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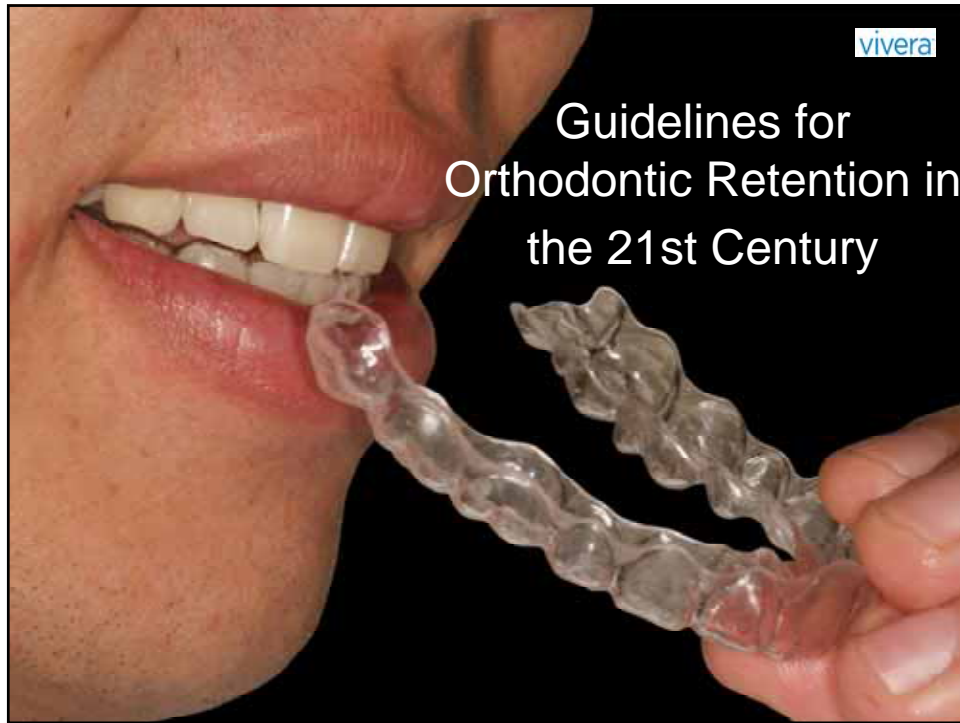
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Guidelines for Orthodontic Retention in the 21st Century
Dr Doug Brandt
May 8, 2009



...for showing up



Dr. Douglas Brandt

- DMD University of Saskatchewan
- MS/Certificate in Orthodontics University of Detroit
- Private Practice for 25 years with a large adult patient base
- Involved in orthodontic and occlusion education at both undergraduate and graduate levels
- Presently working with Align Technology at the Treat Facility in Costa Rica



Dr. Karol Miranda



- DMD Universidad Latino Americana de Ciencia y Tecnología, (ULACIT), Costa Rica
- Private Practice for 4 years
- Presently working with Align Technology on the last 3 years, and involved in clinical education at the Treat Facility in Costa Rica
- Actively treating Invisalign patients
- Associated professor at the ULACIT, College of Dentistry

**DID YOU
KNOW**



1994: 4 million people received orthodontic treatment in North America



2004: 6 million people received orthodontic treatment in North America



Approximately 25% of those orthodontic patients were **Adults**



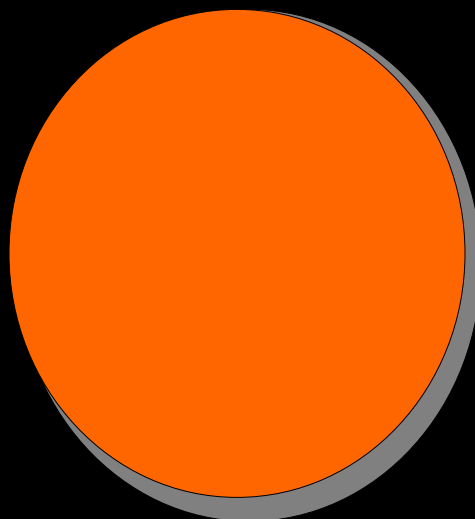
A large percentage of those adults had experienced **orthodontic relapse**



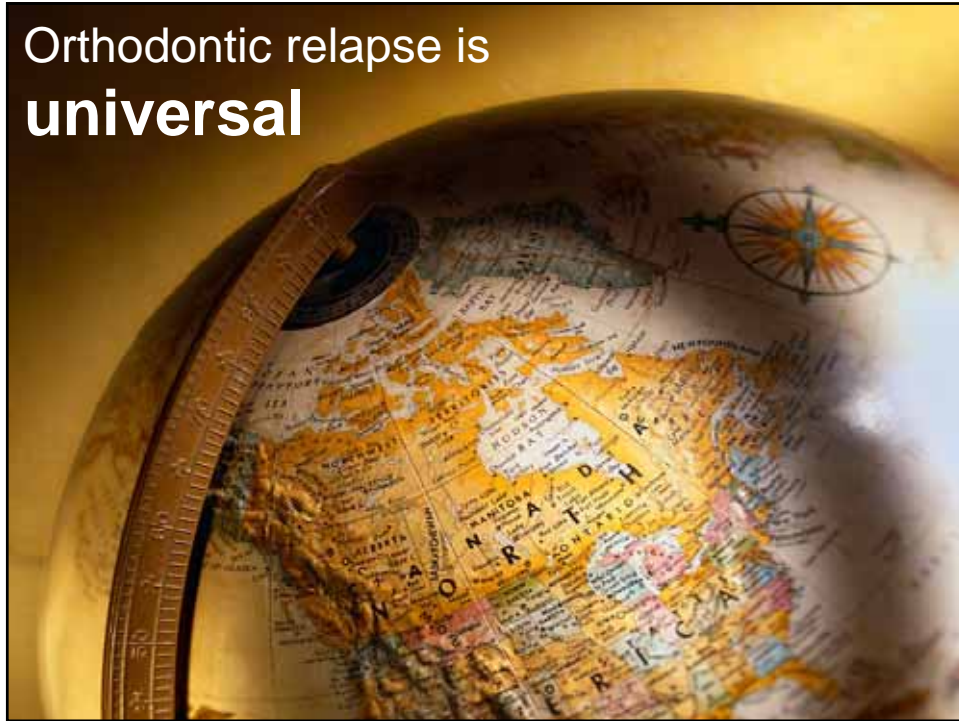
Approximately 50% of all orthodontic cases have **significant relapse**



