

NOTE Confidence: 0.7887644633333333

00:38:27.670 --> 00:38:30.910 oxygen saturation increased 78 to 95.

NOTE Confidence: 0.7887644633333333

00:38:30.910 --> 00:38:33.064 So wrong long term results is

NOTE Confidence: 0.7887644633333333

00:38:33.064 --> 00:38:34.750 really what we're interested in,

NOTE Confidence: 0.7887644633333333

00:38:34.750 --> 00:38:35.750 but then also to you.

NOTE Confidence: 0.7887644633333333

00:38:35.750 --> 00:38:37.448 Would argue that well all these

NOTE Confidence: 0.7887644633333333

00:38:37.448 --> 00:38:39.350 you know these 12 year follow up

NOTE Confidence: 0.7887644633333333

00:38:39.350 --> 00:38:41.620 part of it is that the the the the

NOTE Confidence: 0.7887644633333333

00:38:41.620 --> 00:38:43.282 children are you know growing too

NOTE Confidence: 0.7887644633333333

00:38:43.282 --> 00:38:45.815 and in essence the you know the

NOTE Confidence: 0.7887644633333333

00:38:45.815 --> 00:38:47.790 adenoids and tonsils are shrinking

NOTE Confidence: 0.7887644633333333

00:38:47.863 --> 00:38:49.860 as well but you know they had a

NOTE Confidence: 0.7887644633333333

00:38:49.860 --> 00:38:51.413 control group to compare this with

NOTE Confidence: 0.7887644633333333

00:38:51.413 --> 00:38:53.309 and still this is the this is the

NOTE Confidence: 0.7887644633333333

00:38:53.309 --> 00:38:54.710 results that they're showing so

NOTE Confidence: 0.7887644633333333

00:38:54.710 --> 00:38:56.378 there is some validity to that

NOTE Confidence: 0.7887644633333333

00:38:56.380 --> 00:38:58.410 and some it's not for every child

NOTE Confidence: 0.7887644633333333
00:38:58.410 --> 00:39:00.149 absolutely I'm not saying that but
NOTE Confidence: 0.7887644633333333
00:39:00.149 --> 00:39:02.025 definitely in the in the for the
NOTE Confidence: 0.7887644633333333
00:39:02.087 --> 00:39:03.792 wrong right candidate it's effective
NOTE Confidence: 0.7887644633333333
00:39:03.792 --> 00:39:06.640 and it's it's been shown it also.
NOTE Confidence: 0.7887644633333333
00:39:06.640 --> 00:39:09.490 Helps improve quality of life.
NOTE Confidence: 0.7887644633333333
00:39:09.490 --> 00:39:11.986 And the questionnaires that we've done,
NOTE Confidence: 0.7887644633333333
00:39:11.990 --> 00:39:14.393 this is a study we did here at BU
NOTE Confidence: 0.7887644633333333
00:39:14.393 --> 00:39:16.857 where we analyzed the nasal airway
NOTE Confidence: 0.7887644633333333
00:39:16.857 --> 00:39:18.982 symmetry and upper airway changes
NOTE Confidence: 0.7887644633333333
00:39:19.051 --> 00:39:20.967 after rapid mixer expansion.
NOTE Confidence: 0.7887644633333333
00:39:20.970 --> 00:39:22.430 So we had two groups.
NOTE Confidence: 0.7887644633333333
00:39:22.430 --> 00:39:24.254 So we had a group of patients that
NOTE Confidence: 0.7887644633333333
00:39:24.254 --> 00:39:26.313 we that we that had rapid maxillary
NOTE Confidence: 0.7887644633333333
00:39:26.313 --> 00:39:28.557 expansion and we were looking at each
NOTE Confidence: 0.7887644633333333
00:39:28.557 --> 00:39:30.147 segment of the airway separately.
NOTE Confidence: 0.7887644633333333

00:39:30.150 --> 00:39:32.022 So we had the right and left nasal cavity,
NOTE Confidence: 0.7887644633333333

00:39:32.030 --> 00:39:33.490 the nasal pharyngeal area,
NOTE Confidence: 0.7887644633333333

00:39:33.490 --> 00:39:34.950 the oropharyngeal area and
NOTE Confidence: 0.7887644633333333

00:39:34.950 --> 00:39:35.990 the Hypopharyngeal area.
NOTE Confidence: 0.7887644633333333

00:39:35.990 --> 00:39:37.852 And what we showed was that both
NOTE Confidence: 0.7887644633333333

00:39:37.852 --> 00:39:39.537 the control groups this was over 2.
NOTE Confidence: 0.7887644633333333

00:39:39.540 --> 00:39:41.507 Two years time point on the initial
NOTE Confidence: 0.7887644633333333

00:39:41.507 --> 00:39:43.441 call beam CT's were taken right
NOTE Confidence: 0.7887644633333333

00:39:43.441 --> 00:39:45.156 before chronic treatment and two
NOTE Confidence: 0.7887644633333333

00:39:45.156 --> 00:39:46.859 years later when it was done.
NOTE Confidence: 0.7887644633333333

00:39:46.860 --> 00:39:48.915 And what we showed was that both
NOTE Confidence: 0.7887644633333333

00:39:48.915 --> 00:39:51.165 groups that control and the the
NOTE Confidence: 0.7887644633333333

00:39:51.165 --> 00:39:53.065 rapid mixer expansion group showed
NOTE Confidence: 0.7887644633333333

00:39:53.065 --> 00:39:55.195 an increase in in all segments.
NOTE Confidence: 0.7887644633333333

00:39:55.200 --> 00:39:55.544 However,
NOTE Confidence: 0.7887644633333333

00:39:55.544 --> 00:39:57.608 for the control group the only

NOTE Confidence: 0.7887644633333333
00:39:57.608 --> 00:39:59.381 significant increase was in the
NOTE Confidence: 0.7887644633333333
00:39:59.381 --> 00:40:01.433 oropharyngeal region and the screen portion.
NOTE Confidence: 0.7887644633333333
00:40:01.440 --> 00:40:03.596 But for the for the subject group,
NOTE Confidence: 0.7887644633333333
00:40:03.600 --> 00:40:04.368 for the,
NOTE Confidence: 0.7887644633333333
00:40:04.368 --> 00:40:07.056 for the children who had maxillary expansion,
NOTE Confidence: 0.7887644633333333
00:40:07.060 --> 00:40:09.620 all of these other segments.
NOTE Confidence: 0.7887644633333333
00:40:09.620 --> 00:40:10.946 To increase significantly.
NOTE Confidence: 0.7887644633333333
00:40:10.946 --> 00:40:14.040 But what we also found was that
NOTE Confidence: 0.7887644633333333
00:40:14.125 --> 00:40:16.596 where the rights if if the right
NOTE Confidence: 0.7887644633333333
00:40:16.596 --> 00:40:19.095 side was the smaller side relative
NOTE Confidence: 0.7887644633333333
00:40:19.095 --> 00:40:22.462 to the left side before rapid mixer
NOTE Confidence: 0.7887644633333333
00:40:22.462 --> 00:40:24.582 expansion it tended the discrepancy
NOTE Confidence: 0.7887644633333333
00:40:24.582 --> 00:40:26.910 between them tends to become less.
NOTE Confidence: 0.7887644633333333
00:40:26.910 --> 00:40:31.206 So the one that started up smaller became.
NOTE Confidence: 0.7887644633333333
00:40:31.210 --> 00:40:33.274 I guess it grew more in a way
NOTE Confidence: 0.7887644633333333

00:40:33.274 --> 00:40:35.755 or it it became larger than the
NOTE Confidence: 0.7887644633333333

00:40:35.755 --> 00:40:37.735 one that started out larger.
NOTE Confidence: 0.7887644633333333

00:40:37.735 --> 00:40:40.060 However in the control group.
NOTE Confidence: 0.7887644633333333

00:40:40.060 --> 00:40:42.180 The side that's started out
NOTE Confidence: 0.7887644633333333

00:40:42.180 --> 00:40:44.300 smaller states smaller after that.
NOTE Confidence: 0.7887644633333333

00:40:44.300 --> 00:40:46.526 So it it almost seems like there
NOTE Confidence: 0.7887644633333333

00:40:46.526 --> 00:40:48.665 would be a balancing effect too
NOTE Confidence: 0.7887644633333333

00:40:48.665 --> 00:40:51.684 to the to sort of balance out and
NOTE Confidence: 0.7887644633333333

00:40:51.684 --> 00:40:54.169 equalize the the right and left side
NOTE Confidence: 0.7887644633333333

00:40:54.169 --> 00:40:56.272 as well with rapid mixer expansion.
NOTE Confidence: 0.7887644633333333

00:40:56.272 --> 00:40:59.034 This is just some of the tables I
NOTE Confidence: 0.7887644633333333

00:40:59.034 --> 00:41:01.162 know I'm running out of time so.
NOTE Confidence: 0.7887644633333333

00:41:01.170 --> 00:41:02.880 Just to show you the significant
NOTE Confidence: 0.7887644633333333

00:41:02.880 --> 00:41:04.643 increase in each of those segments
NOTE Confidence: 0.7887644633333333

00:41:04.643 --> 00:41:06.883 that I was talking about and this is
NOTE Confidence: 0.9147278203333333

