

OstoSeal: Waterproof and reusable ostomy pouch shower cover

Client: Mrs. Tami Mlodik

Advisor: Prof. Duc-Huy Nguyen

Team Members:

Eve Vosters (evosters@wisc.edu) - BWIG

Cassity Dechenne (dechenne@wisc.edu) - Co-Leader

Addison Tanner (artanner@wisc.edu) - Co-Leader

Kira Schienke (kschienke@wisc.edu) - Communicator

Lilli Tanner (ltanner5@wisc.edu) - BSAC

Lana Schardt (lschardt@wisc.edu) - BPAG

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Problem statement

This project will work towards the creation of a safe, comfortable and effective ostomy pouch and wafer adhesive cover meant to keep the two components dry during showering. Current methods of keeping ostomy pouches and adhesives are often unreliable or inconvenient which negatively impacts the users quality of life. This cover is intended to work with a schedule of at least daily showers, and must be durable and easy enough to use in order to accommodate this stipulation. This device should be firmly waterproof and compact to support a schedule of daily use. Also, it must fit the variety of pouch sizes and waistline shapes and sizes that a person could have.

Brief status update

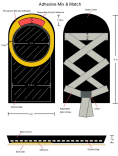
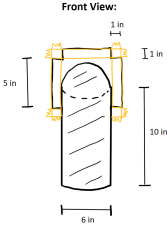
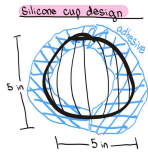
- Created a preliminary presentation to share with other groups and advisors

Difficulties/advice requests

None at this time

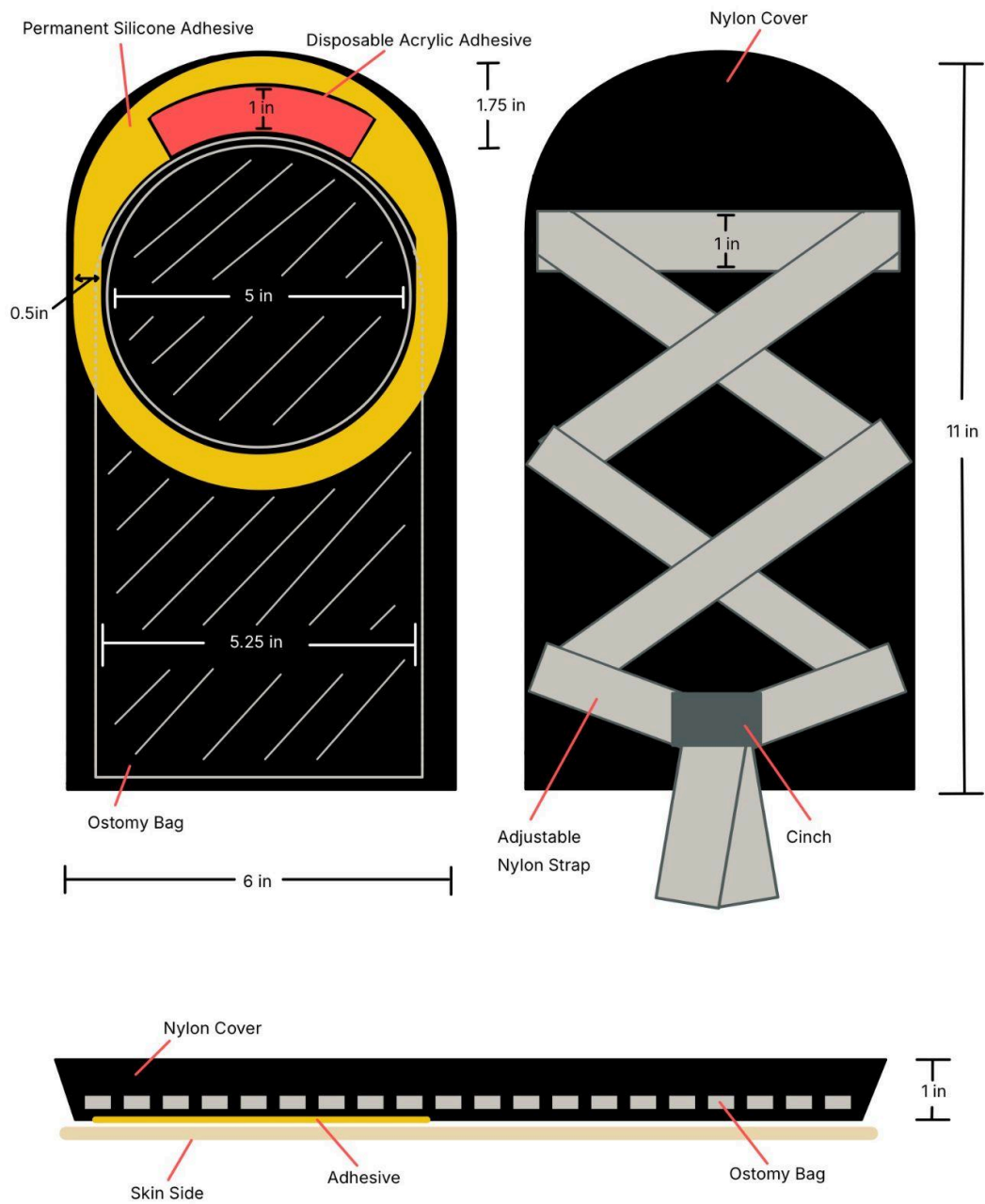
Current design

Ostomy Shower Pouch Design Matrix

		Adhesive Mix and Match 		Adhesive Strips on Flaps 		Silicone Cup Design 	
Criteria	Weight	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Waterproofness	25	4/5	20	5/5	25	2/5	10
Ease of Use	20	4/5	16	3.5/5	14	5/5	20
Reusability	15	3/5	9	2/5	6	5/5	15
Comfort	15	4/5	12	4/5	12	2/5	6
Ease of Fabrication	10	3/5	6	4/5	8	5/5	10
Adjustability	10	5/5	10	2/5	4	0/5	0
Cost	5	4/5	4	5/5	5	5/5	5
Total	100	Sum	76	Sum	74	Sum	66

