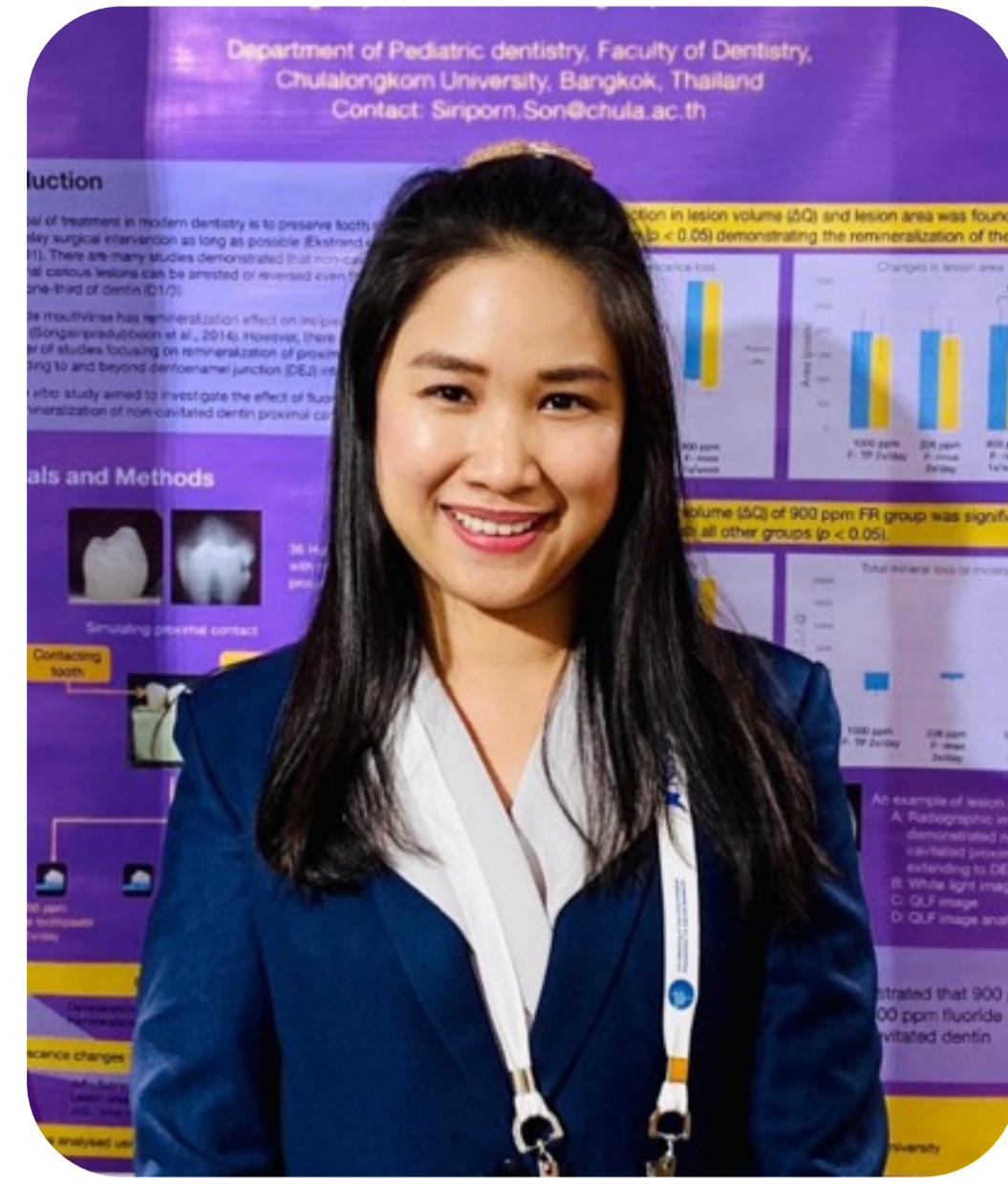




P5-3

# Effect of drinking water after fluoride varnish application on saliva fluoride level

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## INTRODUCTION

Fluoride varnish have been widely used in dental clinics especially for pediatric patients. The action of fluoride varnish is slowly releasing fluoride ions into the underlying tooth surfaces and the oral cavity. Fluoride varnish was proved to be safe and effective in preventing dental caries.

However, the post-application information of fluoride varnish is still insufficient. The post-application instructions in guidelines / recommendations from various dental organizations are varied.



