

How many licks does
it take



**ASSIGN
BUSTER**

TOOTSIE ROLL POPS 1 How Many Licks Does it Take? Niklas Andersson

Saginaw Valley State University of Michigan TOOTSIE ROLL POPS 2 Abstract

Tootsie Roll Pops are known for the catch phrase, “ How many licks does it take to get to the center of a Tootsie Roll Pop? ” The phrase was first introduced in an animated commercial in 1970. The whole point of the commercial is that no one will ever know how many licks it takes because you can’t resist the great temptation of biting into the candy shell. To test this hypothesis correctly, you must stop counting the moment that the center becomes exposed.

This study suggests that the flavor of the Tootsie Pop will be a participating factor. Are there any other factors at play? Will the world ever know how many licks it truly takes to get to the center of a Tootsie Roll Pop? TOOTSIE ROLL POPS 3 Introduction When the first Tootsie Roll Pop commercial debuted, many men, women, and children have asked, “ How many licks does it take to get to the center of a Tootsie Roll Pop? ” A Tootsie Roll Pop is similar to a sucker, but the difference is the middle.

Inside, you will find a chewy chocolate center. There have been other experiments to determine the number of licks, but every other experiment seems to have different results. I have yet to find a credible study where every factor is at play. I will not be conducting this experiment with other participants, but with yours truly. My hypothesis for this experiment is that the number of licks is not different from each individual flavor. Method For this experiment I will be using the five popular flavors, chocolate, cherry, orange, grape, and raspberry.

The sole purpose of this research is to systematically determine how many licks it takes to get to the center. The lick will be defined as sticking out the tongue and running the Tootsie Roll Pop down the side of the tongue. With saliva playing a crucial role, I will retract my tongue every ten licks. The center is determined to have been reached when licking yields the texture of the Tootsie Roll. This eliminates any false positives as a result of bubbles in the candy, oddly textured regions, and seeing chocolate through the candy. I will be licking five of each flavor for a total of twenty-five Tootsie Roll Pops.

For every Tootsie Roll Pop I finish, I will drink a cup of water and rest for fifteen minutes before proceeding. TOOTSIE ROLL POPS 4 Results The numbers you see on the graph are the average amount of licks for each flavor. Over 15, 000 licks later, the results are staggering. The chocolate Tootsie Roll Pop took over twice as many licks than any other flavor. Orange, grape, and raspberry were a surprisingly tight bundle with an average of fifty licks apart. It appears cherry takes the least amount of licks to reach the center.

The total average to reach the center of a Tootsie Roll Pop is 717 licks.

Flavors	Trial 1	Trial 2	Trial 3	Trial 4	Average
Chocolate	1140	1120	1055	1300	1165
Cherry	520	555	560	535	543
Orange	600	690	584	570	626
Grape	665	630	715	640	663
Raspberry	615	580	610	665	628

TOOTSIE ROLL POPS 5 Discussion I did not expect the chocolate flavor would differentiate from the other flavors. The four other flavors are not far apart from each other. This leads me to believe that any dye or ingredient used for the chocolate flavored Tootsie Pops create a stronger shell or coating.

Perhaps with an even larger sample size, the data will become more condensed or more stretched. I could continue this experiment, but I believe many other factors are at work here. Other possible areas of research include the effects of tongue size, saliva production, age, and gender. The data shown above is just the average for an eighteen year old male participant. What would happen if I included every possible factor to the experiment? TOOTSIE ROLL POPS 6 Works Cited Tootsie. (n. d.). Retrieved from <http://www.tootsie.com/>