00:41:06.942 --> 00:41:08.850 for the control group or the

NOTE Confidence: 0.914727820333333
00:41:08.850 --> 00:41:10.122 only significant increase was
NOTE Confidence: 0.914727820333333
00:41:10.130 --> 00:41:13.190 in the oropharyngeal region?
NOTE Confidence: 0.914727820333333
00:41:13.190 --> 00:41:14.870 And I just went over that.
NOTE Confidence: 0.914727820333333
00:41:14.870 --> 00:41:18.890 Another treatment modality is the
NOTE Confidence: 0.914727820333333
00:41:18.890 --> 00:41:20.555 functional appliances that are very
NOTE Confidence: 0.914727820333333
00:41:20.555 --> 00:41:23.231 similar to what you all may be familiar
NOTE Confidence: 0.914727820333333
00:41:23.231 --> 00:41:25.127 with with the oral appliances and
NOTE Confidence: 0.914727820333333
00:41:25.127 --> 00:41:26.931 adults to essentially posture the
NOTE Confidence: 0.914727820333333
00:41:26.931 --> 00:41:28.711 the mandible forward to increase
NOTE Confidence: 0.914727820333333
00:41:28.711 --> 00:41:30.600 the airway volume posteriorly.
NOTE Confidence: 0.914727820333333
00:41:30.600 --> 00:41:32.130 And in children,
NOTE Confidence: 0.914727820333333
00:41:32.130 --> 00:41:35.034 we do this normally because the idea is
NOTE Confidence: 0.914727820333333
00:41:35.034 --> 00:41:38.308 that again by posturing the mandible forward.
NOTE Confidence: 0.914727820333333
00:41:38.310 --> 00:41:40.614 We're sending the signal through the
NOTE Confidence: 0.914727820333333
00:41:40.614 --> 00:41:42.788 soft tissue around too that there
NOTE Confidence: 0.914727820333333

00:41:42.788 --> 00:41:45.076 would be a sort of an increase in
NOTE Confidence: 0.914727820333333

00:41:45.145 --> 00:41:47.173 the condylar activity in a sense
NOTE Confidence: 0.914727820333333

00:41:47.173 --> 00:41:49.200 helping them grow a larger mandible.
NOTE Confidence: 0.914727820333333

00:41:49.200 --> 00:41:51.545 Now there's a lot of debate about
NOTE Confidence: 0.914727820333333

00:41:51.545 --> 00:41:53.767 that and it's not that significant.
NOTE Confidence: 0.914727820333333

00:41:53.770 --> 00:41:54.622 If we're lucky,
NOTE Confidence: 0.914727820333333

00:41:54.622 --> 00:41:57.466 we may be able to get one to two
NOTE Confidence: 0.914727820333333

00:41:57.466 --> 00:41:59.806 millimeter of longer mandibles per se.
NOTE Confidence: 0.914727820333333

00:41:59.810 --> 00:42:01.610 And a lot of it may be really
NOTE Confidence: 0.914727820333333

00:42:01.610 --> 00:42:02.470 borrowing from future.
NOTE Confidence: 0.914727820333333

00:42:02.470 --> 00:42:03.466 But in essence,
NOTE Confidence: 0.914727820333333

00:42:03.466 --> 00:42:05.790 and this is also what it's doing,
NOTE Confidence: 0.914727820333333

00:42:05.790 --> 00:42:07.770 is that it's helping us with
NOTE Confidence: 0.914727820333333

00:42:07.770 --> 00:42:09.090 with correcting the occlusion.
NOTE Confidence: 0.914727820333333

00:42:09.090 --> 00:42:11.774 Of the of the children with maybe
NOTE Confidence: 0.914727820333333

00:42:11.774 --> 00:42:13.838 potentially helping them with a little

NOTE Confidence: 0.914727820333333
00:42:13.838 --> 00:42:16.218 bit more growth of the lower jaw and
NOTE Confidence: 0.914727820333333
00:42:16.218 --> 00:42:18.540 at the same time opening up their Airways.
NOTE Confidence: 0.914727820333333
00:42:18.540 --> 00:42:20.172 And you know there are several
NOTE Confidence: 0.914727820333333
00:42:20.172 --> 00:42:22.305 articles on this I can I can leave
NOTE Confidence: 0.914727820333333
00:42:22.305 --> 00:42:24.103 these here with you that you know
NOTE Confidence: 0.914727820333333
00:42:24.103 --> 00:42:26.007 how they can reduce they may reduce
NOTE Confidence: 0.914727820333333
00:42:26.007 --> 00:42:27.840 the risk of OSA later but again
NOTE Confidence: 0.914727820333333
00:42:27.840 --> 00:42:29.383 they're not treatment for OSA and
NOTE Confidence: 0.914727820333333
00:42:29.383 --> 00:42:31.039 I would not really edge it just to
NOTE Confidence: 0.914727820333333
00:42:31.039 --> 00:42:32.782 put it out there for you that these
NOTE Confidence: 0.914727820333333
00:42:32.782 --> 00:42:34.592 are sort of some of the treatment
NOTE Confidence: 0.914727820333333
00:42:34.592 --> 00:42:36.350 that we do the opposite problem
NOTE Confidence: 0.914727820333333
00:42:36.410 --> 00:42:38.419 when the upper jaws that fault and
NOTE Confidence: 0.914727820333333
00:42:38.419 --> 00:42:40.119 it's smaller than the lower jaw.
NOTE Confidence: 0.914727820333333
00:42:40.120 --> 00:42:42.904 Use what's what we call a face mask
NOTE Confidence: 0.914727820333333

00:42:42.904 --> 00:42:44.998 that sort of brings the maxilla

NOTE Confidence: 0.914727820333333

00:42:44.998 --> 00:42:47.154 forward and that tends to bring the

NOTE Confidence: 0.914727820333333

00:42:47.154 --> 00:42:48.713 maxilla forward and downward and

NOTE Confidence: 0.914727820333333

00:42:48.713 --> 00:42:50.489 then it rotates the mandible back.

NOTE Confidence: 0.914727820333333

00:42:50.490 --> 00:42:52.345 And again there are studies that show

NOTE Confidence: 0.914727820333333

00:42:52.345 --> 00:42:54.625 it's this is sort of what it looks like.

NOTE Confidence: 0.914727820333333

00:42:54.630 --> 00:42:56.730 So the upper teeth would be

NOTE Confidence: 0.914727820333333

00:42:56.730 --> 00:42:58.550 sort of falling behind here.

NOTE Confidence: 0.914727820333333

00:42:58.550 --> 00:42:59.650 It doesn't show that it's

NOTE Confidence: 0.914727820333333

00:42:59.650 --> 00:43:00.530 behind because of these.

NOTE Confidence: 0.914727820333333

00:43:00.530 --> 00:43:02.162 The the byte block that you

NOTE Confidence: 0.914727820333333

00:43:02.162 --> 00:43:03.750 see here it's holding it open.

NOTE Confidence: 0.914727820333333

00:43:03.750 --> 00:43:05.814 But a lot of kids would have this

NOTE Confidence: 0.914727820333333

00:43:05.814 --> 00:43:07.670 underbite and then we can use this

NOTE Confidence: 0.914727820333333

00:43:07.670 --> 00:43:09.339 appliance that holds on to this

NOTE Confidence: 0.914727820333333

00:43:09.339 --> 00:43:10.939 contractor we make inside and.

NOTE Confidence: 0.914727820333333
00:43:10.940 --> 00:43:13.460 It pulls in and at this age
NOTE Confidence: 0.914727820333333
00:43:13.460 --> 00:43:15.319 it actually is able to.
NOTE Confidence: 0.914727820333333
00:43:15.320 --> 00:43:16.680 Promote growth at the level
NOTE Confidence: 0.914727820333333
00:43:16.680 --> 00:43:17.768 of the sutures right.
NOTE Confidence: 0.914727820333333
00:43:17.770 --> 00:43:19.464 Right where I was showing you in
NOTE Confidence: 0.914727820333333
00:43:19.464 --> 00:43:21.013 the very first slides where can
NOTE Confidence: 0.914727820333333
00:43:21.013 --> 00:43:22.812 still we can we can manipulate it
NOTE Confidence: 0.914727820333333
00:43:22.869 --> 00:43:24.414 and and cause activation within
NOTE Confidence: 0.914727820333333
00:43:24.414 --> 00:43:26.231 these sutures in the maxilla and
NOTE Confidence: 0.914727820333333
00:43:26.231 --> 00:43:28.128 and and effect and have the effect
NOTE Confidence: 0.914727820333333
00:43:28.128 --> 00:43:30.078 for it to actually grow downward
NOTE Confidence: 0.914727820333333
00:43:30.078 --> 00:43:32.100 and forward more and hence the
NOTE Confidence: 0.914727820333333
00:43:32.163 --> 00:43:33.968 airway would be become larger.
NOTE Confidence: 0.914727820333333
00:43:33.970 --> 00:43:34.484 So here's,
NOTE Confidence: 0.914727820333333
00:43:34.484 --> 00:43:36.283 here's an example of before and after.
NOTE Confidence: 0.914727820333333

00:43:36.290 --> 00:43:38.579 You see red is after yellow was
NOTE Confidence: 0.914727820333333

00:43:38.579 --> 00:43:40.748 before and how it's come forward
NOTE Confidence: 0.914727820333333

00:43:40.748 --> 00:43:42.968 and the mandible has gone down
NOTE Confidence: 0.914727820333333

00:43:42.968 --> 00:43:45.479 and back and the airway enlarges.
NOTE Confidence: 0.914727820333333

00:43:45.480 --> 00:43:47.220 The one thing that I really
NOTE Confidence: 0.914727820333333

00:43:47.220 --> 00:43:48.380 would like to mention
NOTE Confidence: 0.884556799545455

00:43:48.447 --> 00:43:51.057 just because there's a lot of talk about you
NOTE Confidence: 0.884556799545455

00:43:51.057 --> 00:43:54.154 know orthodontic treatment, taking out teeth,
NOTE Confidence: 0.884556799545455

00:43:54.154 --> 00:43:57.500 extraction of teeth and causes sleep apnea.
NOTE Confidence: 0.884556799545455

00:43:57.500 --> 00:44:00.452 And there there are a lot of dentists that
NOTE Confidence: 0.884556799545455

00:44:00.452 --> 00:44:02.882 actually claim that there's a lot of you
NOTE Confidence: 0.884556799545455

00:44:02.882 --> 00:44:05.564 know you know many, many I guess people
NOTE Confidence: 0.884556799545455

00:44:05.564 --> 00:44:07.700 in medical profession have heard that.
NOTE Confidence: 0.884556799545455

00:44:07.700 --> 00:44:10.360 So I would I would just like to go over
NOTE Confidence: 0.884556799545455

00:44:10.437 --> 00:44:12.684 this very quickly that when we take
NOTE Confidence: 0.884556799545455

00:44:12.684 --> 00:44:15.570 out a tooth we have reasons for it and.