100% of all orthodontic cases have **the potential for significant relapse**



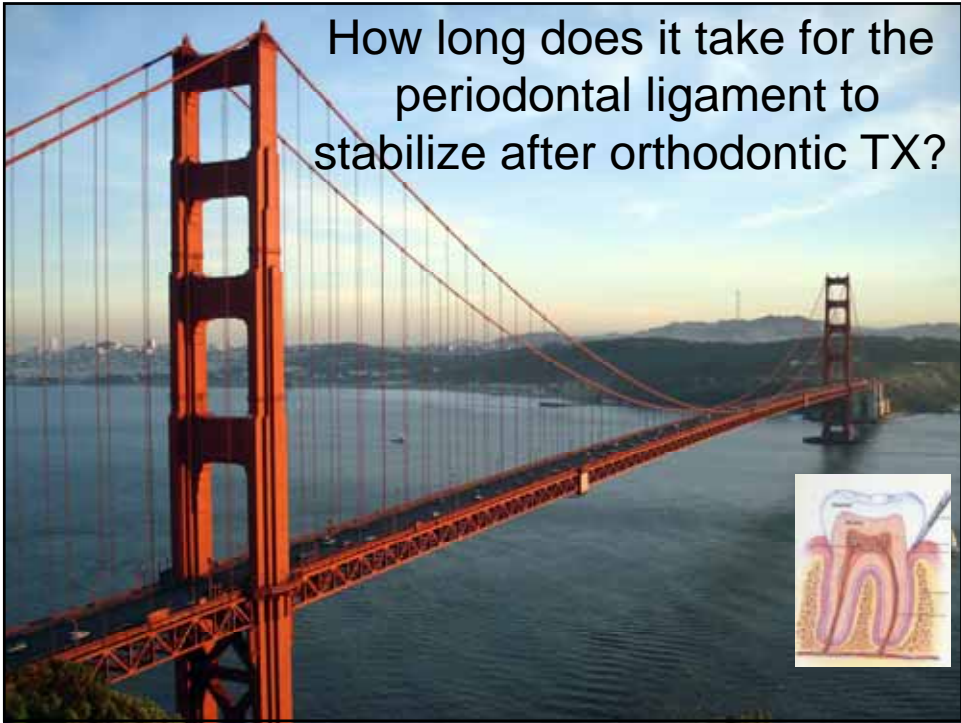
Orthodontic relapse is
universal



Why?

Shift happens





How long does it take for the periodontal ligament to stabilize after orthodontic TX?



6 Months

January 2009							February 2009							March 2009						
Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa
				1	2	3	1	2	3	4	5	6	7	1	2	3	4	5	6	7
4	5	6	7	8	9	10	8	9	10	11	12	13	14	8	9	10	11	12	13	14
11	12	13	14	15	16	17	15	16	17	18	19	20	21	15	16	17	18	19	20	21
18	19	20	21	22	23	24	22	23	24	25	26	27	28	22	23	24	25	26	27	28
25	26	27	28	29	30	31								29	30	31				

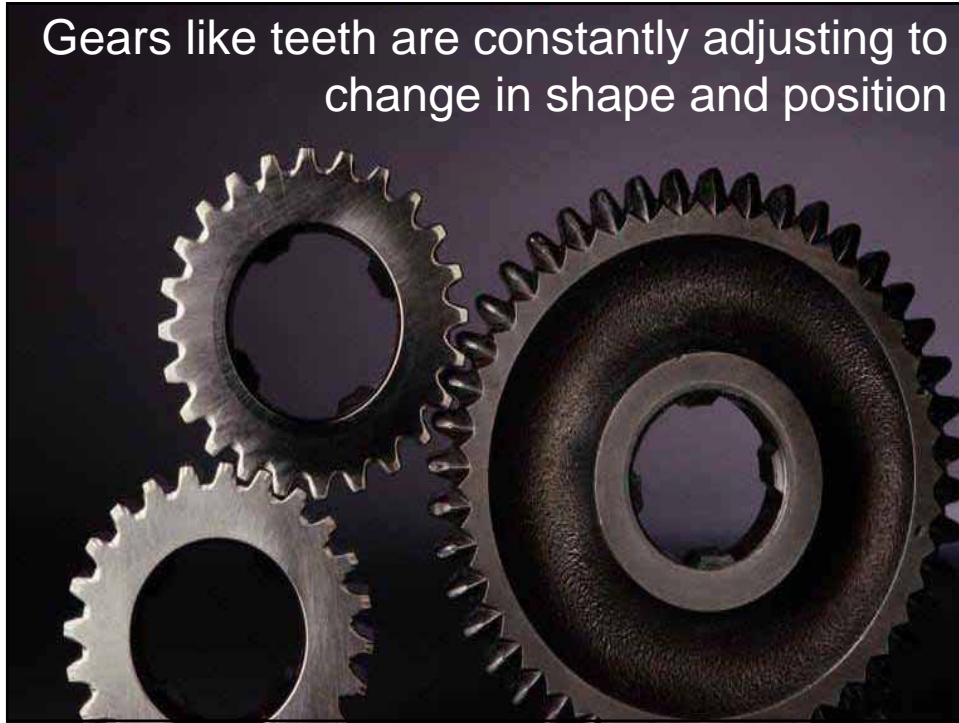
April 2009							May 2009							June 2009						
S	M	T	W	Th	F	S	S	M	T	W	Th	F	S	Su	M	Tu	W	Th	F	Sa
			1	2	3	4	3	4	5	6	7	8	9	1	2	3	4	5	6	
5	6	7	8	9	10	11	10	11	12	13	14	15	16	7	8	9	10	11	12	13
12	13	14	15	16	17	18	17	18	19	20	21	22	23	14	15	16	17	18	19	20
19	20	21	22	23	24	25	24	25	26	27	28	29	30	21	22	23	24	25	26	27
26	27	28	29	30			31							28	29	30				

