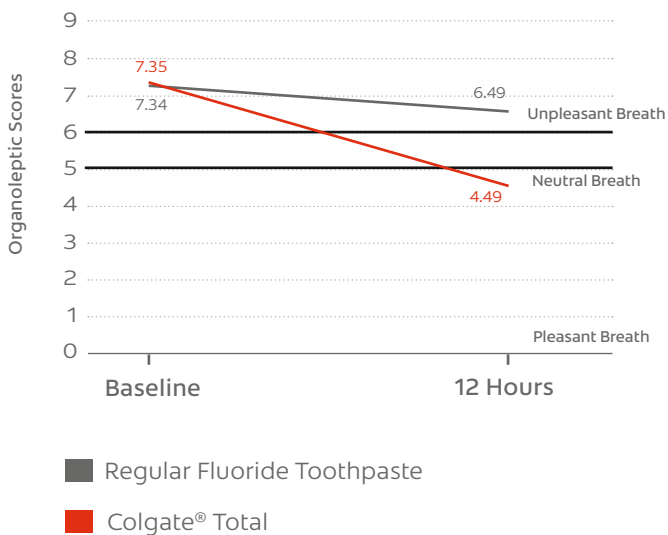


A Clinical Investigation proves the efficacy of Colgate® Total for controlling Oral Malodor

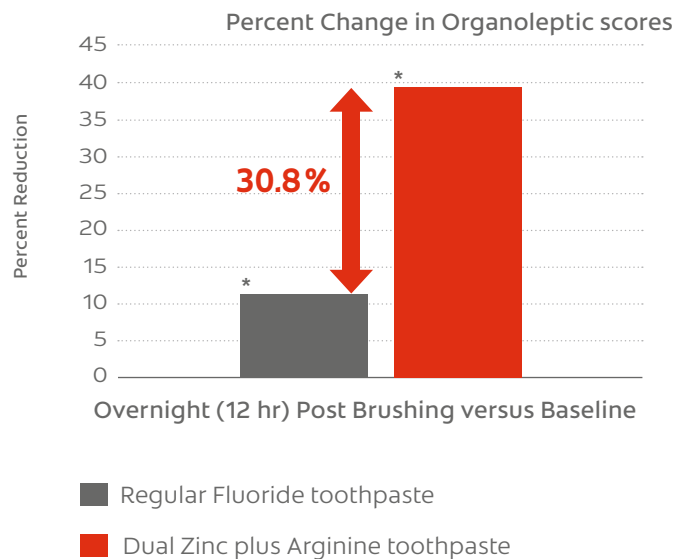
Results

Figure 1. Overnight (12 hours) post brushing organoleptic scores compared to baseline



* statistically significant ($p < 0.001$) reduction of organoleptic scores

Figure 2. Percent Change in Organoleptic Scores



In this clinical study the efficacy of a new Colgate® Total with Dual Zinc plus Arginine toothpaste was assessed for the 12 hour overnight oral malodor reduction after 3 weeks of product use.

- After 3 weeks of product use, 90 % of the group using Colgate® Total experienced a shift toward “pleasant” breath (Figure 1).
- Subjects using Colgate® Total showed a statistically significant reduction of 38.9 % in organoleptic scores as compared to baseline (Figure 2).
- Relative to the regular fluoride toothpaste group, subjects in the Colgate® Total group exhibited statistically significant reduction of 30.8 % in oral malodor.

Clinical study essentials

- Randomized, double-blind, parallel, clinical study
- 80 participants completed the study
- 3 weeks study duration
- Conducted at Chengdu, People’s Republic of China.
- Accepted for publication in Journal of Clinical Dentistry, 2018. Hu et al, A clinical investigation of the efficacy of a Dual Zinc plus Arginine toothpaste for controlling oral malodor

Implication for practice

Colgate® Total toothpaste with Dual Zinc and Arginine provides patients with superior oral malodor control, even 12 hours after brushing, in comparison to a regular fluoride toothpaste after three weeks of continuous use.



Supplementary Study Information



Products under Investigation

- Test toothpaste 1: zinc (zinc oxide, zinc citrate) 0.96%, 1.5% Arginine and 1450 ppm fluoride (Colgate® Total with Dual Zinc plus Arginine; Colgate-Palmolive Company, New York, NY)
- Control toothpaste: regular fluoride toothpaste containing 1450 ppm fluoride (MaxFresh Tea; Colgate-Palmolive Company, New York, NY)



Study participants

80 adult subjects with good dental health were recruited for the study

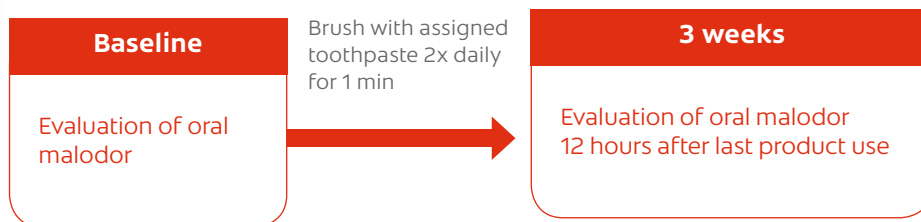


Methods

Subjects randomly assigned to one of two treatment groups. Organoleptic scores were recorded at baseline and after 3 weeks by a panel of four trained and calibrated judges using a nine-point organoleptic hedonic scale.



Trial Procedure



Conclusion

The Colgate® Total with Dual Zinc plus Arginine toothpaste containing zinc (zinc oxide, zinc citrate) 0.96%, 1.5% arginine and 1450 ppm fluoride as sodium fluoride in a silica base provides significantly greater reduction in oral malodor as compared to a regular fluoride toothpaste containing 1450 ppm fluoride as sodium fluoride in a silica base 12 hours post-brushing (overnight) after 3 weeks of product use.

Further published studies with these products:

1. Delgado et al, J Clin Dent, accepted for publication 2018
2. Prasad K et al, J Clin Dent, accepted for publication 2018
3. Manus L et al, J Clin Dent, accepted for publication 2018
4. Lee C et al, J Clin Dent, accepted for publication 2018