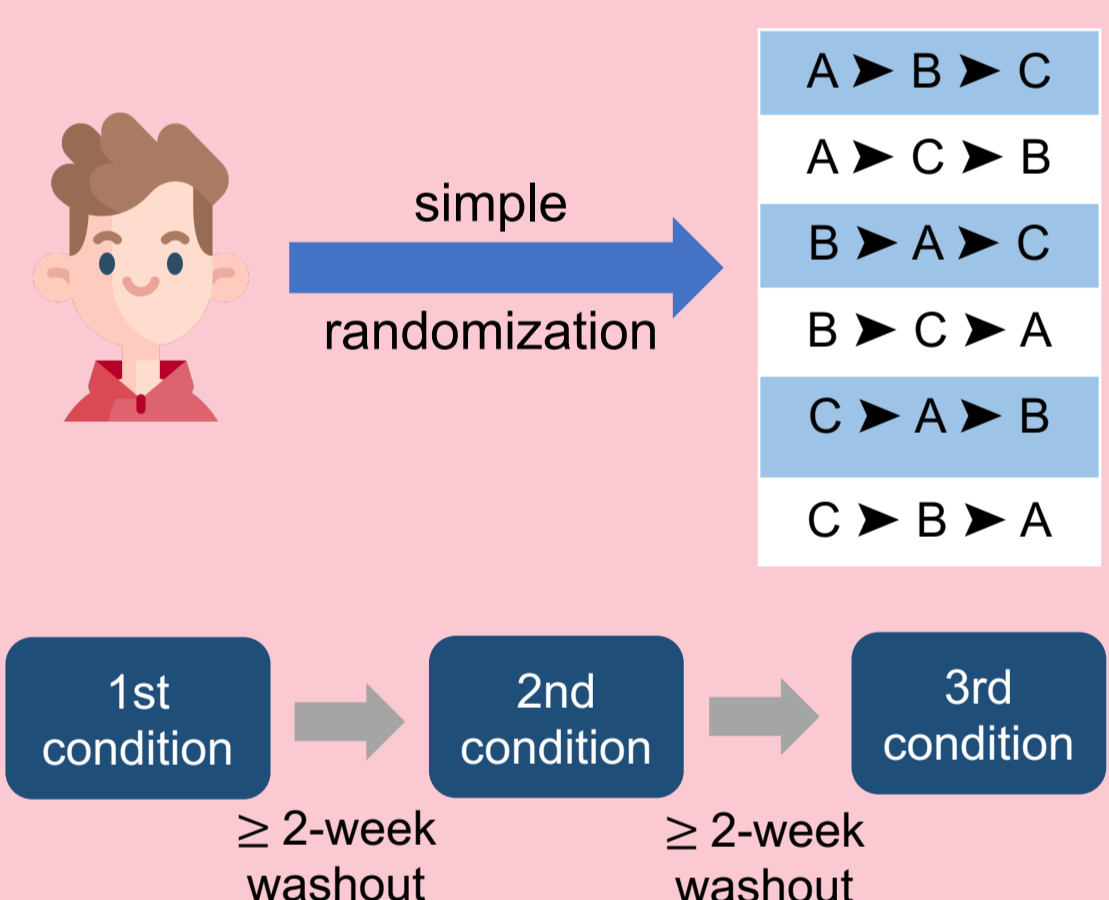
## OBJECTIVE

To investigate the effect of water drinking after fluoride varnish application on the fluoride retention in the whole saliva.

## MATERIALS AND METHODS

### Research design

A randomized three-arm crossover design with 15 subjects.