NOTE Confidence: 0.884556799545455
00:44:15.570 --> 00:44:16.950 And like I said earlier too,
NOTE Confidence: 0.884556799545455
00:44:16.950 --> 00:44:19.230 one is that, you know,
NOTE Confidence: 0.884556799545455
00:44:19.230 --> 00:44:21.342 there's only so much around bone around the
NOTE Confidence: 0.884556799545455
00:44:21.342 --> 00:44:23.568 tooth and we don't want to compromise that.
NOTE Confidence: 0.884556799545455
00:44:23.570 --> 00:44:25.680 So just to show you here, for instance,
NOTE Confidence: 0.884556799545455
00:44:25.680 --> 00:44:27.390 if a tooth is extracted here,
NOTE Confidence: 0.884556799545455
00:44:27.390 --> 00:44:28.972 we can, we can use the space
NOTE Confidence: 0.884556799545455
00:44:28.972 --> 00:44:30.009 several different ways we can,
NOTE Confidence: 0.884556799545455
00:44:30.010 --> 00:44:31.890 we can push everything back from the front.
NOTE Confidence: 0.884556799545455
00:44:31.890 --> 00:44:33.210 There could be some movement from
NOTE Confidence: 0.884556799545455
00:44:33.210 --> 00:44:34.690 the front teeth and from the back
NOTE Confidence: 0.884556799545455
00:44:34.690 --> 00:44:35.992 teeth and then it could be that
NOTE Confidence: 0.884556799545455
00:44:36.042 --> 00:44:37.368 all the back teeth come forward.
NOTE Confidence: 0.884556799545455
00:44:37.370 --> 00:44:38.894 So again there's so many different
NOTE Confidence: 0.884556799545455
00:44:38.894 --> 00:44:40.314 ways we can manipulate, but we,
NOTE Confidence: 0.884556799545455

00:44:40.314 --> 00:44:41.728 we if we need to take out
NOTE Confidence: 0.884556799545455

00:44:41.728 --> 00:44:43.427 a tooth to make room for a,
NOTE Confidence: 0.884556799545455

00:44:43.430 --> 00:44:44.406 for another tooth that's
NOTE Confidence: 0.884556799545455

00:44:44.406 --> 00:44:45.626 impacted or when there are.
NOTE Confidence: 0.884556799545455

00:44:45.630 --> 00:44:47.340 Indications that actually extraction of the
NOTE Confidence: 0.884556799545455

00:44:47.340 --> 00:44:49.517 tooth is needed and if it's not extracted,
NOTE Confidence: 0.884556799545455

00:44:49.520 --> 00:44:53.250 it can have, you know, sort of.
NOTE Confidence: 0.884556799545455

00:44:53.250 --> 00:44:54.550 Side effects in a way.
NOTE Confidence: 0.884556799545455

00:44:54.550 --> 00:44:55.650 Umm, later on in life,
NOTE Confidence: 0.884556799545455

00:44:55.650 --> 00:44:56.694 if if not that.
NOTE Confidence: 0.884556799545455

00:44:56.694 --> 00:44:59.210 So there are times that it's it's effective.
NOTE Confidence: 0.884556799545455

00:44:59.210 --> 00:44:59.843 So for instance,
NOTE Confidence: 0.884556799545455

00:44:59.843 --> 00:45:02.071 I just want to show you a case of mine
NOTE Confidence: 0.884556799545455

00:45:02.071 --> 00:45:04.149 when I was doing my residency and this is,
NOTE Confidence: 0.884556799545455

00:45:04.150 --> 00:45:06.580 this is the mouth of an 18 year old boy
NOTE Confidence: 0.884556799545455

00:45:06.643 --> 00:45:08.809 with there's absolutely no room for

NOTE Confidence: 0.884556799545455
00:45:08.809 --> 00:45:11.130 these two canine teeth to be placed.
NOTE Confidence: 0.884556799545455
00:45:11.130 --> 00:45:12.579 So if if anybody would would tell
NOTE Confidence: 0.884556799545455
00:45:12.579 --> 00:45:14.354 me that you need to fit all these
NOTE Confidence: 0.884556799545455
00:45:14.354 --> 00:45:15.690 teeth and push these teeth out,
NOTE Confidence: 0.884556799545455
00:45:15.690 --> 00:45:17.406 create more room for the tongue.
NOTE Confidence: 0.884556799545455
00:45:17.410 --> 00:45:18.640 And because this kid is going
NOTE Confidence: 0.884556799545455
00:45:18.640 --> 00:45:19.460 to have sleep apnea,
NOTE Confidence: 0.884556799545455
00:45:19.460 --> 00:45:20.708 if you take out teeth that's,
NOTE Confidence: 0.884556799545455
00:45:20.710 --> 00:45:22.090 you know that that's the wrong
NOTE Confidence: 0.884556799545455
00:45:22.090 --> 00:45:23.240 thing to do because the.
NOTE Confidence: 0.884556799545455
00:45:23.240 --> 00:45:25.880 They cannot push these teeth out and not
NOTE Confidence: 0.884556799545455
00:45:25.880 --> 00:45:28.350 cause problems for this child who is now 18,
NOTE Confidence: 0.884556799545455
00:45:28.350 --> 00:45:29.350 not a child anymore,
NOTE Confidence: 0.884556799545455
00:45:29.350 --> 00:45:31.571 but you know by 45 is going to
NOTE Confidence: 0.884556799545455
00:45:31.571 --> 00:45:33.226 have recession all along here.
NOTE Confidence: 0.884556799545455

00:45:33.230 --> 00:45:34.134 And Umm, you know,
NOTE Confidence: 0.884556799545455

00:45:34.134 --> 00:45:35.940 sensitive teeth and all sorts of problems.
NOTE Confidence: 0.884556799545455

00:45:35.940 --> 00:45:38.316 So no, we, I took out four teeth,
NOTE Confidence: 0.884556799545455

00:45:38.320 --> 00:45:39.520 as we can see is missing.
NOTE Confidence: 0.884556799545455

00:45:39.520 --> 00:45:41.417 Now these two teeth are gone here,
NOTE Confidence: 0.884556799545455

00:45:41.420 --> 00:45:43.156 and the same thing on the lower 2.
NOTE Confidence: 0.884556799545455

00:45:43.160 --> 00:45:44.558 Teeth are gone.
NOTE Confidence: 0.884556799545455

00:45:44.558 --> 00:45:45.956 Everything's fit nicely.
NOTE Confidence: 0.884556799545455

00:45:45.960 --> 00:45:48.273 And if you look at the side lateral view,
NOTE Confidence: 0.884556799545455

00:45:48.280 --> 00:45:50.359 you know there's not a the airway,
NOTE Confidence: 0.884556799545455

00:45:50.360 --> 00:45:51.320 at least from this view.
NOTE Confidence: 0.884556799545455

00:45:51.320 --> 00:45:54.120 You can't see significant change in it there.
NOTE Confidence: 0.884556799545455

00:45:54.120 --> 00:45:55.920 There shouldn't be and it's not.
NOTE Confidence: 0.884556799545455

00:45:55.920 --> 00:45:57.880 And this is sort of the superimposition
NOTE Confidence: 0.884556799545455

00:45:57.880 --> 00:45:59.920 before and after you see them gone back.
NOTE Confidence: 0.884556799545455

00:45:59.920 --> 00:46:01.288 I actually had to push the

NOTE Confidence: 0.884556799545455
00:46:01.288 --> 00:46:02.200 top teeth back too,
NOTE Confidence: 0.884556799545455
00:46:02.200 --> 00:46:03.740 but essentially there's really.
NOTE Confidence: 0.884556799545455
00:46:03.740 --> 00:46:05.280 Not a significant change.
NOTE Confidence: 0.884556799545455
00:46:05.280 --> 00:46:07.180 So a lot of times we do have to take
NOTE Confidence: 0.912279694166667
00:46:07.240 --> 00:46:09.249 out teeth. But unfortunately there
NOTE Confidence: 0.912279694166667
00:46:09.249 --> 00:46:12.812 has been a recent talks of, you know,
NOTE Confidence: 0.912279694166667
00:46:12.812 --> 00:46:14.919 over the past few years that orthodontists
NOTE Confidence: 0.912279694166667
00:46:14.919 --> 00:46:16.566 are causing sleep apnea because
NOTE Confidence: 0.912279694166667
00:46:16.566 --> 00:46:18.830 they're taking out teeth and all that.
NOTE Confidence: 0.912279694166667
00:46:18.830 --> 00:46:20.630 Just, you know, just to give you an example,
NOTE Confidence: 0.912279694166667
00:46:20.630 --> 00:46:22.128 if I'm sure you will hear it
NOTE Confidence: 0.912279694166667
00:46:22.128 --> 00:46:23.510 at one point or the other,
NOTE Confidence: 0.912279694166667
00:46:23.510 --> 00:46:26.350 us being accused to, Umm, you know,
NOTE Confidence: 0.912279694166667
00:46:26.350 --> 00:46:28.310 adding to your patient population in a way.
NOTE Confidence: 0.912279694166667
00:46:28.310 --> 00:46:31.046 So the last thing I want to go
NOTE Confidence: 0.912279694166667

