BELLA

Maternity Support

Bella helps pregnant women always keep a good posture, relieving and even preventing the lower waist and hip joint pain during pregnancy. Bella is lightweight and easy to wear. It is dominantly made with cotton that is cool and feather soft to your skin. It fastens quickly with a simple pull and loop closures is designed to grow along with you so you can wear it all the way to delivery. Does not show under clothing. Makes you look and feel better.

INTERNATIONAL HOUSEWARES ASSOCIATION®
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PROBLEM STATEMENT

With the increase in body weight, the center of gravity shifts and posture changes. So, if you do movements like sitting, walking, and bending too many times, with an awkward posture, then you will start feeling muscle pain in the waist.

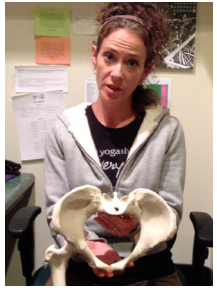
INTERVIEWS

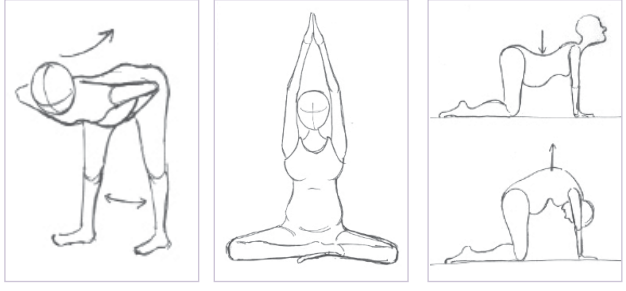
Jona Hilario
Pregnant For 32 Weeks

Jona has frequent hip joints and waist pain.
Her belly makes it hard for her to get close to table when washing dishes. This forces her to bend in a very uncomfortable posture and makes her back and joint pain worse.
Her pain causes her to have problems sleeping. To relieve this pain she puts a long pillow between her legs to help her sleep better.

Linsey Chamlis
Pregnant For 23 Weeks

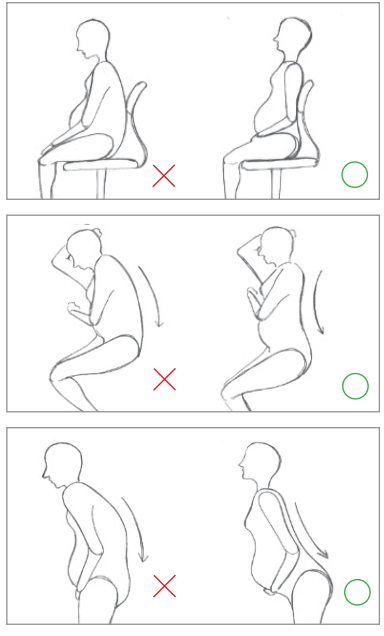
Linsey has lower back and hip pain.
She wants to keep the process nature and safe, so she does not take any medicine for the pain.
She has problems bending over Especially when doing laundry.
It is hard to find a comfortable position to sleep. She did not get a body pillow because it is so expensive. Instead she uses 5 regular pillows to surround her.



