

1 **Salvador Gaytan:** Welcome to SmileTalk, an entertaining and informative dental talk
2 show, featuring the latest news and developments in dentistry. I'm
3 Salvador Gaytan, and I'm here with...
4
5 **Dr. John Chao:** Dr. John Chao and Dr. Chi Leung
6
7 **Dr. Chi Leung:** Chi Leung
8
9 **Dr. John Chao:** My colleague, and we are going to be bringing her into the show
10 this time.
11
12 **Salvador Gaytan:** If she's on good behavior, isn't that right, Dr. John?
13
14 **Dr. Chi Leung:** Yeah, I'll try.
15
16 **Dr. John Chao:** She tries, but we'll see.
17
18 **Salvador Gaytan:** Okay, we'll find out here. Okay, before we get to Dr. Chi, we're
19 going to do our Rapid Fire Five.
20
21 **Dr. John Chao:** Actually, Dr. Leung.
22
23 **Salvador Gaytan:** Dr. Leung, okay, Dr. Leung. Let's get to our Rapid Fire Five Dr.
24 John, where I ask you five quick questions, true or false, you say
25 true or false, and then we get back to the details, and you and Dr.
26 Leung can expand on those details. Are you ready, Dr. John?
27
28 **Dr. John Chao:** Yes, let's go.
29
30 **Salvador Gaytan:** Okay, question number one: Dentists can help treat daytime
31 drowsiness associated with certain sleep disorders, true or false?
32
33 **Dr. John Chao:** That's true.
34
35 **Salvador Gaytan:** Okay. Question number two: You are likely to suffer from sleep
36 apnea, if your neck is size 18 or larger.
37
38 **Dr. John Chao:** Yeah, if your neck size is 18 or larger, you are liable to be
39 suffering from sleep apnea, that's true.
40
41 **Salvador Gaytan:** That is true, okay. Question number three: Frequently getting
42 sleepy when talking to someone, when driving and when sitting in
43 a meeting, may be signs of sleep apnea, true or false?
44
45 **Dr. John Chao:** True.
46

47 **Salvador Gaytan:** Another true, okay. Question number four: Drooling until the age
48 of four is normal, true or false?
49

50 **Dr. John Chao:** True.
51

52 **Salvador Gaytan:** True. I don't remember drooling, do you Dr. John?
53

54 **Dr. John Chao:** I remember.
55

56 **Salvador Gaytan:** You do, huh?
57

58 **Dr. John Chao:** I can remember you drooling.
59

60 **Salvador Gaytan:** Oh yeah, okay, you're going to bring me into this, okay, I
61 understand how it goes. Okay, question number five: Saliva is a
62 mirror of the blood, and can be used to test for gum disease, as
63 well as other diseases, such as HIV, true or false?
64

65 **Dr. John Chao:** Interestingly enough, that's true.
66

67 **Salvador Gaytan:** Okay, all true today, interesting. Okay, let's get to the details.
68 Question number one: Dentists can help treat daytime drowsiness
69 associated with certain sleep disorders. That was true, tell us why
70 that is true.
71

72 **Dr. John Chao:** That is true. We have covered this question somewhat in some past
73 programs. The reason it's true is that sleep apnea is really the result
74 of the collapse of the airway during sleep, when muscles and
75 tissues relax, it becomes floppy. So, when the tissue collapses, you
76 make this snoring noise like this. Did you do that Dr. Leung?
77

78 **Dr. Chi Leung:** I don't think so.
79

80 **Dr. John Chao:** No, that's me, I'm sorry.
81

82 **Dr. Chi Leung:** Women never do that.
83

84 **Dr. John Chao:** So, when that happens, in a way that obstructs the airway, that can
85 lead to a disorder called Obstructive Sleep Apnea. Now, the way
86 that disease is treated is, a continuous positive air pressure device
87 is put on the face of the patient that puts air pressure onto the
88 airway and keeps the airway open when the patient sleeps.
89