July 2009							August 2009							September 2009						
Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa
			1	2	3	4	2	3	4	5	6	7	8			1	2	3	4	5
5	6	7	8	9	10	11	9	10	11	12	13	14	15	6	7	8	9	10	11	12
12	13	14	15	16	17	18	16	17	18	19	20	21	22	13	14	15	16	17	18	19
19	20	21	22	23	24	25	23	24	25	26	27	28	29	20	21	22	23	24	25	26
26	27	28	29	30	31		30	31						27	28	29	30			

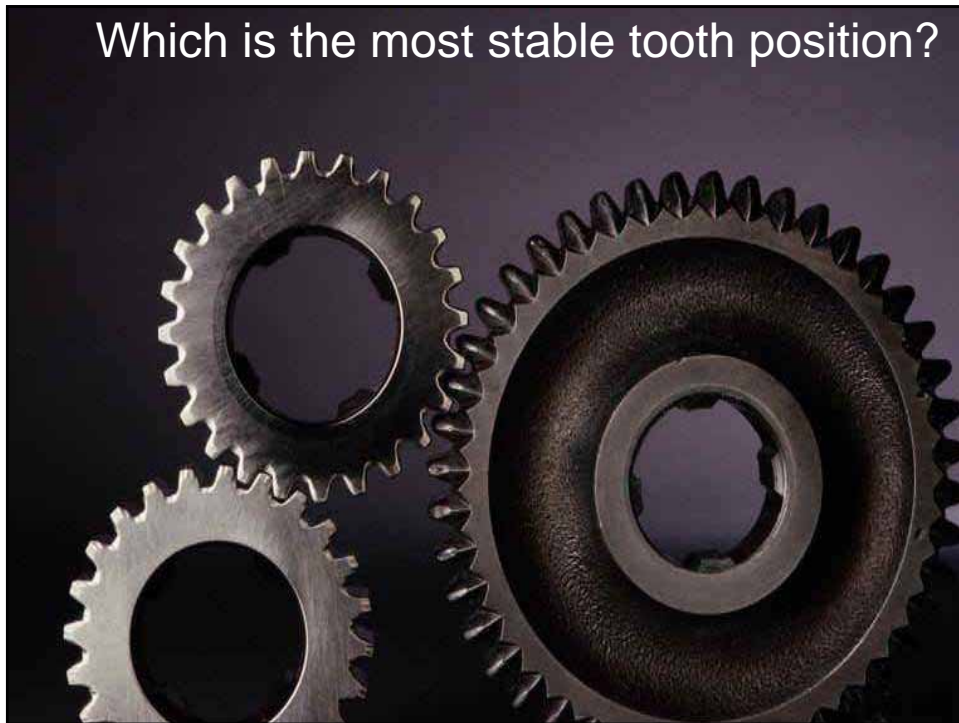
October 2009							November 2009							December 2009						
Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa
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4	5	6	7	8	9	10	8	9	10	11	12	13	14	13	14	15	16	17	18	19
11	12	13	14	15	16	17	15	16	17	18	19	20	21	20	21	22	23	24	25	26
18	19	20	21	22	23	24	22	23	24	25	26	27	28	27	28	29	30	31		
25	26	27	28	29	30	31	29	30						27	28	29	30	31		

Vertex42.com

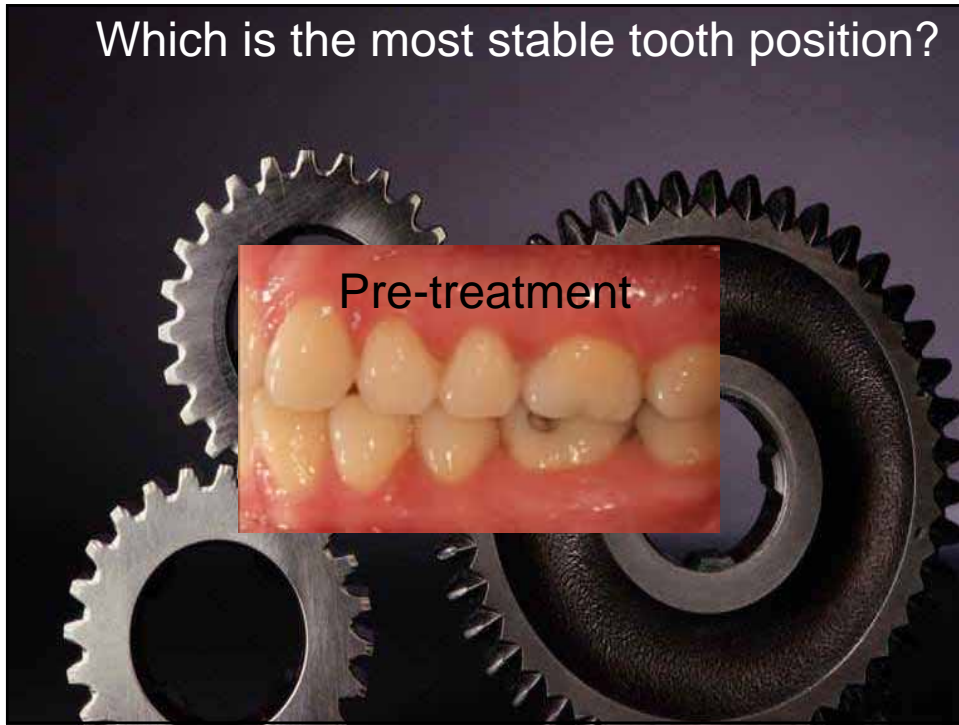
Gears like teeth are constantly adjusting to change in shape and position



Which is the most stable tooth position?