00:46:31.046 --> 00:46:34.079 over is the orthognathic surgery.
NOTE Confidence: 0.912279694166667

00:46:34.080 --> 00:46:36.904 Interventions that we do a lot to not
NOTE Confidence: 0.912279694166667

00:46:36.904 --> 00:46:39.238 during usually we tend to do that for,
NOTE Confidence: 0.912279694166667

00:46:39.240 --> 00:46:41.344 you know, when the children are done with
NOTE Confidence: 0.912279694166667

00:46:41.344 --> 00:46:43.362 growing but you know sort of bringing
NOTE Confidence: 0.912279694166667

00:46:43.362 --> 00:46:45.200 the jaws forward for orthodontic effort,
NOTE Confidence: 0.912279694166667

00:46:45.200 --> 00:46:46.067 they're, you know,
NOTE Confidence: 0.912279694166667

00:46:46.067 --> 00:46:47.801 sort of their function and their
NOTE Confidence: 0.912279694166667

00:46:47.801 --> 00:46:48.839 aesthetics of their faces.
NOTE Confidence: 0.912279694166667

00:46:48.840 --> 00:46:50.513 But also too we know how that
NOTE Confidence: 0.912279694166667

00:46:50.513 --> 00:46:51.880 would affect their Airways too.
NOTE Confidence: 0.912279694166667

00:46:51.880 --> 00:46:54.373 So the idea is that we can still, uh,
NOTE Confidence: 0.912279694166667

00:46:54.373 --> 00:46:56.038 when there is mandibular deformities,
NOTE Confidence: 0.912279694166667

00:46:56.040 --> 00:46:57.440 when there's efficiency in the
NOTE Confidence: 0.912279694166667

00:46:57.440 --> 00:46:58.000 mandible mandible,
NOTE Confidence: 0.912279694166667

00:46:58.000 --> 00:46:59.375 we don't have to necessarily

NOTE Confidence: 0.912279694166667

00:46:59.375 --> 00:47:00.475 wait for them to,

NOTE Confidence: 0.912279694166667

00:47:00.480 --> 00:47:02.650 you know be 2122 to do the

NOTE Confidence: 0.912279694166667

00:47:02.650 --> 00:47:04.339 surgery the if there is.

NOTE Confidence: 0.912279694166667

00:47:04.340 --> 00:47:07.462 As preoperative rate of growth is can

NOTE Confidence: 0.912279694166667

00:47:07.462 --> 00:47:10.153 be maintained after bilateral sagittal

NOTE Confidence: 0.912279694166667

00:47:10.153 --> 00:47:13.338 osteotomy or vertical Ramis osteotomy.

NOTE Confidence: 0.912279694166667

00:47:13.340 --> 00:47:15.724 If the rate of growth was normal and

NOTE Confidence: 0.912279694166667

00:47:15.724 --> 00:47:18.544 the the jaws were just very much they

NOTE Confidence: 0.912279694166667

00:47:18.544 --> 00:47:20.999 had a large discrepancy and we do the,

NOTE Confidence: 0.912279694166667

00:47:21.000 --> 00:47:22.673 we do the surgery then you know

NOTE Confidence: 0.912279694166667

00:47:22.673 --> 00:47:24.584 that it tends to grow at the same

NOTE Confidence: 0.912279694166667

00:47:24.584 --> 00:47:26.100 normal rate that it was going.

NOTE Confidence: 0.912279694166667

00:47:26.100 --> 00:47:28.100 Now if the rate of growth was deficient

NOTE Confidence: 0.912279694166667

00:47:28.100 --> 00:47:30.251 for the mandible prior to surgery then

NOTE Confidence: 0.912279694166667

00:47:30.251 --> 00:47:32.127 chances are that it continues the

NOTE Confidence: 0.912279694166667

00:47:32.127 --> 00:47:34.414 same way and the and the the child may need.

NOTE Confidence: 0.912279694166667

00:47:34.414 --> 00:47:36.058 And a second surgery later on.

NOTE Confidence: 0.912279694166667

00:47:36.060 --> 00:47:37.990 But a lot of times there could

NOTE Confidence: 0.912279694166667

00:47:37.990 --> 00:47:39.565 be indications that we have to do

NOTE Confidence: 0.912279694166667

00:47:39.565 --> 00:47:41.089 the surgery maybe when they're,

NOTE Confidence: 0.912279694166667

00:47:41.090 --> 00:47:42.734 you know, 1314.

NOTE Confidence: 0.912279694166667

00:47:42.734 --> 00:47:45.474 And then for maxillary deformities,

NOTE Confidence: 0.912279694166667

00:47:45.480 --> 00:47:47.405 if there's a very small maxilla now,

NOTE Confidence: 0.912279694166667

00:47:47.410 --> 00:47:49.048 now the problem becomes the like

NOTE Confidence: 0.912279694166667

00:47:49.048 --> 00:47:51.264 we have to realize that any laford

NOTE Confidence: 0.912279694166667

00:47:51.264 --> 00:47:52.326 maxillary osteotomy inhibits

NOTE Confidence: 0.912279694166667

00:47:52.326 --> 00:47:54.230 further growth of the maxilla.

NOTE Confidence: 0.912279694166667

00:47:54.230 --> 00:47:55.995 So a vertical growth continues

NOTE Confidence: 0.912279694166667

00:47:55.995 --> 00:47:57.407 at the presurgical rate.

NOTE Confidence: 0.912279694166667

00:47:57.410 --> 00:47:59.312 But because we can't expect much

NOTE Confidence: 0.912279694166667

00:47:59.312 --> 00:48:01.346 forward growth in the in the

NOTE Confidence: 0.912279694166667
00:48:01.346 --> 00:48:03.106 maxilla after the Lefort osteotomy,
NOTE Confidence: 0.912279694166667
00:48:03.110 --> 00:48:05.492 there has to be some overcorrection
NOTE Confidence: 0.912279694166667
00:48:05.492 --> 00:48:06.286 plans too.
NOTE Confidence: 0.912279694166667
00:48:06.290 --> 00:48:08.477 And the last thing I want to go over
NOTE Confidence: 0.912279694166667
00:48:08.477 --> 00:48:10.662 is another another study we did here
NOTE Confidence: 0.912279694166667
00:48:10.662 --> 00:48:13.038 at at BU looking at the effect of.
NOTE Confidence: 0.912279694166667
00:48:13.040 --> 00:48:14.768 Different types of surgeries and again
NOTE Confidence: 0.912279694166667
00:48:14.768 --> 00:48:16.280 different segments of the airway.
NOTE Confidence: 0.912279694166667
00:48:16.280 --> 00:48:18.499 Now we have again the nasal area,
NOTE Confidence: 0.912279694166667
00:48:18.500 --> 00:48:20.132 the nasopharyngeal area,
NOTE Confidence: 0.912279694166667
00:48:20.132 --> 00:48:23.396 oropharynx and hypopharynx and we looked
NOTE Confidence: 0.912279694166667
00:48:23.396 --> 00:48:26.032 at the maxillary advancement alone,
NOTE Confidence: 0.912279694166667
00:48:26.032 --> 00:48:28.124 mandibular advancement alone and
NOTE Confidence: 0.912279694166667
00:48:28.124 --> 00:48:30.000 then bimaxillary advancement.
NOTE Confidence: 0.912279694166667
00:48:30.000 --> 00:48:31.668 And I've just highlighted the significant
NOTE Confidence: 0.912279694166667

00:48:31.668 --> 00:48:33.409 changes in volume in each of them.
NOTE Confidence: 0.912279694166667

00:48:33.410 --> 00:48:35.111 And you can see that the next
NOTE Confidence: 0.912279694166667

00:48:35.111 --> 00:48:36.562 three advancement along the only
NOTE Confidence: 0.912279694166667

00:48:36.562 --> 00:48:37.902 significant change actually appeared
NOTE Confidence: 0.912279694166667

00:48:37.902 --> 00:48:39.642 in the oropharyngeal region with
NOTE Confidence: 0.912279694166667

00:48:39.642 --> 00:48:41.038 the mandibular advancement alone,
NOTE Confidence: 0.912279694166667

00:48:41.040 --> 00:48:43.040 same thing or financial region.
NOTE Confidence: 0.912279694166667

00:48:43.040 --> 00:48:43.748 Increased significantly.
NOTE Confidence: 0.912279694166667

00:48:43.748 --> 00:48:46.226 But when you put the two together
NOTE Confidence: 0.912279694166667

00:48:46.226 --> 00:48:48.331 and you do an MMA bimaxillary
NOTE Confidence: 0.912279694166667

00:48:48.331 --> 00:48:50.016 advancement now there is increase
NOTE Confidence: 0.789896958965517