90 The dentist comes in into the picture, because we can actually
91 move the lower jaw forward with dental appliances, such as
92 something like a mouth guard. If we move the lower jaw forward,

93 then the airway actually opens up bigger. When the airway opens
94 up, then it's more difficult for the airway to be obstructed. It's
95 called a Mandibular Advancement Device.
96
97 **Salvador Gaytan:** Can you spell that? I'm just kidding, I'm just kidding, I'm just
98 kidding.
99
100 **Dr. John Chao:** Mandible means the lower jaw. If the device advances the lower
101 jaw, that can relieve the difficulty in breathing. So, if we can treat
102 the obstructive sleep apnea symptoms successfully, then we can
103 get rid of daytime drowsiness, and other symptoms associated with
104 sleep apnea.
105
106 **Salvador Gaytan:** Excellent, okay, question number two: You are likely to suffer
107 from sleep apnea if your neck is size 18 or larger, that's true, isn't
108 it Dr. John?
109
110 **Dr. John Chao:** That's true, it's not always true. You can have a very thick neck
111 and not have problems with your airway when you're sleeping.
112 However, if you have a large neck, it generally means that there is
113 more soft tissue blocking -- that can potentially block the airway.
114
115 So, when a person's neck is 18 or more, we generally suspect that
116 there might be a chance that the sleep apnea could be present.
117
118 **Salvador Gaytan:** So, how does someone know if their neck size fits that 18 or larger,
119 how do they know if they have an excess amount of soft tissue?
120
121 **Dr. John Chao:** Well, there are ways to check that. There are machines called
122 05:01, that can see how much space you have in the airway, or we
123 can use CT scans to determine the size of the airway, and other
124 kinds of tests that can tell us what's happening. In fact, we have an
125 at-home sleep monitor, that the patient can take home with him.
126
127 **Salvador Gaytan:** Is that the other spouse?
128
129 **Dr. John Chao:** Excuse me?
130
131 **Salvador Gaytan:** Is that the spouse? No, I want some others to know.
132
133 **Dr. John Chao:** Yeah, the spouse can attach it or you can attach it yourself, and this
134 machine will measure how you breathe, how many times you
135 snore, to what degree you snore, how many times the airway gets
136 blocked or semi blocked, and how the oxygen saturation is. So,
137 there are many factors that this machine can actually measure.
138

139 So, we suspect sleep apnea. We can give the patient a home
140 monitor that can bring back results that could screen for this
141 disease. Now, if the screening is positive, then the patient is sent to
142 a sleep lab.
143
144 **Dr. Chi Leung:** Or a physician. Yeah, the medical doctor has to diagnose the
145 patient as a positive result, am I right?
146
147 **Dr. John Chao:** Yes, the dentist can prescribe the test based on his findings or her
148 findings, then the physician, after the sleep test is done, then can
149 officially establish the diagnosis, from which the dentist can work
150 and do his appliance therapy, if that's appropriate.
151
152 **Salvador Gaytan:** Fantastic. Okay, let's get to question number three: Frequently
153 getting sleepy when talking to someone, when driving, and when
154 sitting in a meeting may be signs of sleep apnea. That also is true,
155 isn't it?
156
157 **Dr. John Chao:** That's true. That's part of a sleep test called the Epworth, named
158 after the person who invented the test. This test asks the patient to
159 answer eight questions regarding how the patient tends to dose
160 during the daytime.
161
162 For instance, do you dose when you're sleeping and reading, do
163 you dose when you're watching TV? Do you tend to get sleepy
164 when you're sitting in the car doing nothing? So, there are series of
165 eight questions, and the patient answers those questions on a scale
166 of zero to three.
167
168 Afterwards, the numbers are added up. If the numbers are higher
169 than nine, then sleep apnea is suspected, and other tests would be
170 prescribed.
171
172 **Salvador Gaytan:** Okay. Let's get to question number four, but you kind of threw me
173 under the bus on this one Dr. John, calling me a drooler when I
174 was little. Drooling until the age of four is normal, and that is true?
175
176 **Dr. John Chao:** Yeah, I didn't worry about you when you were drooling around.
177 You were a fine, very intelligent kid. The reason drooling comes
178 up is that when you do sleep with dental appliances that treat sleep
179 apnea, drooling is one of the problems.
180
181 So, this question came up. But it is normal to drool when you're a
182 baby, but generally drooling stops about the 15th month, but it can
183 be as late as four years. Now, if you still have drooling after the
184 fourth year, then the medical consultation would be advisable,