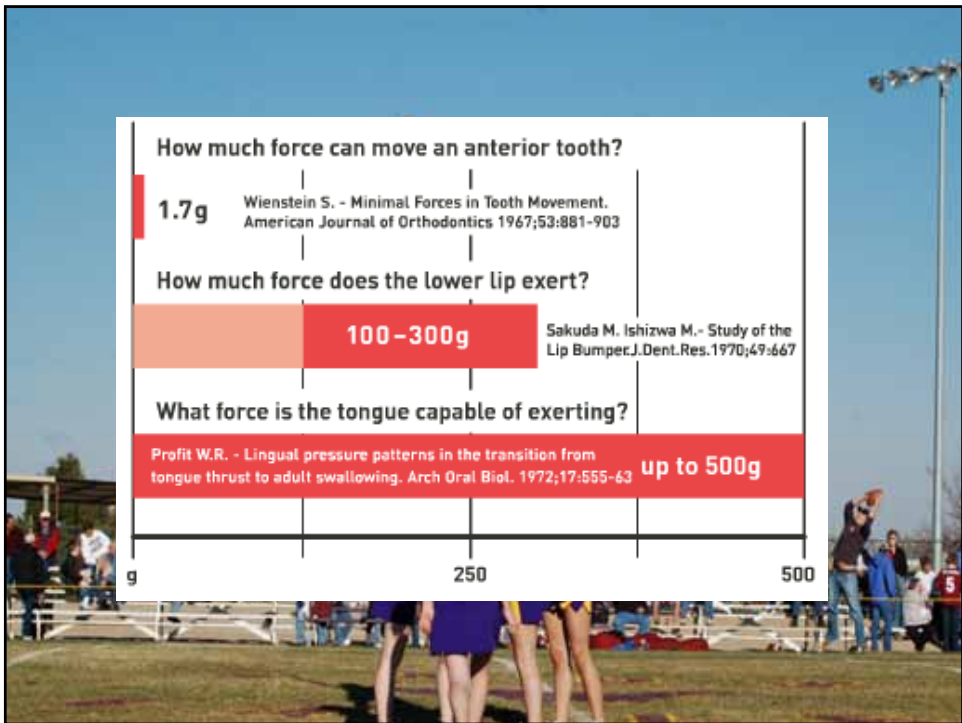


Which is the most stable tooth position?



Stable teeth are surrounded with **balanced muscle support**







Genetics can affect tooth position



Latent growth patterns can affect tooth stability

Excellent oral hygiene...