00:48:50.079 --> 00:48:52.364 in nasopharyngeal cavity or pharyngeal
NOTE Confidence: 0.789896958965517

00:48:52.364 --> 00:48:54.192 cavity and hypopharyngeal cavity.
NOTE Confidence: 0.789896958965517

00:48:54.200 --> 00:48:56.450 Now because by bringing the maxilla
NOTE Confidence: 0.789896958965517

00:48:56.450 --> 00:48:58.988 forward now we're giving a chance for
NOTE Confidence: 0.789896958965517

00:48:58.988 --> 00:49:01.263 the mandible to be even further brought

NOTE Confidence: 0.789896958965517
00:49:01.325 --> 00:49:03.949 forward and in harmony with the upper jaw.
NOTE Confidence: 0.789896958965517
00:49:03.950 --> 00:49:06.214 And this is, this is what we're seeing
NOTE Confidence: 0.789896958965517
00:49:06.214 --> 00:49:08.802 both in the volume and this is the
NOTE Confidence: 0.789896958965517
00:49:08.802 --> 00:49:11.418 minimum cross section area that for all
NOTE Confidence: 0.789896958965517
00:49:11.418 --> 00:49:13.493 of them actually increased significantly.
NOTE Confidence: 0.789896958965517
00:49:13.500 --> 00:49:17.234 And then we showed that you know if
NOTE Confidence: 0.789896958965517
00:49:17.234 --> 00:49:20.106 there is any for every millimeter of
NOTE Confidence: 0.789896958965517
00:49:20.106 --> 00:49:22.276 anterior movement that the greater
NOTE Confidence: 0.789896958965517
00:49:22.276 --> 00:49:25.035 Palatine frame and that we that we
NOTE Confidence: 0.789896958965517
00:49:25.035 --> 00:49:26.981 measured for bimaxillary surgery for
NOTE Confidence: 0.789896958965517
00:49:26.981 --> 00:49:29.627 every anterior movement of the maxilla
NOTE Confidence: 0.789896958965517
00:49:29.627 --> 00:49:33.423 we we see so much increase in in volume
NOTE Confidence: 0.789896958965517
00:49:33.423 --> 00:49:36.282 and same way with the downward with
NOTE Confidence: 0.789896958965517
00:49:36.282 --> 00:49:38.587 every millimeter downward movement of
NOTE Confidence: 0.789896958965517
00:49:38.587 --> 00:49:41.331 the posterior nasal spine again we're
NOTE Confidence: 0.789896958965517

00:49:41.331 --> 00:49:43.923 seeing so much increase in nasopharyngeal.
NOTE Confidence: 0.789896958965517

00:49:43.930 --> 00:49:44.418 Gravity.
NOTE Confidence: 0.789896958965517

00:49:44.418 --> 00:49:47.834 So just to show you some pictures,
NOTE Confidence: 0.789896958965517

00:49:47.840 --> 00:49:49.532 this is an example of a
NOTE Confidence: 0.789896958965517

00:49:49.532 --> 00:49:50.096 mandibular advancement.
NOTE Confidence: 0.789896958965517

00:49:50.100 --> 00:49:53.130 You see how the mandible is so far back huge
NOTE Confidence: 0.789896958965517

00:49:53.205 --> 00:49:55.711 overjet and this is before surgery where
NOTE Confidence: 0.789896958965517

00:49:55.711 --> 00:49:58.996 the jaw was and where it's brought forward,
NOTE Confidence: 0.789896958965517

00:49:59.000 --> 00:50:00.984 just a single jaw.
NOTE Confidence: 0.789896958965517

00:50:00.984 --> 00:50:01.976 Mandibular advancement.
NOTE Confidence: 0.789896958965517

00:50:01.980 --> 00:50:05.376 And this is the facial change,
NOTE Confidence: 0.789896958965517

00:50:05.380 --> 00:50:07.145 the not sort of occlusion
NOTE Confidence: 0.789896958965517

00:50:07.145 --> 00:50:09.280 and then on the airway too.
NOTE Confidence: 0.789896958965517

00:50:09.280 --> 00:50:10.819 So this is where the jaw used to be.
NOTE Confidence: 0.789896958965517

00:50:10.820 --> 00:50:12.542 The upper is not touched practically
NOTE Confidence: 0.789896958965517

00:50:12.542 --> 00:50:14.170 this is where the initial.

NOTE Confidence: 0.789896958965517
00:50:14.170 --> 00:50:15.700 Position of the lower jaw,
NOTE Confidence: 0.789896958965517
00:50:15.700 --> 00:50:17.908 the final position and the increase
NOTE Confidence: 0.789896958965517
00:50:17.908 --> 00:50:21.107 in the in the airway as you can see.
NOTE Confidence: 0.789896958965517
00:50:21.110 --> 00:50:22.916 And from another view from the
NOTE Confidence: 0.789896958965517
00:50:22.916 --> 00:50:25.093 axial view again this is where you
NOTE Confidence: 0.789896958965517
00:50:25.093 --> 00:50:26.905 know the initial position and and
NOTE Confidence: 0.789896958965517
00:50:26.905 --> 00:50:28.685 after and how the airway changes
NOTE Confidence: 0.789896958965517
00:50:28.685 --> 00:50:30.854 and she's not going to go over the
NOTE Confidence: 0.789896958965517
00:50:30.854 --> 00:50:32.590 numbers much with you at this point.
NOTE Confidence: 0.789896958965517
00:50:32.590 --> 00:50:33.706 Skeletal class 3,
NOTE Confidence: 0.789896958965517
00:50:33.706 --> 00:50:36.310 that's when the maxilla is has not
NOTE Confidence: 0.789896958965517
00:50:36.389 --> 00:50:38.909 grown as much in a way it's smaller
NOTE Confidence: 0.789896958965517
00:50:38.909 --> 00:50:41.804 and it's not projected as much or the
NOTE Confidence: 0.789896958965517
00:50:41.804 --> 00:50:44.590 mandible appears to be to have grown so much.
NOTE Confidence: 0.789896958965517
00:50:44.590 --> 00:50:46.462 But really and truly most of the time
NOTE Confidence: 0.789896958965517

00:50:46.462 --> 00:50:48.389 really the mandible is is not at fault
NOTE Confidence: 0.789896958965517

00:50:48.389 --> 00:50:50.210 and it's the maxilla didn't grow much.
NOTE Confidence: 0.789896958965517

00:50:50.210 --> 00:50:51.053 So it's best.
NOTE Confidence: 0.789896958965517

00:50:51.053 --> 00:50:52.739 And also to for the airway,
NOTE Confidence: 0.789896958965517

00:50:52.740 --> 00:50:54.876 it's best to try and bring the maxilla
NOTE Confidence: 0.789896958965517

00:50:54.876 --> 00:50:56.973 forward as opposed to setting back the
NOTE Confidence: 0.789896958965517

00:50:56.973 --> 00:50:59.035 mandible and that's what we set up
NOTE Confidence: 0.789896958965517

00:50:59.035 --> 00:51:01.070 the patients for and we set them up
NOTE Confidence: 0.789896958965517

00:51:01.070 --> 00:51:03.130 and then they go through the surgery.
NOTE Confidence: 0.789896958965517

00:51:03.130 --> 00:51:05.338 So this was a double job because we
NOTE Confidence: 0.789896958965517

00:51:05.338 --> 00:51:07.270 don't want to do just the demand.
NOTE Confidence: 0.789896958965517

00:51:07.270 --> 00:51:08.745 Maxilla forward sometimes may affect
NOTE Confidence: 0.789896958965517

00:51:08.745 --> 00:51:10.824 the esthetics of the nose too depending
NOTE Confidence: 0.789896958965517

00:51:10.824 --> 00:51:12.468 on how much advancement we need.
NOTE Confidence: 0.789896958965517

00:51:12.470 --> 00:51:15.014 So then we sort of titrated not having
NOTE Confidence: 0.789896958965517

00:51:15.014 --> 00:51:17.609 to do just the mandible back and

NOTE Confidence: 0.789896958965517

00:51:17.609 --> 00:51:20.510 affecting the airway in a negative way.

NOTE Confidence: 0.789896958965517

00:51:20.510 --> 00:51:23.222 And then the most common one for sleep

NOTE Confidence: 0.789896958965517

00:51:23.222 --> 00:51:24.695 apnea maxillomandibular advancement and

NOTE Confidence: 0.789896958965517

00:51:24.695 --> 00:51:27.285 that it enlarges the pharyngeal airway space.

NOTE Confidence: 0.789896958965517

00:51:27.290 --> 00:51:28.900 It tightens the upper airway

NOTE Confidence: 0.789896958965517

00:51:28.900 --> 00:51:30.510 muscles and tendons and Umm.

NOTE Confidence: 0.789896958965517

00:51:30.510 --> 00:51:33.370 But the counterclockwise rotation

NOTE Confidence: 0.789896958965517

00:51:33.370 --> 00:51:36.102 especially there's 4547% increase that's

NOTE Confidence: 0.789896958965517

00:51:36.102 --> 00:51:38.610 been shown in the financial airway space,

NOTE Confidence: 0.789896958965517

00:51:38.610 --> 00:51:40.045 in the soft palate and at the

NOTE Confidence: 0.789896958965517

00:51:40.045 --> 00:51:41.070 base of the tongue.

NOTE Confidence: 0.789896958965517

00:51:41.070 --> 00:51:44.430 This goes up to 76%

NOTE Confidence: 0.82082547

00:51:44.430 --> 00:51:47.682 and another superimposition of it showing

NOTE Confidence: 0.82082547

00:51:47.682 --> 00:51:50.630 the before and after how that changes.