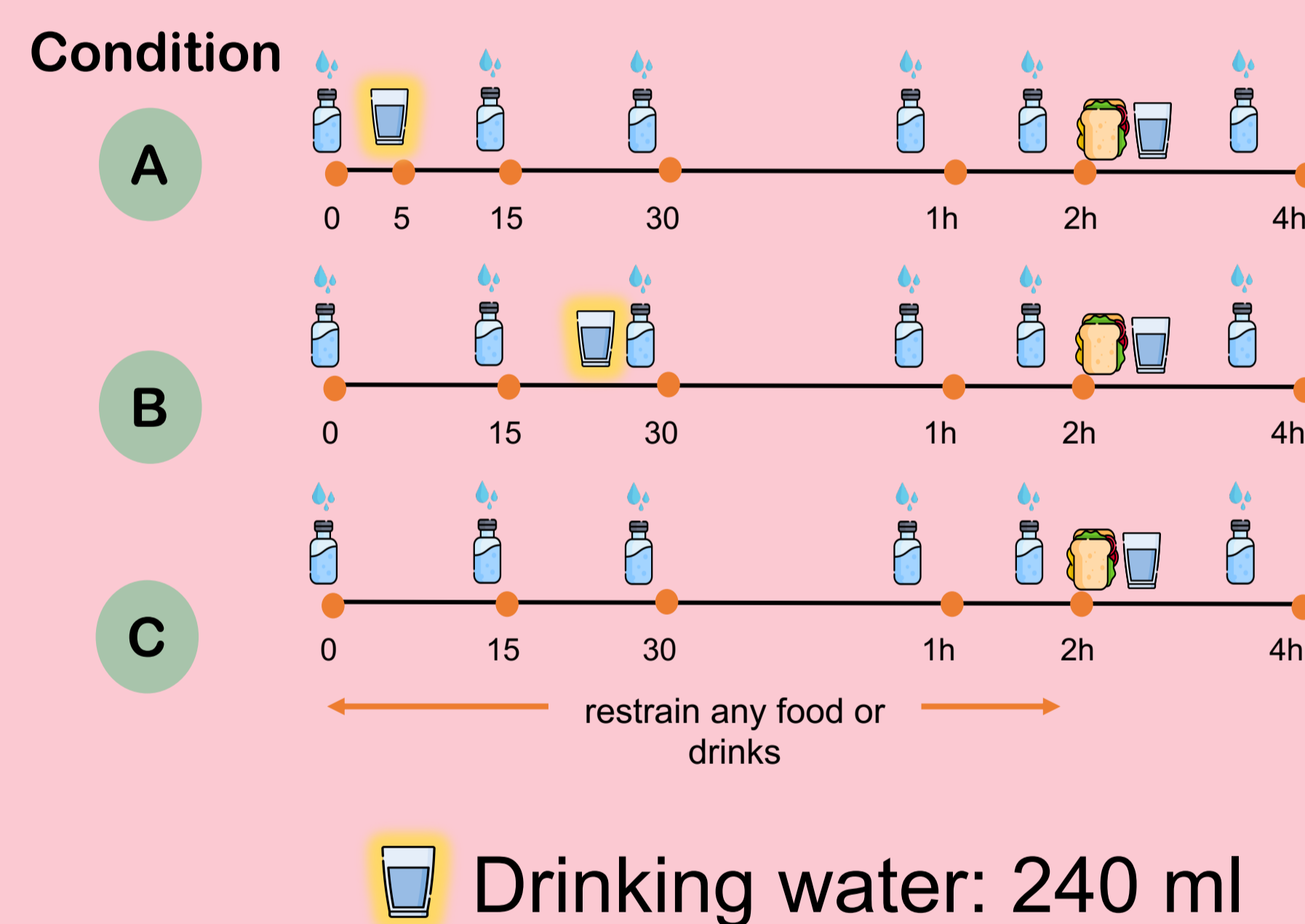
### Baseline collection

- Unstimulated whole saliva
- 5 minutes

### Fluoride application

- Duraphat® (5% NaF varnish)
- Applied on all teeth surfaces
- with small brush
- within 2 minutes
- by the single operator

### Interventions



### Fluoride analysis

Using an ion-specific electrode (Orion 9609)