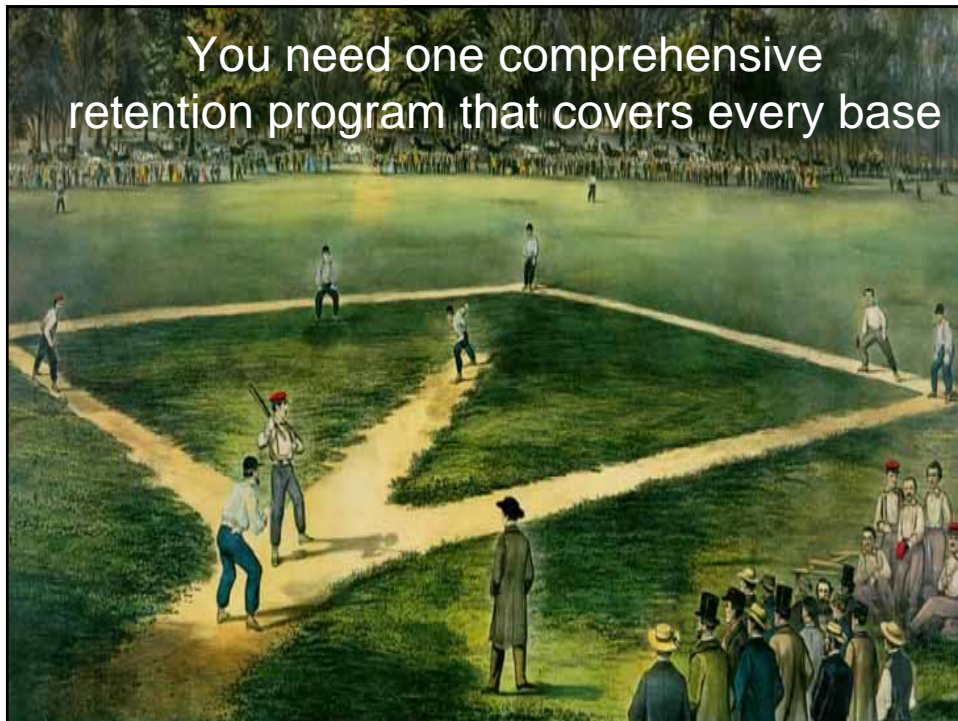
...maintains supporting tissues

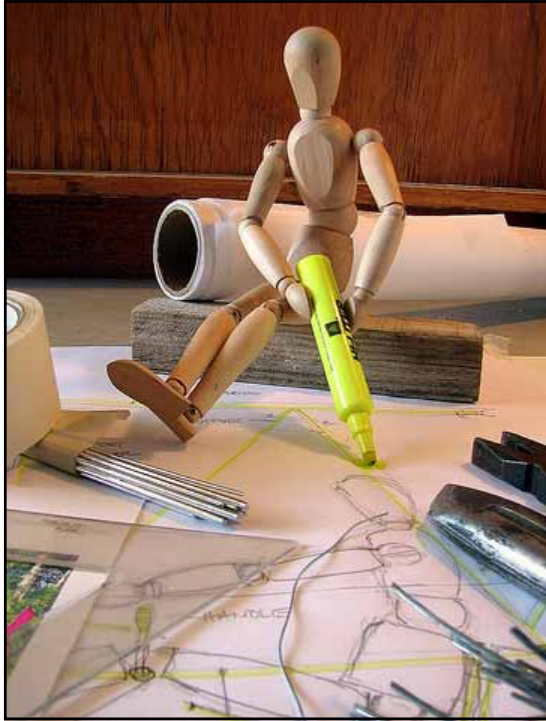


So, what does it all mean?



You need one comprehensive retention program that covers every base





Planning the Treatment is the first step



Planning what to move is important

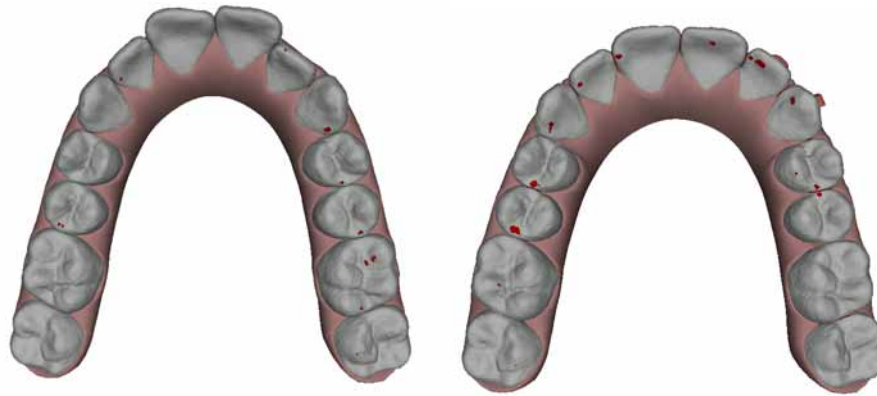
Do you need to move every tooth?



Create a functional **arch form**



You can selectively expand and coordinate



Positioning teeth for future restorative dental procedures



Consumers are seeking esthetic changes



Doctor and Patient retention responsibilities need to be in balance



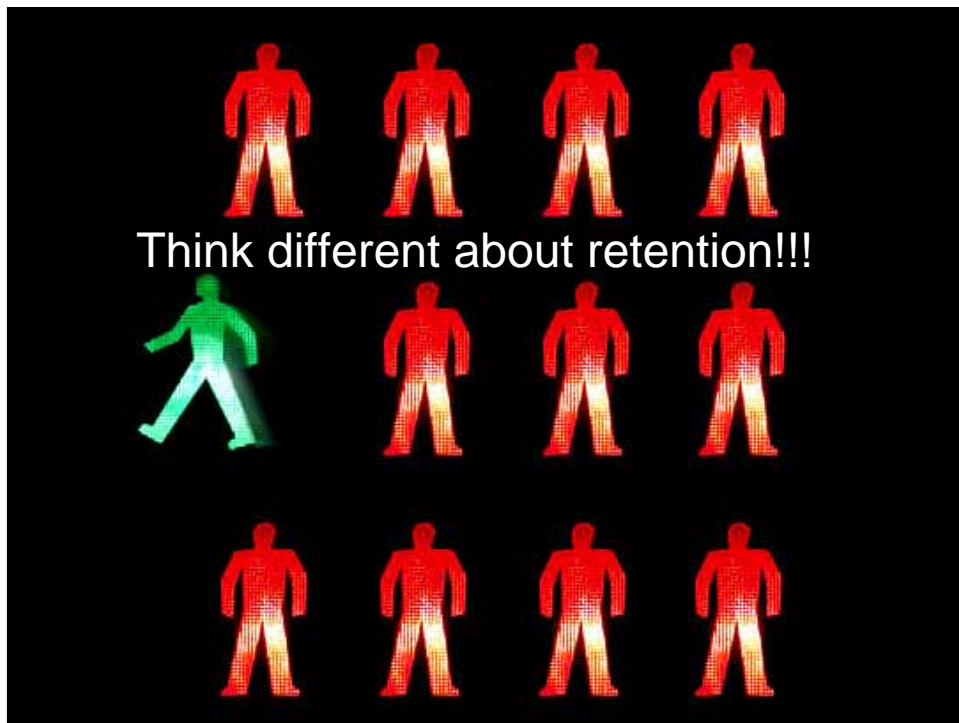
Your retention program needs to adapt to this changing population base



