

Expandable Nasogastric Tube

Week 9 November 9th – November 16th

Team: Darren Klaty – Co-Team Leader
Mike Rossmiller – Co-Team Leader
Alex Broderick – BWIG
Megan Halley – Communicator
Sarah Czaplewski - BSAC

Advisor: Paul Thompson

Client: Dr. Steven Yale

Problem Statement:

Nasogastric tubes (NG tubes) are commonly used for aspiration of gastric contents and gastric decompression in patients with small bowel obstruction. Placement of a NG tube causes discomfort and pain during insertion due in part to the large diameter of the tube. The project requires a nasogastric tube which is small enough to reduce discomfort, while still being functional. Secondary design specifications include pH sensitivity, to allow visual confirmation of when the tube reaches the stomach, and recyclability.

Previous Weeks Goals:

- All – Test materials at the SIM Lab on 11/9
- All – Continue examining shrink wrap tearing options,
- All – Look over other team's report once Dr. Yale emails it to us
- All – Determine possible size of sleeve to contain inner tube

Team Role Accomplishments:

- Leaders – Completed Progress Report.
- Communicator – Emailed client and coordinated future Hospital Meeting.
- BWIG – Put Progress Report online.
- BSAC – Will attend next BSAC meeting.

Summary of Design Accomplishments:

- All – Team Meeting to evaluate our progress and direction of project
- All – Determining design possibilities of placing tube into shrink wrap tubing
- Sarah – Received shrink wrap tubing for sleeve from 2 different companies at varying thicknesses and sizes

This Week's Goals/Individual Goals

- To determine feasibility of completing project using current design restraints
- Meet before Thanksgiving Break to come up with plan

Difficulties:

- At .8 mm wall thickness and 125 mm ID, our silicone tube may not fit inside shrink wrap tubing

Activities:

Person(s)	Task	Time (hrs)	Weekly Totals	Semester Totals
Darren	Meeting with Sarah	.5		
	Research	1.0		
	Tube Insertion Tests	2.0	3.5	24
Mike	Progress Report	.5		
	Tubing Research	1	1.5	22.25
Alex	Tubing research	2.5	2.5	19.5
Sarah	Meeting with Darren	.5		
	Tube Research and Design	1.5		
	Meeting with Company Rep	1.0	3.0	34.0
Megan	Background Research	1.0	1.0	21.0
Team	Team meeting	1.0	1.0	13.0

Project Schedule:

Tasks	September				October				November				Dec	
	7	14	21	28	5	12	19	26	2	9	16	23	1	7
Product R&D														
Background Info	X	X	X	X	X			X	X	X				
Design Alternatives				X	X									
Final Design					X	X	X							
Materials							X	X	X	X				
Design Modeling							X	X	X	X				
Testing														
Presentations														
Mid-Semester							X							
Final														
Deliverables														
Progress Reports	X	X	X	X	X	X	X	X	X	X				
PDS	X							X						
Mid-Semester Report								X						
Final Report														
Meetings														
Team Meetings	X	X	X	X	X	X	X	X	X	X				
Advisor Meetings	X	X	X	X	X	X	X	X	X	X				
Client Meetings	X				X				X					
Website	X	X	X	X	X	X	X	X	X	X				

Expenses:

Expenses for tubing. Reimbursement to come in form of checks from Dr. Yale.