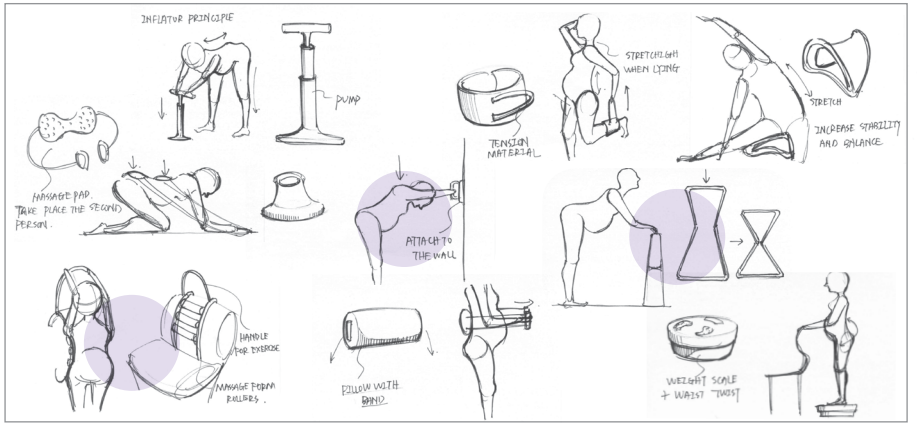


Mary Ellen Bybik
Professional Prenatal Yoga Instructor

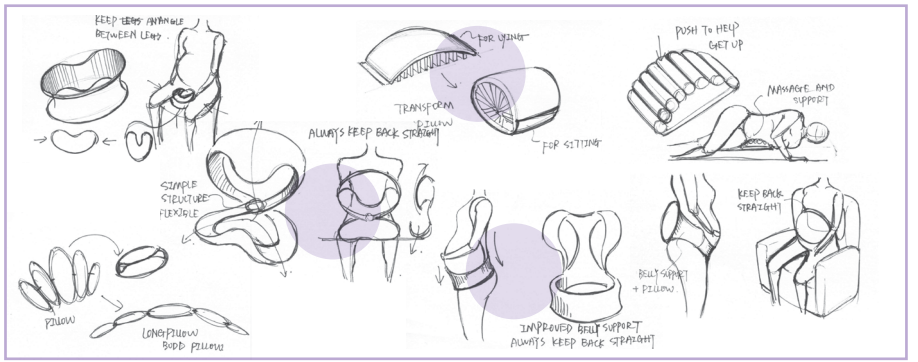
Sitting: The pelvis needs to be symmetric and level when sitting. Do not sit cross-legged. Space in the internal body is taken up by the growing baby. Sitting straight will leave more space while slouching compresses the baby.
Lying: when sleeping or lying down, lie at the best angle for comfort. This angle leaves more space for the baby. Placing a body pillow between the legs helps create more space for pelvic and hip bones.
Bending: Bend with the bones, not the waist. This way the back does not take the pressure of the bend.



CONCEPT IDEATION

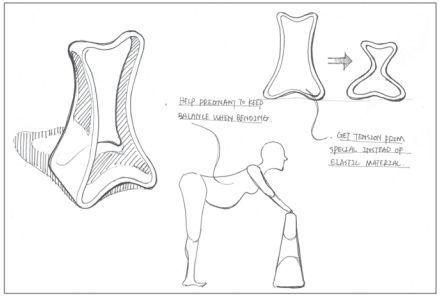


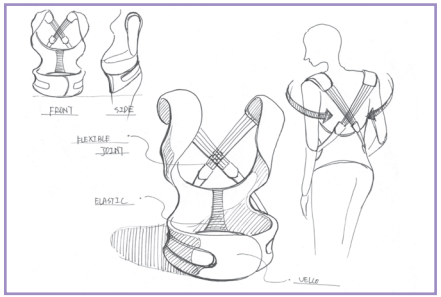
Exercise: Stretching exercise can help to relieve the back pain but it is important to understand how to modify exercise to be safe for pregnant women. Design a tool for pregnant women to help them do simple stretch exercises at home safely .

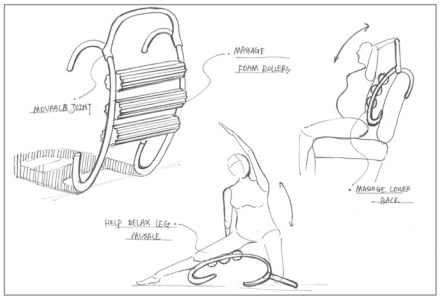


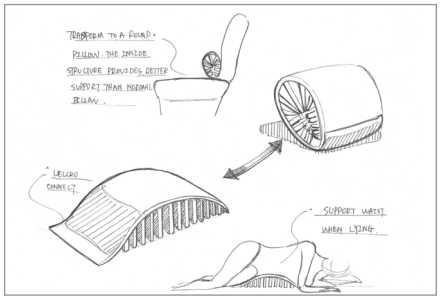
Posture: Bad posture is a key factor for lower back pain during pregnancy. Design a product helps pregnant women to keep a correct posture, in this way to relieve and even prevent the lower waist and hip joint pain.

