

# La Crosse

Health Professions Department  
Physical Therapy Program

## **Final Report**

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The purpose of this study was to examine the adhesive properties of several bandage types in a water environment.

## **Methods**

Twenty participants had several standard bandages applied to the distal portion of their lower limb (less than 10 cm from the lateral malleolus on the fibular side as in Figure 1 in a randomized order. To examine the adhesive properties of each bandage, two clinical whirlpool baths with room temperature water (72°) were used (see Figure 2). Bandages were applied horizontally in a random order on each participant's legs. Prior to bandage application, the skin was cleansed with an alcohol swab. Each limb was immersed in separate whirlpool tanks with the whirlpool agitators on. Time of immersion (in seconds) until the bandage fell off (either partially or completely) was measured during a single 1 hour session.

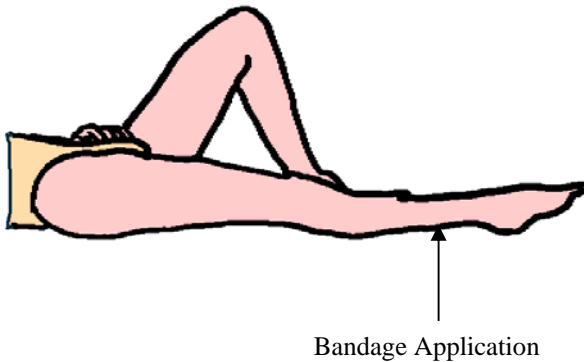


Figure 1. Bandage application site.



Figure 2. Whirlpool bath used in protocol.

Descriptive statistics were used to describe the capabilities of each bandage type.

## **Results**

Data for adhesion time (in minutes) that each brand of adhesive bandage stayed on during the 60 minute test is provided in Table 1.

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Table 1. Mean and standard deviations for each brand during the 60 minute trial.

Brand	Mean (minutes)	Standard Deviation
Target Fabric	48.4	18.73
Enromed	45.2	24.44
3m	31.6	23.35
Band Aid Ultra Strips	44	17.66
Band Aid Fabric	49.2	19.85
Gauze IDT 360	60	0
NexCare Fabric Comfort	45	17.92
NexCare Active Sport	56.6	10.75
Curad Basic Care Fabric	47.2	17.44
CVS Sheer	59.6	1.26
Walgreen's Sheer	58.4	5.06
Winn Dixie Sheer	46.9	18.88
Publix Fabric	40.6	21.60
BSN Coverlet	43.4	22.43

The Gauze IDT 360 performed best of all types of bandages staying on the full 60 minutes. All other bandages fell off short of the 60 minutes testing time with some staying on nearly an average of nearly 30 minutes.

It appears that the Gauze IDT, the CVS Sheer, and Walgreen's Sheer and NexCare Active Sport were the best performers for adhesion during the water immersion trial. Overall, the poorest performer was the 3m bandage.