NOTE Confidence: 0.82082547

00:51:50.630 --> 00:51:52.030 It's a bimaxillary advancement

NOTE Confidence: 0.82082547

00:51:52.030 --> 00:51:54.941 and most of the changes you see is
NOTE Confidence: 0.82082547

00:51:54.941 --> 00:51:56.796 happening in the oropharyngeal area.
NOTE Confidence: 0.82082547

00:51:56.800 --> 00:51:58.768 I'm sorry I went very fast the last
NOTE Confidence: 0.82082547

00:51:58.768 --> 00:52:00.200 few slides, but that's all I got.
NOTE Confidence: 0.82082547

00:52:00.200 --> 00:52:02.016 Happy to answer any questions you may have.
NOTE Confidence: 0.722658495714286

00:52:07.570 --> 00:52:09.094 Doctor Orbach, I think
NOTE Confidence: 0.722658495714286

00:52:09.094 --> 00:52:10.940 you're on mute. You're muted.
NOTE Confidence: 0.82075115

00:52:18.490 --> 00:52:21.199 Sorry, we can't. I can't hear you.
NOTE Confidence: 0.82075115

00:52:21.200 --> 00:52:23.160 Alright, ask to mute.
NOTE Confidence: 0.832453353333333

00:52:27.050 --> 00:52:27.638 There you go.
NOTE Confidence: 0.830217002

00:52:27.790 --> 00:52:32.925 OK. Am I off? So thank you so much for
NOTE Confidence: 0.830217002

00:52:32.925 --> 00:52:35.390 such a wonderful talk, so thorough.
NOTE Confidence: 0.830217002

00:52:35.390 --> 00:52:37.026 I I wonder if we have a few minutes.
NOTE Confidence: 0.830217002

00:52:37.030 --> 00:52:40.236 And I think that people can unmute
NOTE Confidence: 0.830217002

00:52:40.236 --> 00:52:42.590 themselves to ask questions.
NOTE Confidence: 0.830217002

00:52:42.590 --> 00:52:45.069 If there are any people have any questions,

NOTE Confidence: 0.830217002

00:52:45.070 --> 00:52:46.753 they'll probably be the easiest way to do it.

NOTE Confidence: 0.762946495

00:52:47.650 --> 00:52:48.250 All right, let's see.

NOTE Confidence: 0.762946495

00:52:48.250 --> 00:52:49.642 Let me, I see. Doctor Robert

NOTE Confidence: 0.762946495

00:52:49.642 --> 00:52:51.620 Thomas has a question in the chat.

NOTE Confidence: 0.762946495

00:52:51.620 --> 00:52:52.880 So let him unmute himself first,

NOTE Confidence: 0.762946495

00:52:52.880 --> 00:52:54.420 then we'll go to Doctor Connor Perry.

NOTE Confidence: 0.8383858633333333

00:52:57.840 --> 00:52:59.388 Yes, the question I had was

NOTE Confidence: 0.852872292857143

00:53:00.160 --> 00:53:02.422 the time it takes to remodel

NOTE Confidence: 0.852872292857143

00:53:02.422 --> 00:53:05.420 the face, say expansion and

NOTE Confidence: 0.852872292857143

00:53:05.420 --> 00:53:07.830 similar techniques months, years.

NOTE Confidence: 0.809244869285714

00:53:08.630 --> 00:53:11.118 Ohh sure. So what we do with expansion

NOTE Confidence: 0.809244869285714

00:53:11.118 --> 00:53:13.269 is generally it's definitely a month.

NOTE Confidence: 0.809244869285714

00:53:13.270 --> 00:53:15.334 So what we do is that the active

NOTE Confidence: 0.809244869285714

00:53:15.334 --> 00:53:17.014 portion of it would be probably

NOTE Confidence: 0.809244869285714

00:53:17.014 --> 00:53:19.378 weeks and then we sort of hold it

NOTE Confidence: 0.809244869285714

00:53:19.378 --> 00:53:21.322 to allow for a bone acquisition
NOTE Confidence: 0.809244869285714

00:53:21.322 --> 00:53:23.041 and remodeling to happen somewhere
NOTE Confidence: 0.809244869285714

00:53:23.041 --> 00:53:25.183 between four to six months after.
NOTE Confidence: 0.809244869285714

00:53:25.190 --> 00:53:27.872 And then we hold the teeth with with some
NOTE Confidence: 0.809244869285714

00:53:27.872 --> 00:53:30.386 sort of a retainer or will we go on to
NOTE Confidence: 0.809244869285714

00:53:30.386 --> 00:53:32.895 the to with the rest of the treatment.
NOTE Confidence: 0.55162993

00:53:34.420 --> 00:53:35.899 Already done in adults. I mean you
NOTE Confidence: 0.55162993

00:53:35.899 --> 00:53:37.416 had a crack in the bone to do that.
NOTE Confidence: 0.856225612

00:53:37.480 --> 00:53:39.550 But so that's what I was
NOTE Confidence: 0.856225612

00:53:39.550 --> 00:53:40.930 explaining earlier that the,
NOTE Confidence: 0.856225612

00:53:40.930 --> 00:53:43.747 the suture itself may not be a problem much,
NOTE Confidence: 0.856225612

00:53:43.750 --> 00:53:46.014 but there is the sort of the zygomatic
NOTE Confidence: 0.856225612

00:53:46.014 --> 00:53:47.679 buttress and the terrigal plates
NOTE Confidence: 0.856225612

00:53:47.679 --> 00:53:49.749 posteriorly that become really most of
NOTE Confidence: 0.856225612

00:53:49.749 --> 00:53:51.929 the resistance is coming from there.
NOTE Confidence: 0.856225612

00:53:51.930 --> 00:53:53.680 So that's why if we once we

NOTE Confidence: 0.856225612

00:53:53.680 --> 00:53:55.358 need to do it in adults,

NOTE Confidence: 0.856225612

00:53:55.360 --> 00:53:57.412 a lot of times we do need the surgeons

NOTE Confidence: 0.856225612

00:53:57.412 --> 00:53:59.028 to go in and uh, release those.

NOTE Confidence: 0.856225612

00:53:59.028 --> 00:54:01.121 So it would it would involve what

NOTE Confidence: 0.856225612

00:54:01.121 --> 00:54:03.262 we call a surgically assisted

NOTE Confidence: 0.856225612

00:54:03.262 --> 00:54:04.594 rapid maxillary expansion.

NOTE Confidence: 0.856225612

00:54:04.600 --> 00:54:05.370 A starpiece,

NOTE Confidence: 0.856225612

00:54:05.370 --> 00:54:08.450 so that that's sort of the indication here.

NOTE Confidence: 0.7486606

00:54:11.530 --> 00:54:12.610 Is that major surgery?

NOTE Confidence: 0.81330527777778

00:54:14.120 --> 00:54:16.780 It can be an uh in office

NOTE Confidence: 0.81330527777778

00:54:16.780 --> 00:54:18.394 surgery actually, but most,

NOTE Confidence: 0.81330527777778

00:54:18.394 --> 00:54:20.956 most surgeons that I know prefer,

NOTE Confidence: 0.81330527777778

00:54:20.960 --> 00:54:22.764 you know, to do it. But it's not.

NOTE Confidence: 0.81330527777778

00:54:22.764 --> 00:54:24.870 I think it's a day surgery not not

NOTE Confidence: 0.81330527777778

00:54:24.870 --> 00:54:26.350 keeping the patients overnight.

NOTE Confidence: 0.6049388

00:54:28.520 --> 00:54:30.449 Doctor Kenneth Perry.
NOTE Confidence: 0.6049388

00:54:30.450 --> 00:54:32.042 Hi, Doctor Parsi, thanks.
NOTE Confidence: 0.6049388

00:54:32.042 --> 00:54:34.430 That was such a interesting topic.
NOTE Confidence: 0.6049388

00:54:34.430 --> 00:54:36.810 I I work in Pediatrics.
NOTE Confidence: 0.6049388

00:54:36.810 --> 00:54:39.172 So these are issues that we we
NOTE Confidence: 0.6049388

00:54:39.172 --> 00:54:41.286 think about a lot and actually have
NOTE Confidence: 0.6049388

00:54:41.286 --> 00:54:43.043 two questions of first of all I I
NOTE Confidence: 0.6049388

00:54:43.043 --> 00:54:44.310 do wonder if you think there's any
NOTE Confidence: 0.6049388

00:54:44.310 --> 00:54:45.870 role for myofunctional therapy.
NOTE Confidence: 0.6049388

00:54:45.870 --> 00:54:47.765 I think you sort of kind of referenced
NOTE Confidence: 0.6049388

00:54:47.765 --> 00:54:49.810 a lot of the myofunctional therapy
NOTE Confidence: 0.6049388

00:54:49.810 --> 00:54:52.080 zealots talking about you can never
NOTE Confidence: 0.6049388

00:54:52.080 --> 00:54:54.052 pull out a tooth or someone's
NOTE Confidence: 0.6049388

00:54:54.052 --> 00:54:55.580 going to be a terrible airway and
NOTE Confidence: 0.6049388

00:54:55.580 --> 00:54:57.630 and and and the other question,
NOTE Confidence: 0.6049388

00:54:57.630 --> 00:54:59.709 but I do think there is some,

NOTE Confidence: 0.6049388

00:54:59.710 --> 00:55:01.228 there's some interesting.