Having the right tools (appliances) helps keep the teeth aligned



Most common retention appliances



Think

vivera
retainers

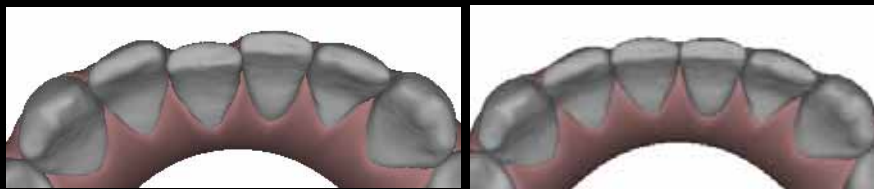


Because

Vivera™ can
finish them off



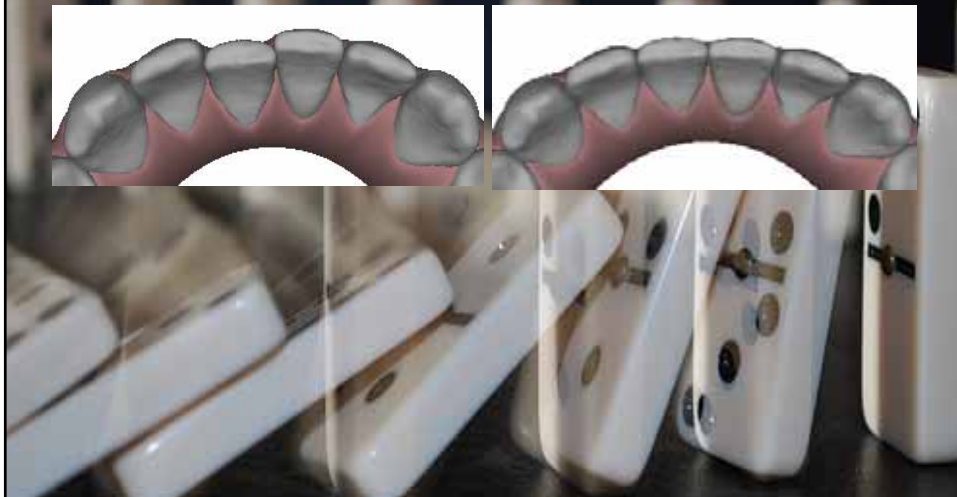
Vivera™ can finish mild discrepancies
in original TX tooth position
(approx. .25mm)



Vivera™ can provide a re-alignment safety net for future relapse



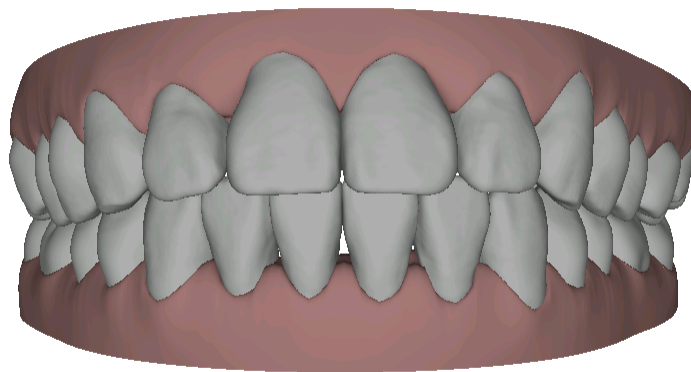
Vivera™ can provide a re-alignment safety net for future relapse
(approx. .25mm)



**Vivera™ can be made from
the original treatment data**



New impressions are optional





Vivera™ can accommodate pontics



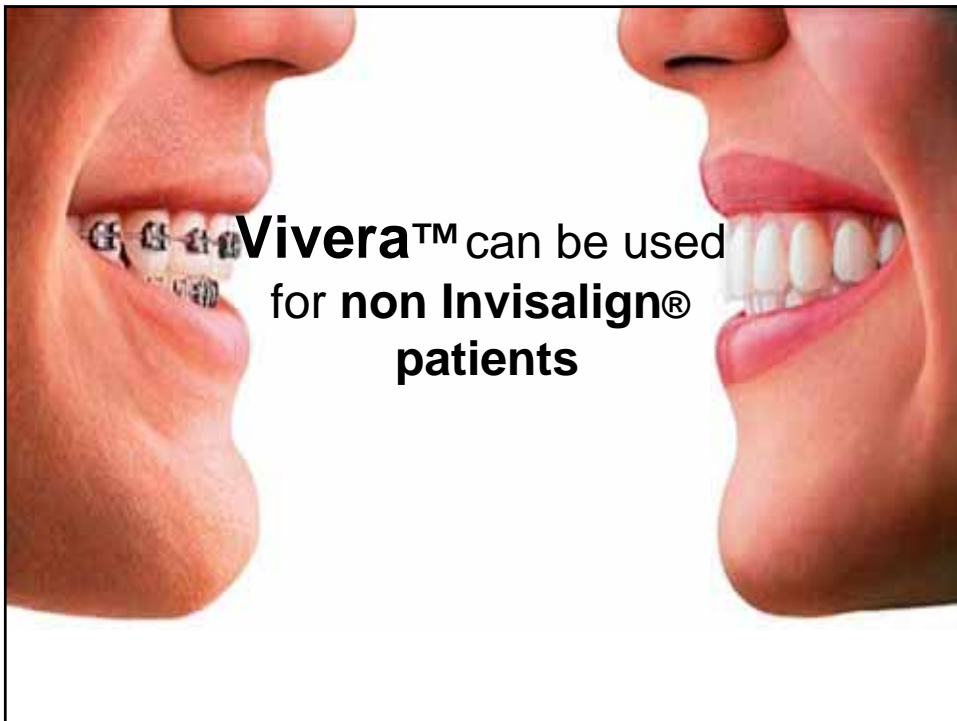
Masking dental spaces after the placement of implants.