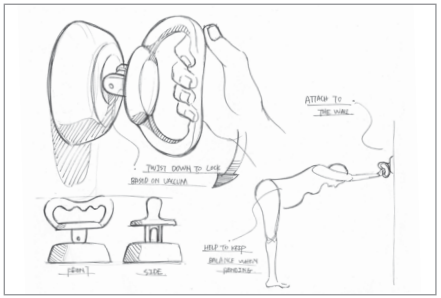
CONCEPT REFINEMENT

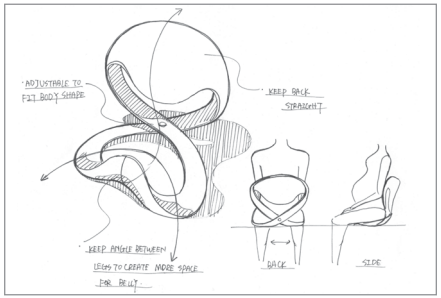








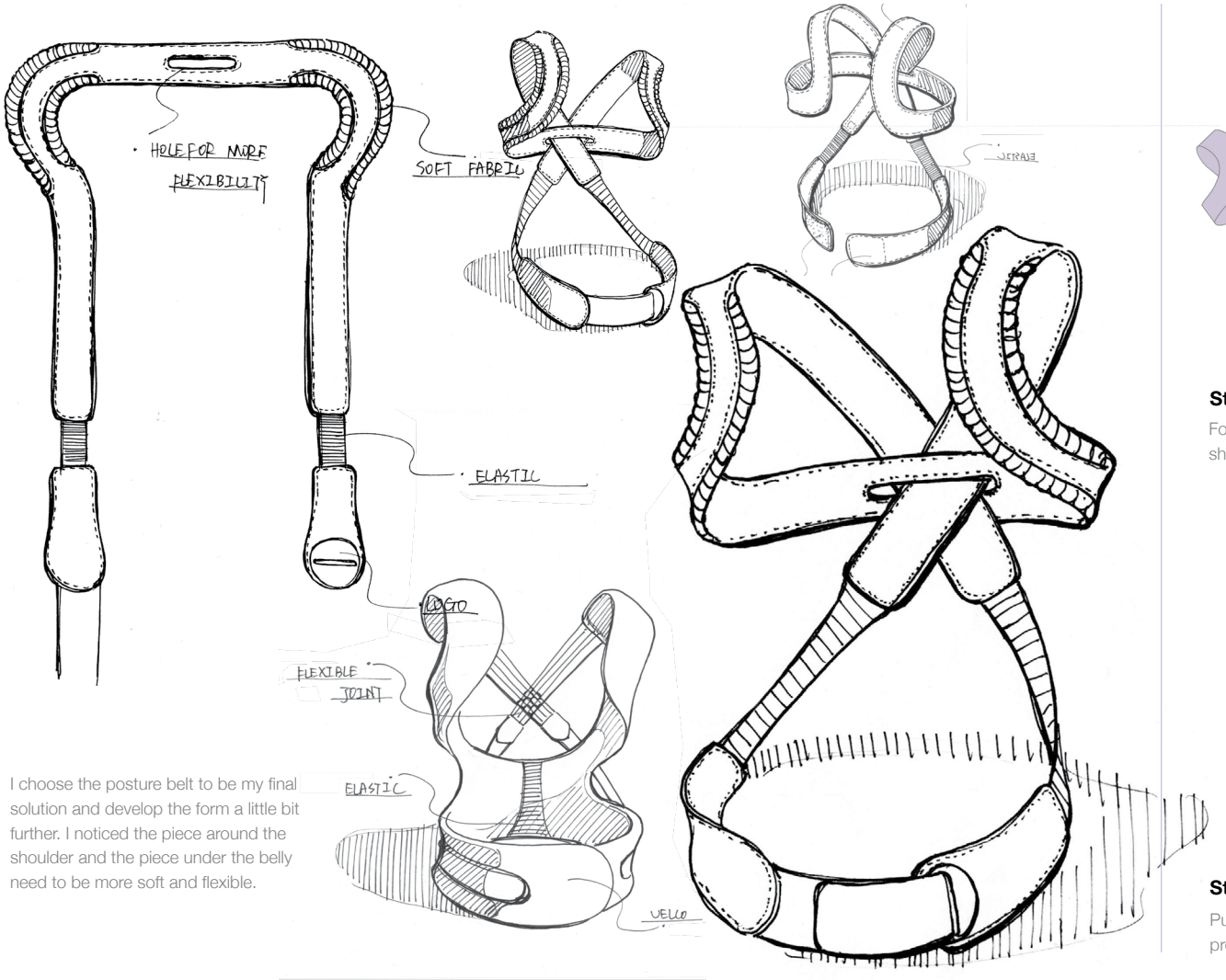




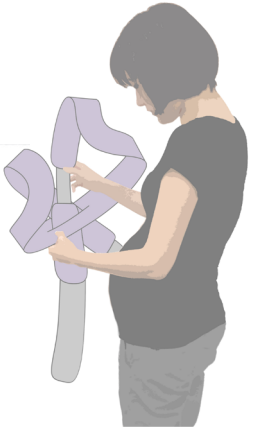
After explored six more potential ideas further I chose to focus one of my posture ideas, **the maternity belly support belt**, for the following reasons:

- The pregnant women still have a very busy daily schedule, the posture ones do not require them to set time out of their day to use it.
- It does not require addition physical exertion and could be used all the way to delivery.

FINAL CONCEPT



I choose the posture belt to be my final solution and develop the form a little bit further. I noticed the piece around the shoulder and the piece under the belly need to be more soft and flexible.



Step 1

Fold the flat piece into a butterfly shape to make it ready to use

Step 2

Put it on like a bag pack, placing the straps over each shoulder.