185 because it could be a neurological, muscular problem or other
186 kinds of physical problems that should be diagnosed.
187
188 **Salvador Gaytan:** So, Dr. John, have you ever had a patient where you made a sleep
189 apnea device for, and they complained that there was just too much
190 drool?
191
192 **Dr. John Chao:** Yeah, drooling is a very common complaint, but considering the
193 benefits of being able to sleep better, and to be able to avoid the
194 consequence of sleep apnea, such as high blood pressure, strokes,
195 heart attacks, excessive salivation is not...
196
197 **Salvador Gaytan:** So, they just have to change their pillow case every night, right?
198
199 **Dr. John Chao:** Yeah, it's a -- for ladies, sometimes they just don't like that. Men
200 don't really care as a rule.
201
202 **Salvador Gaytan:** Okay, question number five: Saliva is a mirror of the blood, and
203 can be used to test for gum disease, as well as other diseases, such
204 as HIV, another true.
205
206 **Dr. John Chao:** Yeah, interestingly enough, this is actually true. Saliva can be said
207 to be the blood of the mouth. It nourishes the tissues there, {ISCA}
208 antibodies and enzymes that keeps the mouth healthy.
209
210 In fact, when somebody has dry mouth or lack of saliva in the
211 mouth, many diseases come about, including gum disease and
212 cavities and other types of manifestations that's not so good. In
213 fact, it gets pretty miserable for the patient to have dry mouth.
214
215 So, saliva is very important to the mouth. In fact, research
216 supported by the National Institute of Dental and Craniofacial
217 Research have engineered a portable phone size test, that in
218 minutes can tell the dentist what's wrong with the mouth, what will
219 be wrong in terms of other diseases. In fact, they can use this
220 particular device as a screening tool for HIV.
221
222 **Salvador Gaytan:** Fantastic.
223
224 **Dr. John Chao:** There are plans of what to use it to screen for certain diseases, and
225 it could be used in case of a terrorist attack to screen masses of
226 people for certain kinds of diseases.
227
228 **Salvador Gaytan:** Very quickly?
229

230 **Dr. John Chao:** Very quickly without any invasive procedures. So, this has great
231 potential, and some day a dentist would be, as a routine,
232 administering a test for different diseases, including systemic
233 diseases with this kind of a test machine.
234
235 **Salvador Gaytan:** Okay, and for anyone tuning in, you're listening to SmileTalk, I'm
236 Salvador with Dr. John, and you can contact Dr. John at
237 AlhambraDental.com or 626-308-9104. We also have a very
238 special guest in studio tonight, Dr. Chi Leung, and she is from the
239 beautiful city of Glendale, isn't that right?
240
241 **Dr. John Chao:** Well, let's not forget, she is also beautiful.
242
243 **Salvador Gaytan:** She is also beautiful, absolutely.
244
245 **Dr. Chi Leung:** Thank you so much [crosstalk].
246
247 **Salvador Gaytan:** Which, I don't have to look at Dr. John all night here, I can look at
248 someone else.
249
250 **Dr. John Chao:** Yes, I echo that sentiment.
251
252 **Salvador Gaytan:** Now, I'm getting you back for calling me a drooler.
253
254 **Dr. John Chao:** Yeah, well.
255
256 **Salvador Gaytan:** Dr. {Leon}, you are a very unusual type of dentist in the fact that
257 you are a general practitioner, but you also are an expert in
258 orthodontics, isn't that right?
259
260 **Dr. Chi Leung:** Yes, I have been trained with orthodontics and I have been doing
261 orthodontics in my practice, and that is a very rewarding type of
262 service I can offer to my patients, and I am glad.
263
264 **Salvador Gaytan:** Fantastic. Now, before Dr. John -- I know he has much questions
265 for you, but just to give the audience just a little bit of perspective.
266 You came from China when you were a teenager, isn't that right?
267
268 **Dr. Chi Leung:** Right, yes. I came from China, came to United States, and I think
269 that's the best thing that's ever happened to my life, and I'm glad.
270
271 **Salvador Gaytan:** You did not speak English when you came here, did you?
272
273 **Dr. Chi Leung:** Yeah, I didn't get enough schooling when I was in China, because
274 of Chinese 10 year culture revolution, and the schools stopped. So,
275 I didn't have much education, and I came to United States, and the