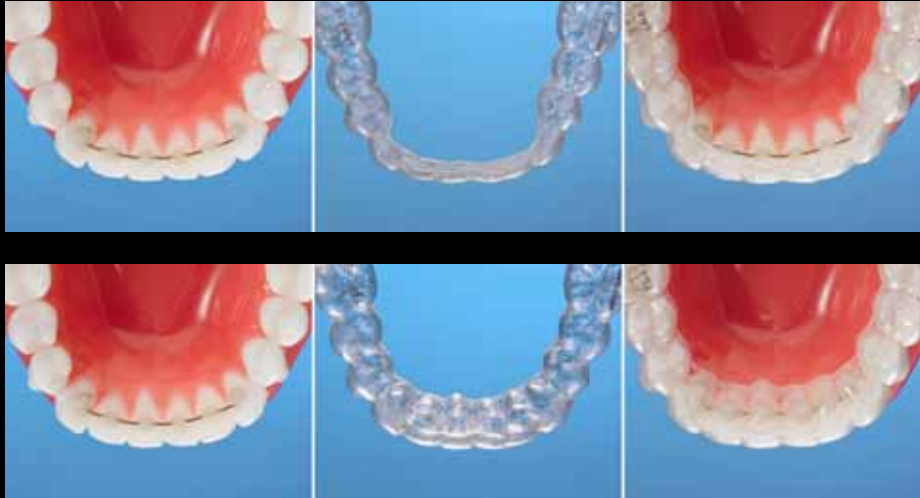
Vivera™ can be made from
new PVS impressions



Vivera™ can be used
for non Invisalign®
patients



Vivera™ can accommodate fixed lingual wire retainers



Vivera™ can accommodate changes that you make to the shape and size of the teeth



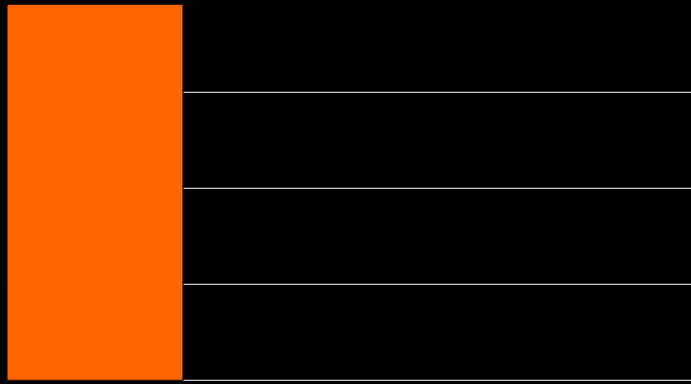
Vivera™ can accommodate post
Invisalign restorative changes