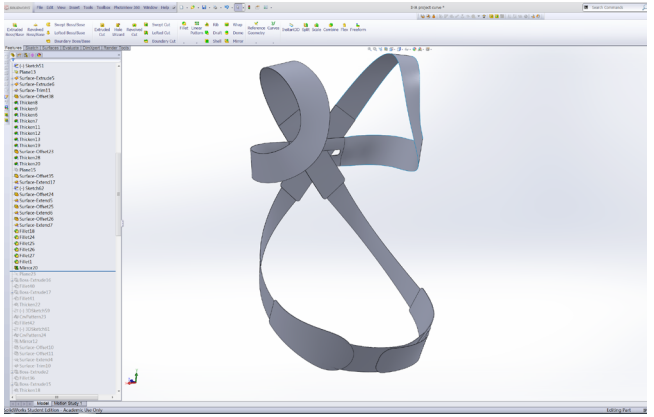
Step 3

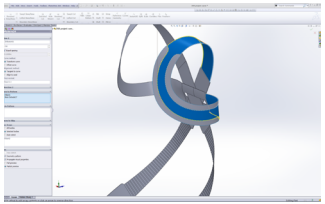
Pull the two ends to tighten to appropriate pressure

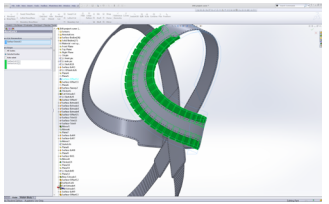
Step 4

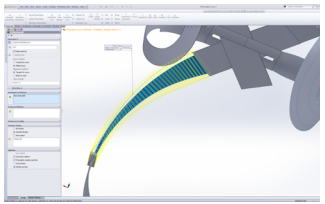
Adjust it to a comfortable position and secure it with the Velcro pad

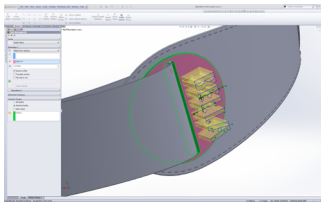
CAD MODEL





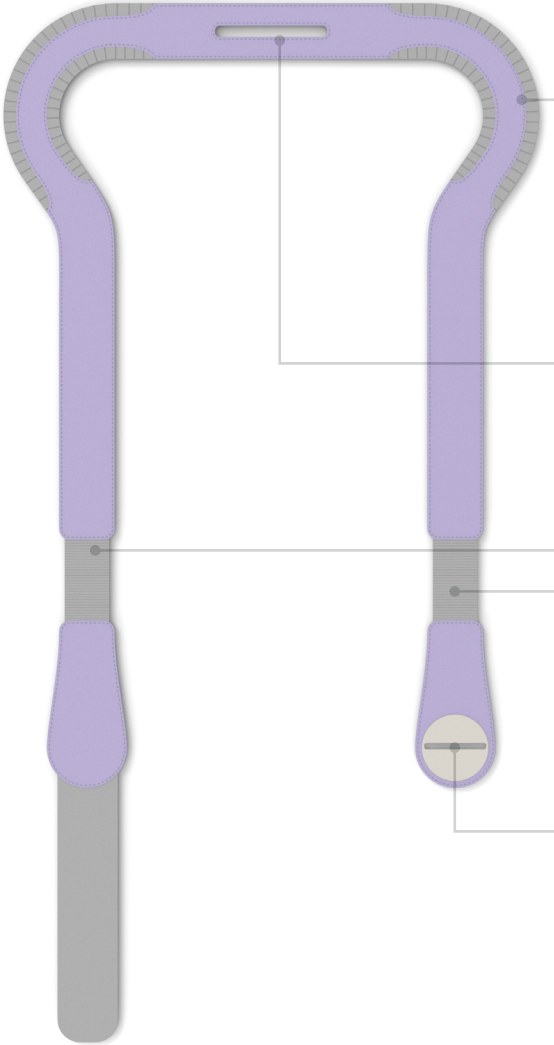


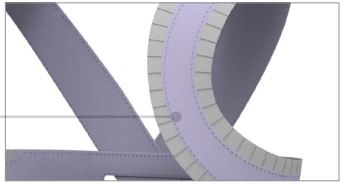




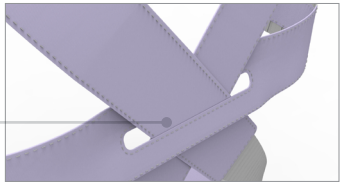
Modeling a soft good is quite different from a solid product. I used 3D spline to build up the overall structure, did loft surface and then started to add details on it.

DESIGN FEATURES



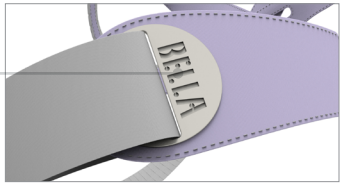


Soft, elastic fabric provides comfort and does not restrict movement



Straps intertwined for an adjustable, flexible fit.

Gentle elastic provides appropriate pressure



Loop closures is designed for easy adjustment

APPEARANCE MODEL