276 freedom, you can do anything you want, and that is just a dream
277 world for me.
278
279 **Salvador Gaytan:** Now, is it true when you got here, all you wanted to do was eat ice
280 cream?
281
282 **Dr. Chi Leung:** No, sorry, ice cream is not the first priority.
283
284 **Salvador Gaytan:** Okay, I'm just teasing you.
285
286 **Dr. John Chao:** I have a question for Dr. Leung. Now, when you first got here, did
287 all the Americans look alike to you?
288
289 **Dr. Chi Leung:** Yes, they all look like the same, and they all -- I even say, gosh, I
290 wish I have that green eyes and broad and tall and beautiful, just
291 stare at them already making me feel like gosh, I wish I have that.
292 The only thing that I can do is go home and complain to my home.
293
294 **Salvador Gaytan:** That's right, that's right. Now, what's very fascinating is like you
295 said, you had limited education in China, and then you came here
296 as a teenager, and you didn't speak much English. Then, within a
297 few years, you took a test, and you got accepted to USC.
298
299 **Dr. Chi Leung:** Yes, by that time, I think anyone, it doesn't matter who, once you
300 realize the opportunity for you is such a lifetime chance, then you
301 just fight for it. I think I did that, because I realized that it suddenly
302 just opened my eyes, and to see the new world, and I just said I am
303 going to do it, then I did it.
304
305 **Salvador Gaytan:** You did it, and you went to SC, which is Dr. John's Alma Mater as
306 well.
307
308 **Dr. John Chao:** Now, she did so well with the entrance exam, they actually offered
309 her a four year scholarship.
310
311 **Dr. Chi Leung:** Yeah, and I think I finished my undergrad as biomedical
312 engineering in three and a half years.
313
314 **Salvador Gaytan:** How long does it usually take someone to complete bio -- bio
315 electrical engineering?
316
317 **Dr. John Chao:** Biomedical.
318
319 **Dr. Chi Leung:** Biomedical, yeah. Normally it takes minimum four years,
320 sometimes needs a bit more than that, yeah, because you take a

321 couple of extra course. By that time, you also can get a EE degree,
322 Electrical Engineering degree. So, that's what I did.
323
324 **Salvador Gaytan:** Then, you worked for a while.
325
326 **Dr. Chi Leung:** Yeah, I went to work, and I worked in a Good Samaritan Hospital
327 as a biomedical engineer for quite a few years. Then, I went to
328 children's hospital and worked there as a biomedical engineer. So,
329 that was a very rewarding experience also.
330
331 **Salvador Gaytan:** But then you had a revelation that you wanted to go back to dental
332 school. Tell us about that.
333
334 **Dr. Chi Leung:** Yeah, I always wanted to go to some higher degree, to achieve
335 more in my life. So, I was thinking even do dental, because I like
336 to use my hand, and I can do my -- I can do very detailed work
337 ever since a little girl. So, I said I want to do something with my
338 hand. So, I was thinking -- then I think that dentistry is the one.
339
340 **Salvador Gaytan:** Fantastic. So, you went back to USC Medical School, you got
341 accepted.
342
343 **Dr. Chi Leung:** Yes.
344
345 **Salvador Gaytan:** Then you finished in what, three years, four years?
346
347 **Dr. Chi Leung:** I finished my dental school in three and a half years. So, I took
348 earlier {board}. That's a little bit unusual for dental school
349 students, because normally students take longer to complete, and I
350 think I did pretty -- at least I think it's okay.
351
352 **Dr. John Chao:** That's very unusual actually. Nobody has ever done that in the
353 history of dental school.
354
355 **Salvador Gaytan:** That quick?
356
357 **Dr. John Chao:** To get out as early as you did.
358
359 **Salvador Gaytan:** You didn't even do that Dr. John?
360
361 **Dr. John Chao:** No, I had to follow the [crosstalk].
362
363 **Salvador Gaytan:** I thought you were really smart. You always told me you were
364 really smart.
365
366 **Dr. John Chao:** Yeah, I just don't drool, that's all.