NOTE Confidence: 0.6049388

00:55:01.230 --> 00:55:02.393 Stuff in the literature about that.

NOTE Confidence: 0.6049388

00:55:02.393 --> 00:55:04.017 And the other thing is if you think

NOTE Confidence: 0.6049388

00:55:04.017 --> 00:55:05.348 that this is something I think

NOTE Confidence: 0.6049388

00:55:05.348 --> 00:55:06.947 about with my kids when I see them

NOTE Confidence: 0.6049388

00:55:06.947 --> 00:55:08.676 looking at their phones all the time.

NOTE Confidence: 0.6049388

00:55:08.680 --> 00:55:10.156 If you think that having people

NOTE Confidence: 0.6049388

00:55:10.156 --> 00:55:12.423 have their head a lot in sort of an

NOTE Confidence: 0.6049388

00:55:12.423 --> 00:55:13.957 anterior head carriage is going to

NOTE Confidence: 0.6049388

00:55:13.957 --> 00:55:15.926 affect their airway adversely as well.

NOTE Confidence: 0.6049388

00:55:15.926 --> 00:55:18.214 I mean I I think I have the,

NOTE Confidence: 0.6049388

00:55:18.220 --> 00:55:20.334 I share the same sentiments that you

NOTE Confidence: 0.6049388

00:55:20.334 --> 00:55:22.840 with them like children on the phone too.

NOTE Confidence: 0.6049388

00:55:22.840 --> 00:55:24.400 And I can't imagine it wouldn't

NOTE Confidence: 0.6049388

00:55:24.400 --> 00:55:26.238 because again at the end of the day,

NOTE Confidence: 0.6049388

00:55:26.240 --> 00:55:26.894 I don't know.
NOTE Confidence: 0.6049388

00:55:26.894 --> 00:55:28.717 I mean the the tissues don't know what
NOTE Confidence: 0.6049388

00:55:28.717 --> 00:55:30.693 it is that's holding them in that position.
NOTE Confidence: 0.6049388

00:55:30.700 --> 00:55:31.252 So the response.
NOTE Confidence: 0.6049388

00:55:31.252 --> 00:55:31.988 Would be the same.
NOTE Confidence: 0.6049388

00:55:31.990 --> 00:55:33.110 We just have to hit the threshold.
NOTE Confidence: 0.6049388

00:55:33.110 --> 00:55:35.045 It just has to be held in that position
NOTE Confidence: 0.6049388

00:55:35.045 --> 00:55:36.965 long enough for the response to happen.
NOTE Confidence: 0.6049388

00:55:36.970 --> 00:55:38.895 If these are intermittent short
NOTE Confidence: 0.6049388

00:55:38.895 --> 00:55:40.050 instances it's fine.
NOTE Confidence: 0.6049388

00:55:40.050 --> 00:55:43.025 But if it's long instances that it,
NOTE Confidence: 0.6049388

00:55:43.030 --> 00:55:44.640 it's sort of like the same way
NOTE Confidence: 0.6049388

00:55:44.640 --> 00:55:46.585 that you were just mentioning the
NOTE Confidence: 0.6049388

00:55:46.585 --> 00:55:48.177 myofunctional therapies and there's
NOTE Confidence: 0.6049388

00:55:48.177 --> 00:55:50.268 definitely some some benefit to them.
NOTE Confidence: 0.6049388

00:55:50.270 --> 00:55:52.614 I'm not very well versed and I don't

NOTE Confidence: 0.6049388
00:55:52.614 --> 00:55:54.905 think there's really a lot of robust
NOTE Confidence: 0.6049388
00:55:54.905 --> 00:55:56.545 good peer reviewed literature out
NOTE Confidence: 0.6049388
00:55:56.612 --> 00:55:58.526 there unfortunately to to set up
NOTE Confidence: 0.6049388
00:55:58.526 --> 00:56:00.465 protocols for us on my functional
NOTE Confidence: 0.6049388
00:56:00.465 --> 00:56:01.765 therapy but for sure.
NOTE Confidence: 0.6049388
00:56:01.770 --> 00:56:03.842 When I see a sort of the anterior
NOTE Confidence: 0.6049388
00:56:03.842 --> 00:56:05.848 teeth not touching and I see a
NOTE Confidence: 0.6049388
00:56:05.848 --> 00:56:07.655 tongue that's just sort of sitting
NOTE Confidence: 0.6049388
00:56:07.655 --> 00:56:08.959 there at all times,
NOTE Confidence: 0.6049388
00:56:08.960 --> 00:56:10.256 then I know the reason there.
NOTE Confidence: 0.6049388
00:56:10.260 --> 00:56:11.730 So if that tongue would be trained
NOTE Confidence: 0.6049388
00:56:11.730 --> 00:56:13.247 not to sit in between those teeth
NOTE Confidence: 0.6049388
00:56:13.247 --> 00:56:15.019 and sit on the roof of the mouth,
NOTE Confidence: 0.6049388
00:56:15.020 --> 00:56:16.670 I see the teeth actually self
NOTE Confidence: 0.6049388
00:56:16.670 --> 00:56:18.679 correct most of the way if not all.
NOTE Confidence: 0.6049388

00:56:18.680 --> 00:56:21.558 So there is definitely some some
NOTE Confidence: 0.6049388

00:56:21.558 --> 00:56:25.860 benefit to to to a lot of it but.
NOTE Confidence: 0.6049388

00:56:25.860 --> 00:56:27.492 But like many other new things
NOTE Confidence: 0.6049388

00:56:27.492 --> 00:56:29.243 that we just don't know enough
NOTE Confidence: 0.6049388

00:56:29.243 --> 00:56:31.343 about and there hasn't been a good
NOTE Confidence: 0.6049388

00:56:31.343 --> 00:56:32.539 studies uh carried out.
NOTE Confidence: 0.6049388

00:56:32.540 --> 00:56:34.948 It's overused a lot of times with not
NOTE Confidence: 0.6049388

00:56:34.948 --> 00:56:37.520 having a good base knowledge about it.
NOTE Confidence: 0.93139855

00:56:39.570 --> 00:56:40.380 Thank you.
NOTE Confidence: 0.564208845

00:56:43.060 --> 00:56:44.148 All right, doctor Guaruja.
NOTE Confidence: 0.495000344

00:56:46.850 --> 00:56:49.930 OK, still need it, Sir. See.
NOTE Confidence: 0.712967818333333

00:56:52.290 --> 00:56:54.182 Doctor Barsi, absolutely fascinating.
NOTE Confidence: 0.712967818333333

00:56:54.182 --> 00:56:56.810 Thought so. Thank you for that.
NOTE Confidence: 0.712967818333333

00:56:56.810 --> 00:56:57.989 Thank you. There.
NOTE Confidence: 0.712967818333333

00:56:57.989 --> 00:57:00.023 There are some data which suggests
NOTE Confidence: 0.712967818333333

00:57:00.023 --> 00:57:02.528 that over the past several centuries,

NOTE Confidence: 0.712967818333333
00:57:02.530 --> 00:57:04.882 the human jaws may have shrunk
NOTE Confidence: 0.712967818333333
00:57:04.882 --> 00:57:07.250 or maxilla and our mandible.
NOTE Confidence: 0.712967818333333
00:57:07.250 --> 00:57:10.764 And that may be related to not
NOTE Confidence: 0.712967818333333
00:57:10.764 --> 00:57:13.196 eating some form. Yes. Yes.
NOTE Confidence: 0.712967818333333
00:57:13.196 --> 00:57:15.974 And then you suggested that mouth
NOTE Confidence: 0.712967818333333
00:57:15.974 --> 00:57:18.075 breathing itself can produce
NOTE Confidence: 0.712967818333333
00:57:18.075 --> 00:57:19.719 skeletal abnormalities which
NOTE Confidence: 0.712967818333333
00:57:19.719 --> 00:57:22.459 can contribute to sleep apnea.
NOTE Confidence: 0.712967818333333
00:57:22.460 --> 00:57:24.962 So do you feel lifestyle changes
NOTE Confidence: 0.712967818333333
00:57:24.962 --> 00:57:28.148 like like eating more solid food or
NOTE Confidence: 0.712967818333333
00:57:28.148 --> 00:57:30.543 ensuring nasal patency or ensuring
NOTE Confidence: 0.712967818333333
00:57:30.543 --> 00:57:32.739 even habitual nose breathing?
NOTE Confidence: 0.712967818333333
00:57:32.740 --> 00:57:35.225 Those can prevent sleep disordered
NOTE Confidence: 0.712967818333333
00:57:35.225 --> 00:57:37.213 breathing in some children.
NOTE Confidence: 0.712967818333333
00:57:37.220 --> 00:57:38.956 I mean, I guess the keyword here
NOTE Confidence: 0.712967818333333

00:57:38.956 --> 00:57:41.042 is in some children, as you said,
NOTE Confidence: 0.7129678183333333

00:57:41.042 --> 00:57:42.566 the ones that would have otherwise,
NOTE Confidence: 0.7129678183333333

00:57:42.570 --> 00:57:44.160 you know, have this anatomical
NOTE Confidence: 0.7129678183333333

00:57:44.160 --> 00:57:45.868 contribution to it because, you know,
NOTE Confidence: 0.7129678183333333

00:57:45.868 --> 00:57:47.760 you know better than me that that this is,
NOTE Confidence: 0.7129678183333333

00:57:47.760 --> 00:57:49.620 this is a multifactorial animal we're
NOTE Confidence: 0.7129678183333333

