

Clinical Comparison of Antiperspirant Efficacy as a Function of Morning and/or Nighttime Application

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INTRODUCTION

More than 90% of consumers in the United States use an antiperspirant product to control wetness and malodor in the axilla. The presence of axilla wetness and malodor can have a negative impact on self-confidence and social acceptance. As a result, most consumers rank the use of antiperspirant or deodorant products in the top two or three priorities in their grooming regime.

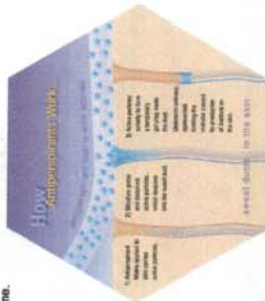
Most consumers, more than 80% in the United States, apply their product as part of their morning hygiene regime. However, many consumers reapply their product during the day to prevent axilla wetness and malodor from appearing in the late afternoon or evening. Late day axilla wetness and malodor can be attributed to an increase in overall sweat rate during the early evening.

Sweat rate is known to have a circadian cycle that follows a sinusoidal pattern with a maximum level near 6 pm and a minimum at night.⁽¹⁾

There is limited data in the literature describing the impact of reapplication or late in the day application. One study showed that two applications of a commercial cream product per day provided similar perceived efficacy to a commercial aluminum chloride based product in the treatment of hyperhidrosis with a much higher rate of patient compliance. However, there is no data in the literature that quantifies the application time or number of applications on antiperspirant efficacy in the general population.

OBJECTIVE

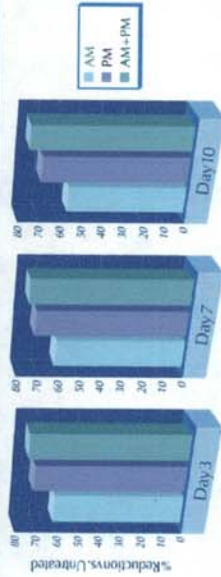
Determine the impact of twice daily dosage and time of product application on the efficacy of a commercial cream product via standard hot room product testing.



Clinical Protocol

Initial Product Application Treat the 10 axillae 2x per treatment period	Product No Antiperspirant was used for the week.
Product Application Daily reapplication was used for the week.	Product Reapplication was used for the week.
Sweating was reduced by 20% (less than 100% and 25% Relative Humidity) Total sweat loss was reduced using standard hot room test conditions	Product Reapplication was used for the week.
Each product provided a least 100% of sweat per 20 minute collection in untreated Total sweat loss per 20 min was reduced by 20% (less than 100% and 25% Relative Humidity)	Product Reapplication was used for the week.
A commercial cream product was applied to one axilla, the second untreated axilla Treated and untreated axillae were reappplied across each treatment group	Product Reapplication was used for the week.
Treatment group one AM/PM Application Treatment group 1 (AM/PM) had product applied between 8 and 8 am.	Product Reapplication was used for the week.
Treatment group 2 PM Application Treatment group 2 (PM) had product applied between 8 and 8 pm.	Product Reapplication was used for the week.
Treatment group 3 AM Application Treatment group 3 (AM) had product applied between 8 and 8 am.	Product Reapplication was used for the week.
Treatment group 4 PM Application Treatment group 4 (PM) had product applied between 8 and 8 pm.	Product Reapplication was used for the week.

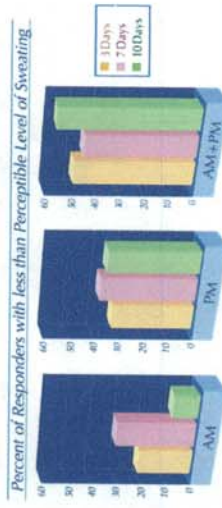
RESULTS



- All treatments showed a significant effect versus the untreated axilla.
- Analysis of LS means showed that PM and AM+PM applications were significantly more effective than AM application at all three test points.
- Nonparametric statistical analysis showed that PM and AM+PM applications were significantly more effective than AM application at all three test points and that AM+PM was significantly more effective than PM application at 10 days.

There is a minimum sweat amount required for consumers to notice perspiration in the axilla.

AM+PM application resulted in significantly more responders below the perceptible level than conditions than the other two treatment methods.



CONCLUSIONS

- Twice daily application will provide a significant clinical and noticeable benefit versus the typical once per morning treatment.
- Evening application will provide a clinical benefit versus morning application
- The current morning application preferred by most consumers can be improved by altering their treatment pattern to either evening application or twice daily application.

REFERENCES

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