367
368 **Salvador Gaytan:** You don't drool. You see, you see, what I have to deal with here?
369
370 **Dr. John Chao:** But I managed -- but it's very unusual, it's very unusual. Don't you
371 think that dentistry is very much like engineering?
372
373 **Dr. Chi Leung:** Yes. Dentistry, actually the reason I choose as dentist compared to
374 medicine is a lot of -- well, in our whole mouth actually, the
375 movement, the balance and the chewing function, everything is
376 related to force. The force has to be -- it's just like in grinder. You
377 have to properly grind it.
378
379 If you have one tooth that's out of a cushion, that means biting is
380 improper, then your jaw will hurt, you would not chew your food
381 properly, and that will bring a lot of trouble. So, in our mouth,
382 actually the force, the balance of the force is very important. I
383 think that's unique compared to dental and medical. So, I like that.
384
385 **Dr. John Chao:** Yeah, we're dealing with hard tissue. So, for instance when we
386 make a bridge, isn't the principles involved the same as you did
387 build a bridge over the freeway? It just is smaller in size in the
388 mouth.
389
390 **Dr. Chi Leung:** That's right, yeah.
391
392 **Dr. John Chao:** We didn't say metal tensile strength and all the engineering
393 principles that you learned when you were an undergraduate.
394
395 **Dr. Chi Leung:** Yeah, and right now even the new technology comes, for example,
396 like the implants, and we talked a lot, and right now a lot of
397 dentists and the patients are all looking forward into it. The implant
398 actually involves a lot of the force, the balance of the force too.
399
400 If the force is not right, if not put in properly or if the balance is
401 not right, the implant sometimes will fail. Sometimes they will
402 fracture. So, I think that is the -- we still continue to learn the
403 balance, a cushion and everything. That's involved day in and day
404 out.
405
406 **Dr. John Chao:** Yeah, so your background in engineering is very crucial in your
407 success in dental school. Isn't that true?
408
409 **Dr. Chi Leung:** Yes. I'm so glad that I have that background, and that definitely
410 helped me a lot when they talk about -- even materials, they talk
411 about what type of material to use the best. I think I benefit from
412 my background as biomedical engineering.

413

414 **Salvador Gaytan:** For anyone tuning in, you're listening to SmileTalk with Dr. John,
415 the friendly dentist. He can be reached at AlhambraDental.com or
416 626-308-9104, and he welcomes all questions, isn't that right, Dr.
417 John?

418

419 **Dr. John Chao:** Yes, please email or even call in your questions. We'll be very
420 happy to answer them.

421

422 **Salvador Gaytan:** Dr. Leung, you do orthodontics as well as dentistry. I know Dr.
423 John was asking you some questions off radio about if there is a
424 benefit for the patient that you are able to do both?

425

426 **Dr. Chi Leung:** I think that's {way} benefit to our patient is -- orthodontists did a
427 lot for the whole population of the patient, but as a general dentist,
428 I feel like doing the ortho in our office also has some additional
429 benefits.