00:57:49.620 --> 00:57:51.856 dealing with that we can't, you know,
NOTE Confidence: 0.7129678183333333

00:57:51.856 --> 00:57:54.320 just blame the anatomy on all of it.
NOTE Confidence: 0.7129678183333333

00:57:54.320 --> 00:57:55.536 But you're absolutely right.
NOTE Confidence: 0.7129678183333333

00:57:55.536 --> 00:57:56.242 I, I don't.
NOTE Confidence: 0.7129678183333333

00:57:56.242 --> 00:57:58.180 But I don't know to what extent we could,
NOTE Confidence: 0.7129678183333333

00:57:58.180 --> 00:58:00.588 we could ask a child of this day
NOTE Confidence: 0.7129678183333333

00:58:00.588 --> 00:58:03.642 and age to be on a hard diet similar
NOTE Confidence: 0.7129678183333333

00:58:03.642 --> 00:58:05.671 to our ancestors versus, you know,
NOTE Confidence: 0.7129678183333333

00:58:05.671 --> 00:58:07.019 where things weren't cooked.
NOTE Confidence: 0.7129678183333333

00:58:07.020 --> 00:58:08.908 You know so so I don't know realistically

NOTE Confidence: 0.712967818333333

00:58:08.908 --> 00:58:10.660 if what you're suggesting is doable

NOTE Confidence: 0.712967818333333

00:58:10.660 --> 00:58:12.508 so I think unfortunately we're we're

NOTE Confidence: 0.712967818333333

00:58:12.558 --> 00:58:14.088 dealing with the beast that we're

NOTE Confidence: 0.712967818333333

00:58:14.088 --> 00:58:16.042 dealing with and we have to play the

NOTE Confidence: 0.712967818333333

00:58:16.042 --> 00:58:18.054 game and and you know the the jaws

NOTE Confidence: 0.712967818333333

00:58:18.054 --> 00:58:19.993 are small but as absolutely I think

NOTE Confidence: 0.712967818333333

00:58:19.993 --> 00:58:21.864 nasal patency is huge I mean you

NOTE Confidence: 0.712967818333333

00:58:21.864 --> 00:58:23.700 know them not being able to bring

NOTE Confidence: 0.712967818333333

00:58:23.700 --> 00:58:25.590 the bring them out the their their

NOTE Confidence: 0.712967818333333

00:58:25.651 --> 00:58:27.499 the jaw falling back the the tongue

NOTE Confidence: 0.712967818333333

00:58:27.499 --> 00:58:29.620 sort of not sitting on the so imagine

NOTE Confidence: 0.712967818333333

00:58:29.620 --> 00:58:31.760 if if the tongue is not sitting on

NOTE Confidence: 0.712967818333333

00:58:31.760 --> 00:58:33.790 the palette now the the arch has

NOTE Confidence: 0.712967818333333

00:58:33.854 --> 00:58:35.852 it's only under the influence of

NOTE Confidence: 0.712967818333333

00:58:35.852 --> 00:58:37.929 the the pressure from the cheeks.

NOTE Confidence: 0.712967818333333

00:58:37.930 --> 00:58:39.202 The tongue is not sitting there
NOTE Confidence: 0.7129678183333333

00:58:39.202 --> 00:58:40.050 to balance it out.
NOTE Confidence: 0.7129678183333333

00:58:40.050 --> 00:58:41.666 So this this arch is going to grow,
NOTE Confidence: 0.7129678183333333

00:58:41.670 --> 00:58:43.448 the maxilla is going to grow narrow.
NOTE Confidence: 0.7129678183333333

00:58:43.450 --> 00:58:45.306 So if if we're able to not allow
NOTE Confidence: 0.7129678183333333

00:58:45.306 --> 00:58:47.362 for the for the for the lower jaw
NOTE Confidence: 0.7129678183333333

00:58:47.362 --> 00:58:49.374 to bounce down and back and then the
NOTE Confidence: 0.7129678183333333

00:58:49.374 --> 00:58:51.535 the the time not to be out sort of
NOTE Confidence: 0.7129678183333333

00:58:51.535 --> 00:58:53.570 lower and be where it needs to be.
NOTE Confidence: 0.7129678183333333

00:58:53.570 --> 00:58:56.349 Yes a lot of this would be
NOTE Confidence: 0.7129678183333333

00:58:56.349 --> 00:58:57.143 preventable absolutely.
NOTE Confidence: 0.7129678183333333

00:58:57.150 --> 00:58:57.465 Wonderful.
NOTE Confidence: 0.7129678183333333

00:58:57.465 --> 00:58:59.355 And and another very quick question.
NOTE Confidence: 0.7129678183333333

00:58:59.360 --> 00:59:01.000 So I don't read a lot of children,
NOTE Confidence: 0.7129678183333333

00:59:01.000 --> 00:59:03.634 but curious if someone has some
NOTE Confidence: 0.7129678183333333

00:59:03.634 --> 00:59:06.754 increase in adenoids and has a small

NOTE Confidence: 0.712967818333333
00:59:06.754 --> 00:59:09.846 mandible and large tongue, would you
NOTE Confidence: 0.712967818333333
00:59:09.846 --> 00:59:14.004 go for adenoidectomy or joy expanders?
NOTE Confidence: 0.712967818333333
00:59:14.010 --> 00:59:15.290 I think actually we do.
NOTE Confidence: 0.712967818333333
00:59:15.290 --> 00:59:16.304 I think,
NOTE Confidence: 0.712967818333333
00:59:16.304 --> 00:59:19.346 I mean that's when I would
NOTE Confidence: 0.712967818333333
00:59:19.346 --> 00:59:21.629 really defer to our ENT,
NOTE Confidence: 0.712967818333333
00:59:21.630 --> 00:59:22.716 pediatric ENT physicians.
NOTE Confidence: 0.712967818333333
00:59:22.716 --> 00:59:26.217 We don't do just I mean if they if they
NOTE Confidence: 0.712967818333333
00:59:26.217 --> 00:59:28.696 think that I should be the one doing
NOTE Confidence: 0.712967818333333
00:59:28.696 --> 00:59:30.768 the sort of rapid maxillary expansion first.
NOTE Confidence: 0.712967818333333
00:59:30.770 --> 00:59:31.850 I get the referral from them.
NOTE Confidence: 0.712967818333333
00:59:31.850 --> 00:59:32.256 We tried,
NOTE Confidence: 0.712967818333333
00:59:32.256 --> 00:59:33.677 but I've had the opposite to that.
NOTE Confidence: 0.712967818333333
00:59:33.680 --> 00:59:34.454 They've had,
NOTE Confidence: 0.712967818333333
00:59:34.454 --> 00:59:36.389 they've done the annual tonsillectomy,
NOTE Confidence: 0.712967818333333

00:59:36.390 --> 00:59:37.413 it did not.
NOTE Confidence: 0.712967818333333
00:59:37.413 --> 00:59:39.800 It was only effective maybe a percentage
NOTE Confidence: 0.8883761316
00:59:39.875 --> 00:59:42.413 and then they're sent to me to do more
NOTE Confidence: 0.8883761316
00:59:42.413 --> 00:59:44.738 work with the expansion or whatnot.
NOTE Confidence: 0.8883761316
00:59:44.740 --> 00:59:45.792 And then, you know,
NOTE Confidence: 0.8883761316
00:59:45.792 --> 00:59:47.370 they may still need even more.
NOTE Confidence: 0.8883761316
00:59:47.370 --> 00:59:49.048 They need to lose another, you know,
NOTE Confidence: 0.8883761316
00:59:49.048 --> 00:59:50.118 100 pounds too or something.
NOTE Confidence: 0.8883761316
00:59:50.120 --> 00:59:51.530 So it's just, uh, you know,
NOTE Confidence: 0.8883761316
00:59:51.530 --> 00:59:53.156 that combination we do, we do,
NOTE Confidence: 0.8883761316
00:59:53.160 --> 00:59:55.176 we sort of try to address all of them,
NOTE Confidence: 0.8883761316
00:59:55.180 --> 00:59:58.520 sure. Yeah. Thank you.
NOTE Confidence: 0.838992889166667
00:59:58.810 --> 01:00:00.235 I think we've just about
NOTE Confidence: 0.838992889166667
01:00:00.235 --> 01:00:02.330 come to the end of our time.
NOTE Confidence: 0.838992889166667
01:00:02.330 --> 01:00:04.178 I would like to thank you again
NOTE Confidence: 0.838992889166667
01:00:04.178 --> 01:00:06.109 for such a fascinating talk.

NOTE Confidence: 0.838992889166667
01:00:06.110 --> 01:00:07.166 I wonder, I wonder if there
NOTE Confidence: 0.838992889166667
01:00:07.166 --> 01:00:08.132 are any other questions people
NOTE Confidence: 0.838992889166667
01:00:08.132 --> 01:00:09.227 could just e-mail you directly.
NOTE Confidence: 0.838992889166667
01:00:09.230 --> 01:00:09.958 Would that be OK?
NOTE Confidence: 0.711247925
01:00:09.970 --> 01:00:11.438 Sure, absolutely. Happy to.
NOTE Confidence: 0.817684758571429
01:00:12.270 --> 01:00:15.354 Great. And with that, thank you
NOTE Confidence: 0.817684758571429
01:00:15.354 --> 01:00:17.010 and I wish everybody a good day.
NOTE Confidence: 0.868216195
01:00:17.840 --> 01:00:20.682 Thank you so much for thank you
NOTE Confidence: 0.868216195
01:00:20.682 --> 01:00:24.000 so much everyone. Thank you.