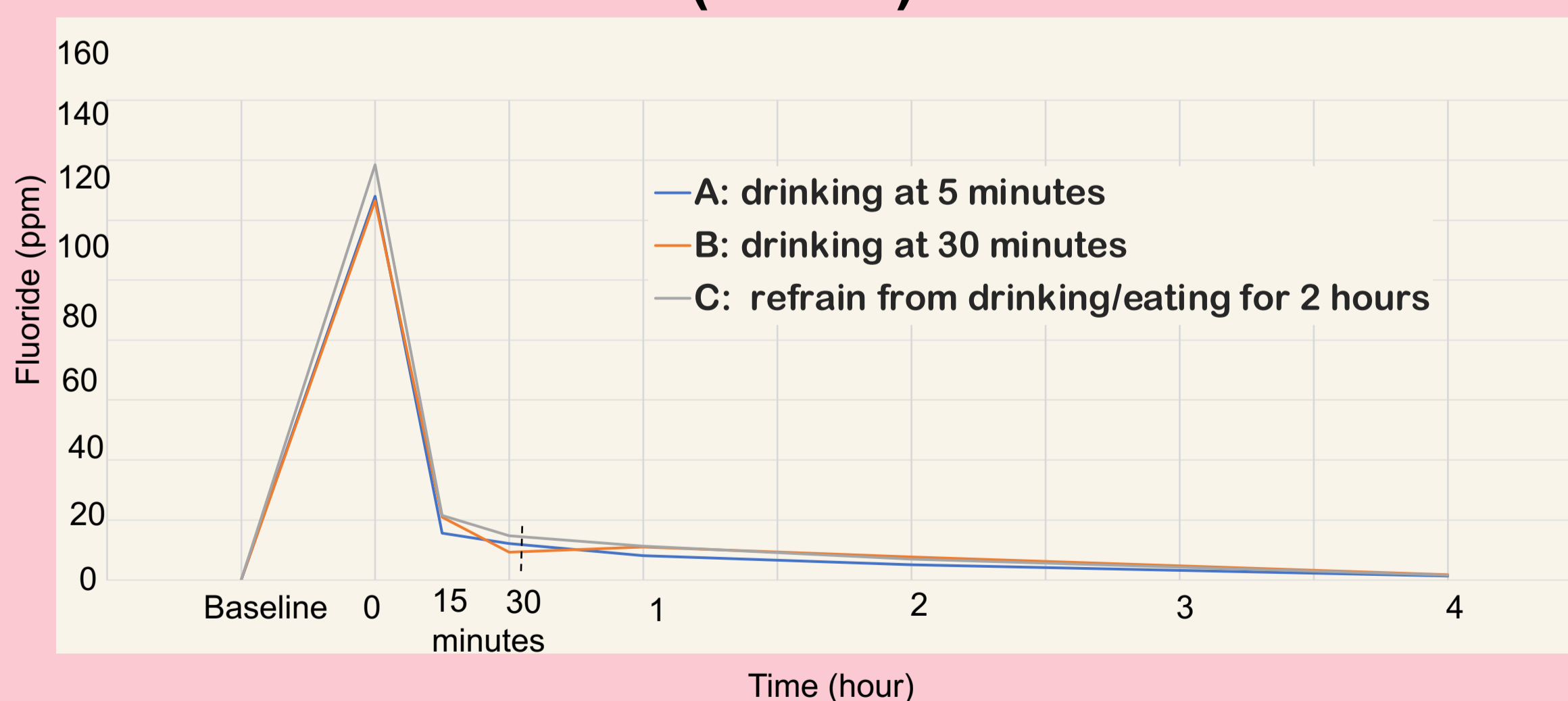
Measure within 24 hours by a blinded investigator

### Statistical analysis

Repeated ANOVA at  $p < 0.05$

## RESULTS

### Mean concentration of saliva fluoride over time (n = 15)



“ No significant difference among conditions ”

### Area under curve of fluoride concentration at each time point (n = 15)

Condition	Time				
	15 min	30 min	1 hour	2 hours	4 hours
A (at 5 min)	66.98 ± 28.97 <sup>A</sup>	79.92 ± 35.07 <sup>B</sup>	98.82 ± 45.66 <sup>C</sup>	123.38 ± 56.77 <sup>D</sup>	147.33 ± 66.45 <sup>E</sup>
B (at 30 min)	68.76 ± 35.54 <sup>A</sup>	82.80 ± 43.68 <sup>B</sup>	101.58 ± 55.32 <sup>C</sup>	136.36 ± 81.61 <sup>D</sup>	171.61 ± 109.78 <sup>E</sup>
C (after 2 hours)	74.61 ± 39.59 <sup>A</sup>	91.49 ± 46.05 <sup>B</sup>	115.78 ± 55.89 <sup>C</sup>	149.89 ± 72.13 <sup>D</sup>	181.74 ± 88.02 <sup>E</sup>
p-value	0.660	0.489	0.305	0.199	0.154

Values with the same superscription letters in each row were defined as not significantly different at  $p < 0.05$ .

## CONCLUSION

The results from this study suggested that **drinking water during 2 hours** after fluoride varnish application has **no effect** on salivary fluoride level at 4 hours after treatment

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