430

431 For example, if the patient goes to orthodontists, sometimes they
432 finish the work and then they never go back again. Orthodontists,
433 the treatment is not just once a lifetime, then that's it. Actually, this
434 keeps involving a continued retention and monitor, and make sure
435 that straight teeth don't get crooked again.

436

437 And as general dentists, we see our patients at least every six
438 months. They come in to check, to do the cleaning, and then I can
439 definitely very well monitor their dentition and make sure they
440 don't relapse.

441

442 I think that's a great service for our patient, and also during the
443 treatment or before the treatment or after treatment, when they
444 have a cavity, they have a gum disease. When you have braces on,
445 you just don't clean them that well, especially the young kids,
446 they're just not able to clean them that well as a general dentist.

447

448 Then, we can monitor and we can clean them if they need to, and if
449 they have a cavity, we can fill them right away to avoid after
450 taking off the braces, it's like 10, five cavities suddenly just all
451 show up. I think that those are all the benefits to do the
452 orthodontics as a general dentist.

453

454 **Dr. John Chao:** Yeah, there are certainly advantages to going to the orthodontist, if
455 the general practitioner does not do orthodontics, isn't that right?
456 However, you are saying that if a general practitioner does
457 orthodontics, then there's definitely the advantages for the patient
458 in terms of follow-up and maintenance, isn't that right?

459
460 **Dr. Chi Leung:** Right, right, yeah. As general dentists, we tend to really have that
461 bond between dentists and the patients, because we saw them all
462 the time, and that's in the result, we take care of the patient, we
463 really treat them like they're family members.
464
465 We treat them not only just one time in their life. We treat them
466 throughout the life, and that is a great relationship. I appreciate
467 that.
468
469 **Dr. John Chao:** Your understanding of the forces involved in moving teeth and
470 putting the teeth in the right place, based on your understanding of
471 engineering principles certainly help you to do a better job in your
472 practice, doesn't it?
473
474 **Dr. Chi Leung:** Yes, that's definitely -- we move -- orthodontists actually just walk
475 the teeth in the bone, just like in the swimming pool, you walk
476 through the water, that's almost the same situation, but with force
477 applied to the teeth, and to make sure that it's just the right force.
478 Not too much, but enough to move the teeth. That's definitely
479 helped for my background, it helped me a lot.
480
481 **Dr. John Chao:** Now, you practice in Glendale, isn't that right?
482
483 **Dr. Chi Leung:** Yes, I practice my -- I practice you see in Glendale, and I have
484 been there for 15 years.
485
486 **Salvador Gaytan:** So, how did you wind up in Glendale?
487
488 **Dr. Chi Leung:** Well, I graduated from dental school, like I graduated early, and
489 my professor actually was there practicing for his whole life, 38
490 years, and he just disabled his left arm, then he picked up the
491 phone and called me.
492
493 Because when I took his class, he had a fairly deep impression
494 about how the way I was thinking. So, he called me and he says,
495 "Do you want to come to help me?" and I did, and then I was just
496 there four months. The he said, "Well, you take over, because I just
497 want to retire and move north."
498
499 **Salvador Gaytan:** So, did you have to buy his practice?
500
501 **Dr. Chi Leung:** Actually, he gave to me his practice, in which I was very grateful.
502
503 **Salvador Gaytan:** So, he gave it to you at no cost?
504

505 **Dr. Chi Leung:** Well, I still -- I can't just let him walk out, so it's not really a
506 purchase, but I think I showed some of my appreciation.
507
508 **Salvador Gaytan:** Dr. John, we are coming to the conclusion of our show here, and
509 it's been fascinating, having a fascinating guest here. She is going
510 to be back for our next show, isn't that right Dr. John?
511
512 **Dr. John Chao:** Yes, we have more to ask her about. I'm looking forward to it.
513
514 **Salvador Gaytan:** Absolutely. Anyway, that's a wrap for tonight, but you can get a
515 hold of Dr. John at AlhambraDental.com or 626-308-9104.
516
517 [END OF AUDIO]