Leading Design

Adhesive Mix & Match



Materials and expenses

No materials or expenses at this time

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
Category 1										
									\$0.00	
									\$0.00	
Category 2										
									\$0.00	
									\$0.00	
								TOTAL:	\$0.00	

Major team goals for the last week

1. Distribute roles for the preliminary presentation and put together the slideshow.
2. Practice the presentation as a group in order to ensure a smooth delivery.
3. Finalize our number one design.
4. Measure dimensions on the ostomy bag sample that we receive from the client.

Major team goals for the next week

1. Start buying materials that will be incorporated into the design.
2. Begin the physical design process.
3. Continue contacting/meeting with the client in order to get her feedback on impending design steps.

Last week's individual goals

- Addison Tanner: Help the team prepare for the preliminary presentation and also finalize the design that we are going to begin fabricating. Practice the presentation alone along with the group.
- Eve Vosters: Continue brainstorming about adjustability of the designs and conduct further research on viable options for adhesives. Refine designs by comparing dimensions of the clients' ostomy bag to dimensions of the designs already created. Prepare for the preliminary presentation by practicing with the team.
- Kira Schienke: Help our team prepare for the final presentation. Acquire the url of the exact ostomy bag that our client uses, along with a physical ostomy bag from the client. Work with the rest of the team to finalize our number one design.
- Lana Schardt: Prepare and deliver my portion of the preliminary design presentation, rehearsing with the team throughout the week. Continue research, specifically looking into fabrication techniques and how materials interact with skin.
- Lilli Tanner: Help create and prepare for the preliminary presentation and finalize our design. Practice presentation alone and with the rest of the team. Continue researching pouch materials.
- Cassity Dechenne: Start and finish working on preliminary presentation and finalize the design that we will begin working on. Practice presentation alone and with group members, plus continue researching ostomy pouch materials/designs.

Next week's individual goals

- Addison Tanner: Work on getting materials together and purchasing them so we can begin creating our prototype. Complete the preliminary report and work on our deliverable. Conduct more research on showering with an ostomy bag along with competing products.
- Eve Vosters: Conduct testing with silicone based adhesives owned and their ability to withstand a shower. Take notes on the client's current showerproof ostomy bag prototype she is using as well as the ostomy bag she uses and record dimensions and any aspects that could be recreated in the design. Conduct more research on the act of showering with an ostomy bag and the specifics of the consequences of getting the adhesive wafer wet.
- Kira Schienke: Figure out how much material we need to purchase to conduct material testing. Find where we will source the disposable adhesive. Help the team prepare the preliminary report.
- Lana Schardt: Purchase materials for our preliminary prototype and keep accurate records of all purchases. Use our research on fabrication methods to start designing our first prototype. Help the team complete our preliminary report and deliverable. Continue research on materials and fabrication.
- Lilli Tanner: Take note of dimensions of client's ostomy bag and current cover prototype as well as use current research to refine our final design. Work with the group to complete our preliminary report. Continue researching materials and fabrication methods.
- Cassity Dechenne: Research and purchase the materials needed for the design. Start working on the cover part of the design. Reflect on the preliminary presentation and see what needs to be done to improve on our design outlook. Continue research on ileostomies and ostomy bags.

Timeline

 OstoSeal Project Timeline

Activities

Name	Date	Activity/Previous Week's Accomplishments	Time (h)	Week Total (h)	Sem. Total (h)
Addison Tanner	10/1/2026	- Completed the presentation and practiced my part - Met with the group to practice as a team and make sure we are under the 10 min limit - Completed more research on competing products as well as stoma placement	1 1 2	4	12
Eve Vosters	10/1/2026	- Filled out presentation slides and practiced presenting my slides within a time limit. - Met with the group to practice presenting all together to ensure our presentation did not exceed the 10 minute time limit. - Conducted more research about one-piece ostomy systems, ostomy care, and "Peristomal Medical Adhesive Related Skin Injury" or PMARSI. - Wrote down a few more questions for the client that were thought of	0.5 1 2.5	4	14

		during research.			
Kira Schienke	10/1/2026	- Ensured all dimensions and specifications are accurate and thorough on the Adhesive Mix & Match design - Did research on specific materials for the gasket and the adjustable strap - Prepared a portion of the presentation to describe the adhesive mix & match design - Met with the rest of the team to rehearse our preliminary presentation	0.5 0.5 1 1	3	12
Lana Schardt	10/1/2026	- Conducted individual research on fabrication with treated fabrics - Completed my slides and practiced my section of our preliminary design presentation - Met in-person with group to run through presentation and discuss future goals	1 1 1	3	11
Lilli Tanner	10/1/2026	- Conducted research on stomas and stoma placement to gain a better idea of where a cover might be placed on the body - Put together my section of the presentation and practiced individually - Met with the group to practice presentation as a group	1 1 1	3	12
Cassity DeChenne	10/1/2026	- Conducted research on the opinions of individuals with stomas in regards to showering with a stoma, plus possible stoma infections. - Emailed the client to put together a mini-biography for her, plus set up and carried out a meet-up to pick up an example of her ostomy bag and cover prototype. - Worked on the preliminary presentation. - Met with group to practice presentation	2 1 1 1	5	14