

INTISARI

Konsumsi minuman manis berpotensi menurunkan *pH* saliva yang rentan menimbulkan karies gigi. Alternatif pencegahan karies gigi dapat dilakukan dengan pemberian stimulasi mekanis pengunyahan permen karet *xylitol*. Mengunyah permen karet *xylitol* akan memberikan rangsangan mekanis pada kelenjar saliva yang dapat meningkatkan sekresi saliva. Sementara itu, peningkatan sekresi saliva akan berpengaruh pada peningkatan *pH* saliva. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh pemberian stimulasi mekanis pengunyahan terhadap *pH* saliva setelah mengonsumsi minuman manis.

Penelitian dilakukan pada 20 *volunteer* yang dibagi menjadi dua kelompok yaitu kelompok perlakuan dan kelompok kontrol dengan metode *cross over design*. Kelompok perlakuan diberi perlakuan mengunyah permen karet *xylitol* setelah minum minuman manis. Sebelum penelitian subjek diinstruksikan untuk tidak makan dan minum selama satu jam. Pengumpulan saliva dilakukan dengan metode *spitting* selama 5 menit kemudian diukur menggunakan *pH* meter. Penelitian dilakukan dua sesi dengan rentang waktu 1x24 jam. Pada sesi kedua dilakukan pertukaran kelompok (*cross over*). Subjek yang semula mendapat kelompok perlakuan menjadi kelompok kontrol dan sebaliknya.

Analisis statistik menggunakan uji *Paired t-test* menunjukkan bahwa terdapat perbedaan yang signifikan antara kelompok perlakuan dan kelompok kontrol ($p < 0,05$). Hasil penelitian menunjukkan bahwa pemberian stimulasi mekanis pengunyahan permen karet *xylitol* setelah mengonsumsi minuman manis dapat meningkatkan *pH* saliva.

Kata kunci: Minuman manis, mengunyah, permen karet *xylitol*, *pH* saliva.

ABSTRACT

Consumption of sweetened drinks has the potential to lower the *pH* of saliva which is prone to causing dental caries. Alternative prevention of dental caries can be done by giving mechanical stimulation of chewing *xylitol* gum. Chewing *xylitol* gum will provide mechanical stimulation to the salivary glands which can increase salivary secretion. Meanwhile, increasing salivary secretion will have an effect on increasing salivary *pH*. The purpose of this study was to determine the effect of chewing mechanical stimulation on the *pH* of saliva after consuming sweetened drinks.

The study consisted of 20 volunteers who were divided into two groups, namely the treatment group and the control group using the cross over design method. The treatment group was treated with chewing *xylitol* gum after drinking sweetened drinks. Prior to the study, subjects were instructed not to eat and drink for one hour. Saliva collection was carried out using the spitting method for 5 minutes and then measured using *pH* meter. The study was conducted in two sessions with a span of 1x24 hours. In the second session, a group exchange (cross over) was conducted. Subjects who were initially in the treatment group became the control group and vice versa.

Statistical analysis using the Paired t-test showed that there were significant differences between the treatment group and the control group ($p < 0.05$). The conclusion of this study indicated that the mechanical stimulation of *xylitol* gum chewing after consuming sugary drinks increased the *pH* of saliva

Key words: Sweet drink, chewing, *xylitol* gum, *pH* of saliva.