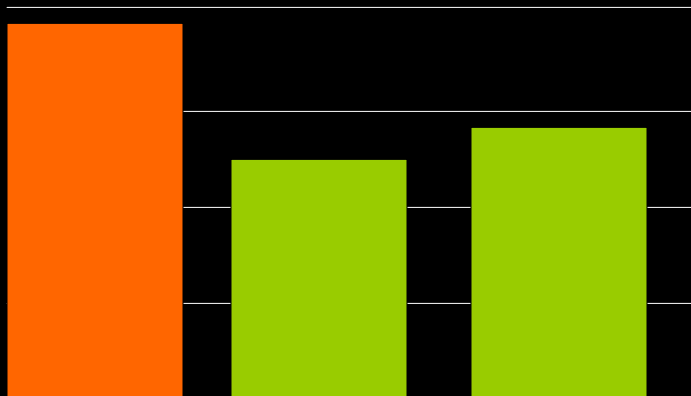
Vivera™ has superior strength



Vivera™ retainer material strength



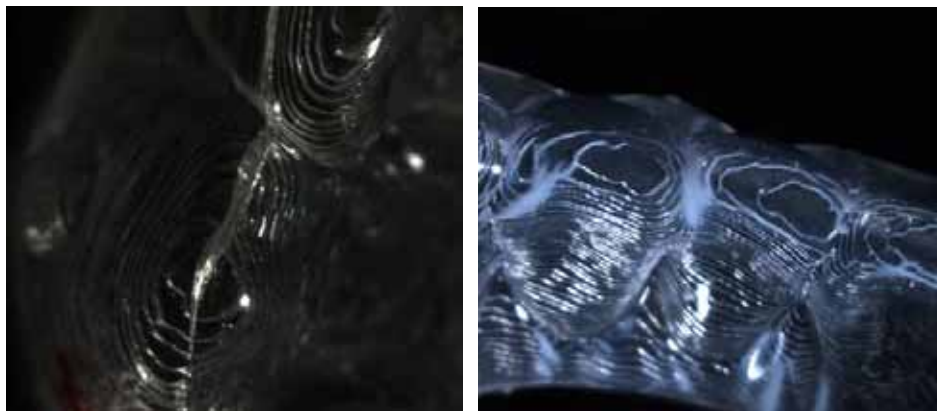
Other clear retainer material strength



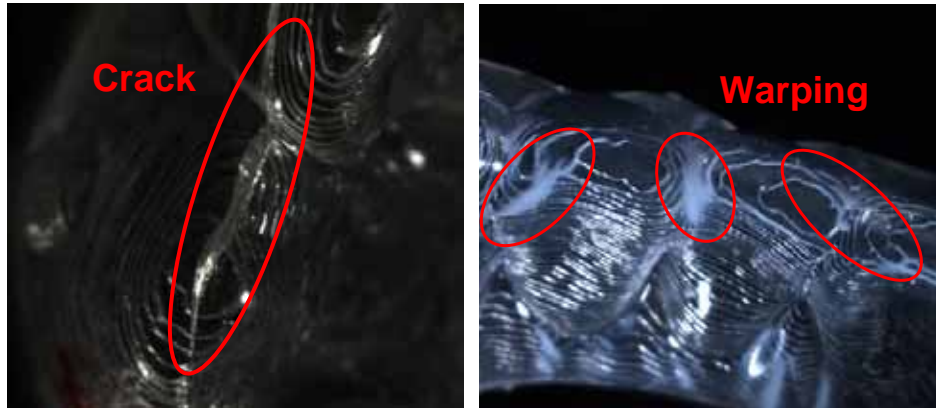
Vivera™ is very durable



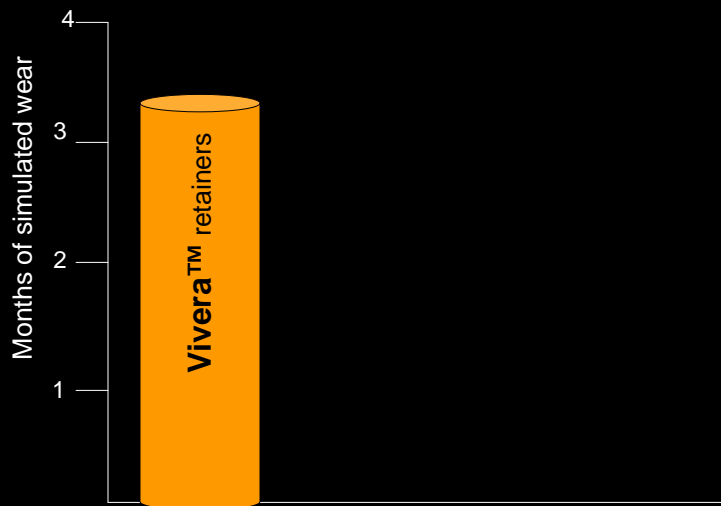
Other clear retainer deformation



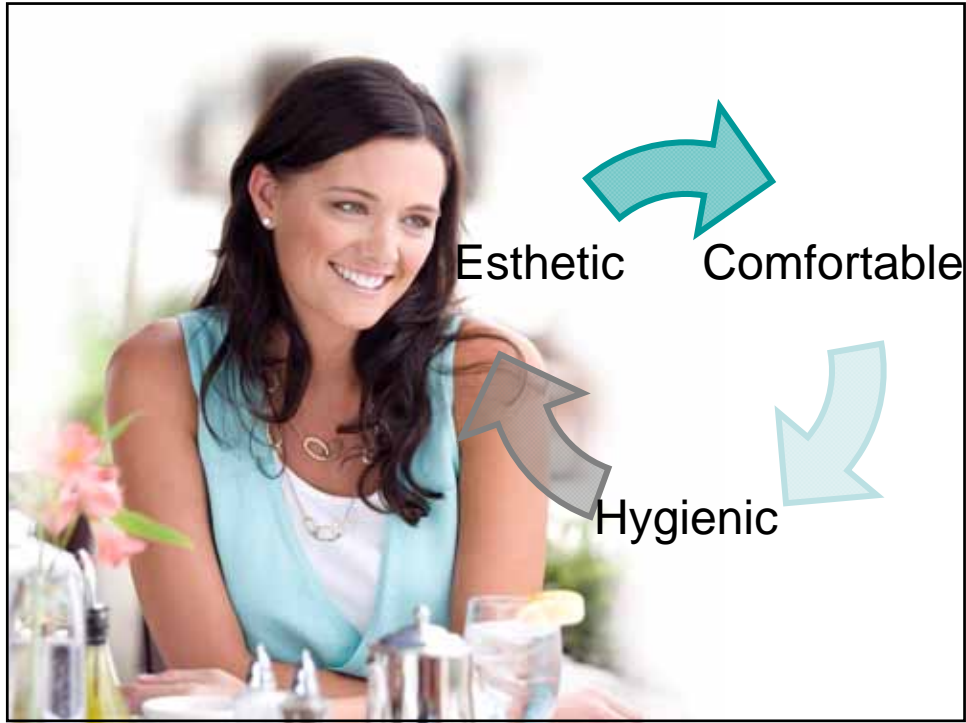
Other clear retainer deformation



First signs of deformation







We still need to cover one more base...



Retainer wear time needs to be determined







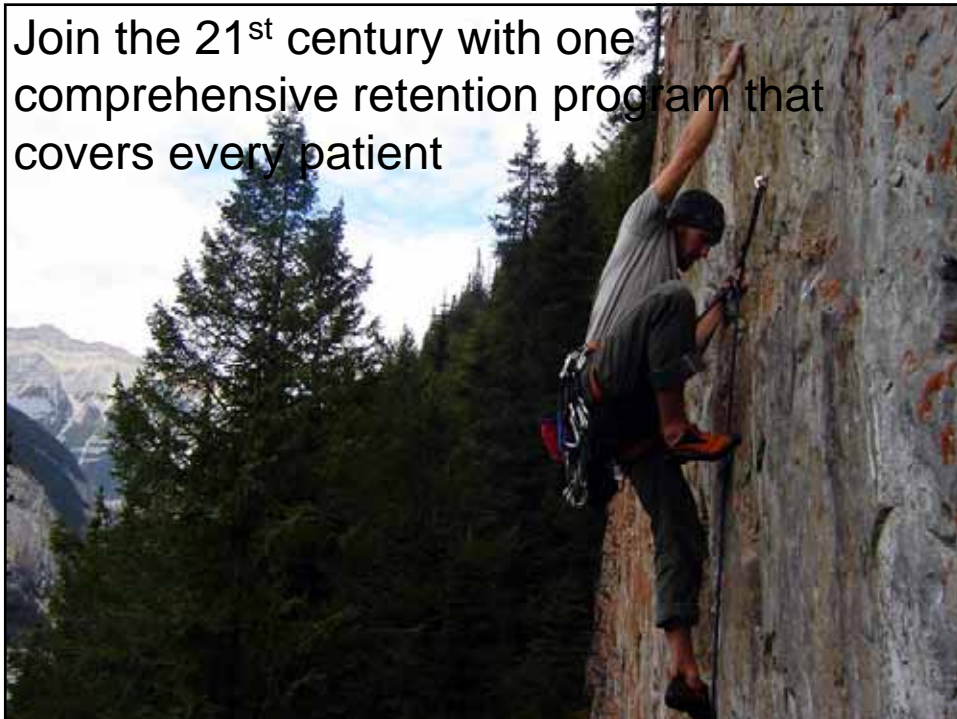
What are you going to do?



Follow the path of 50% **significant relapse?**



Or...



Turn small change...



...into big change



