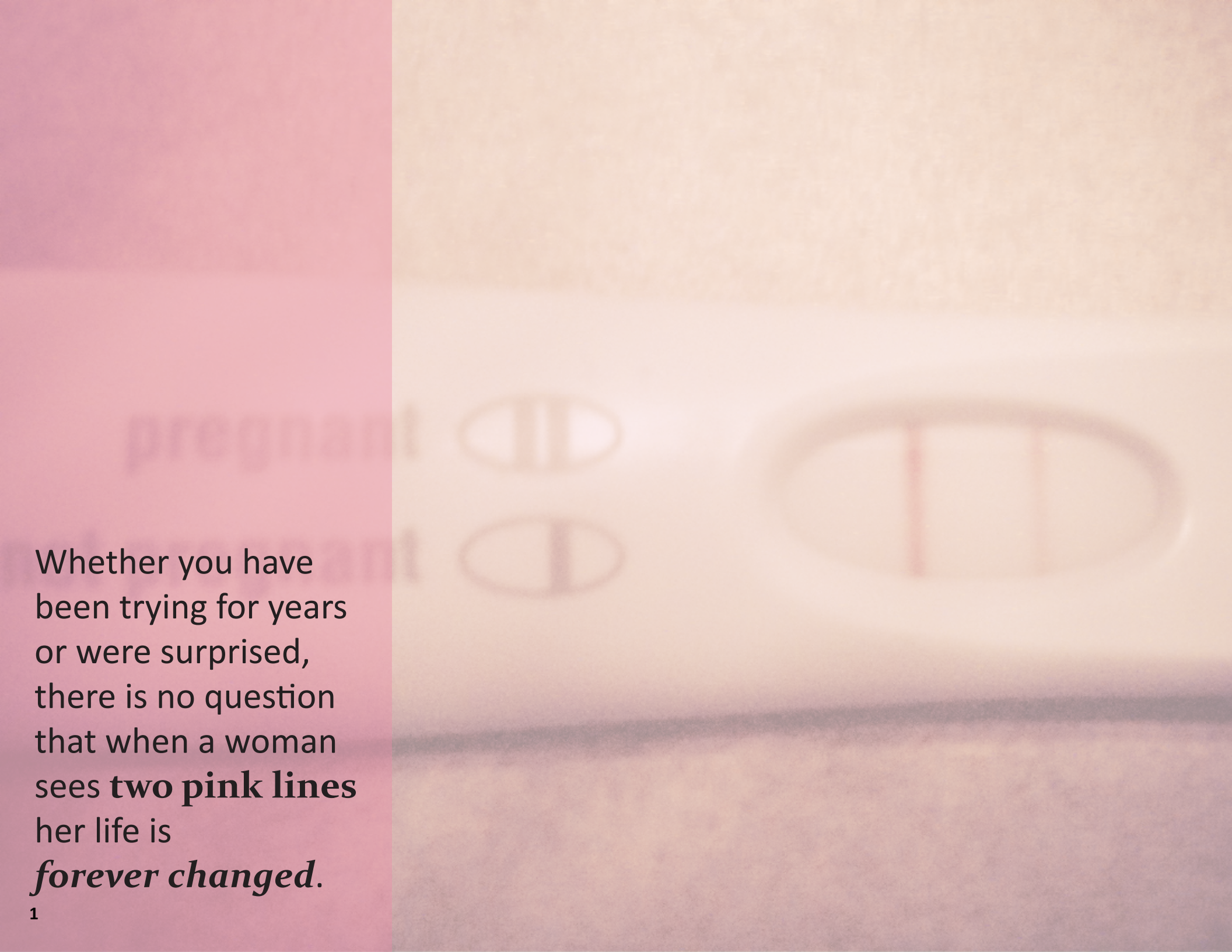


With Child: Personal Informatics and Pregnancy

A Design Workbook

By Elizabeth Kyle






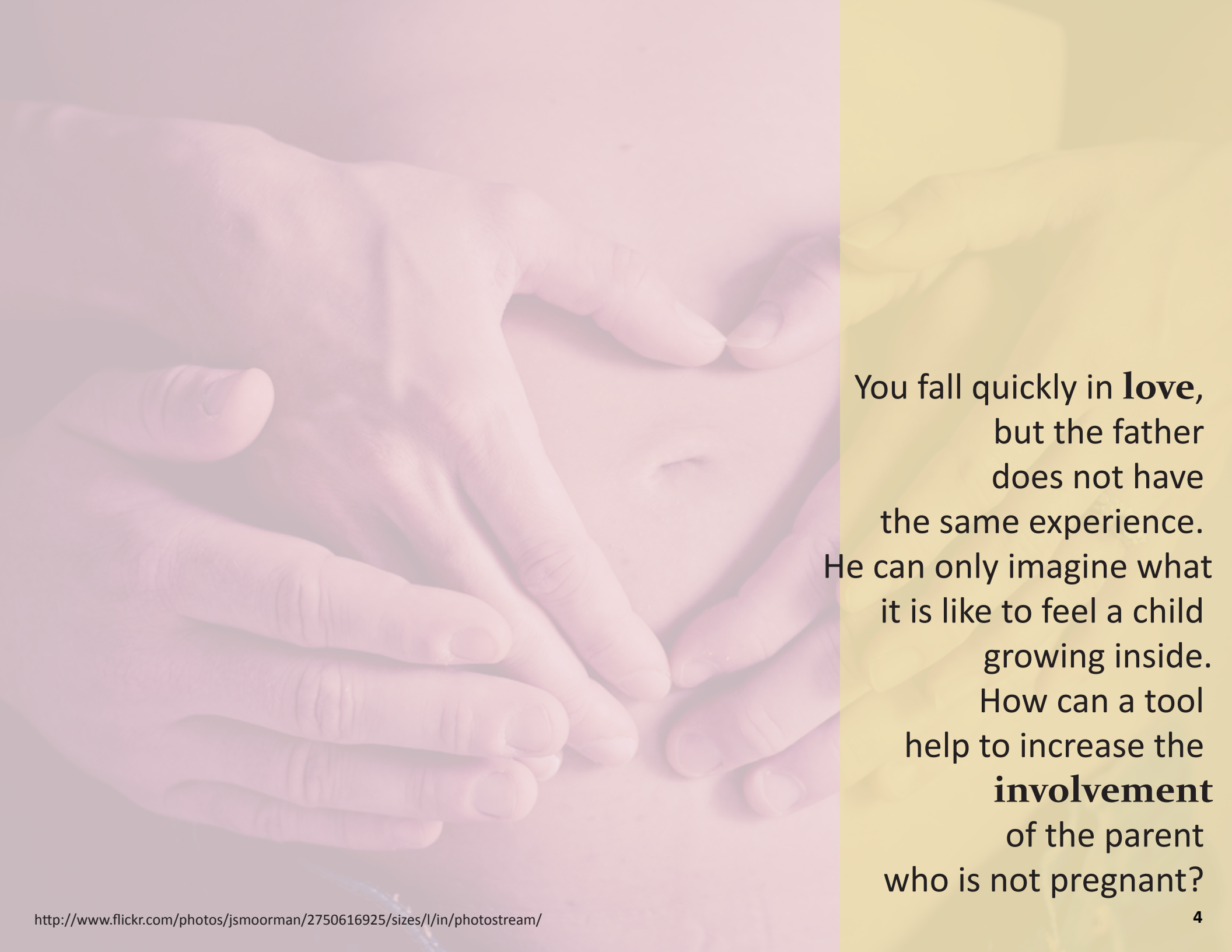
Whether you have
been trying for years
or were surprised,
there is no question
that when a woman
sees **two pink lines**
her life is
forever changed.



You are **exhausted**,
emotional, and full of
anxiety about
the health
of the child within
and your ability
to carry it to term.



Your body is
creating new life.
It is **growing** and
changing.
And you have very
little **control** over
what is happening.
Being able to **track**
what is happening will
reduce anxiety.



You fall quickly in **love**,
but the father
does not have
the same experience.
He can only imagine what
it is like to feel a child
growing inside.
How can a tool
help to increase the
involvement
of the parent
who is not pregnant?

There is so much to **prepare** for, and you do it all while you have little energy and limited **mobility**.

You seek advice and **commiseration** with women who have had children or who are currently expecting.





You go to the doctor on a continual basis. Medically they are **monitoring** you for **high risk** possibilities. And the possibility of a premature birth is always in the back of your mind.

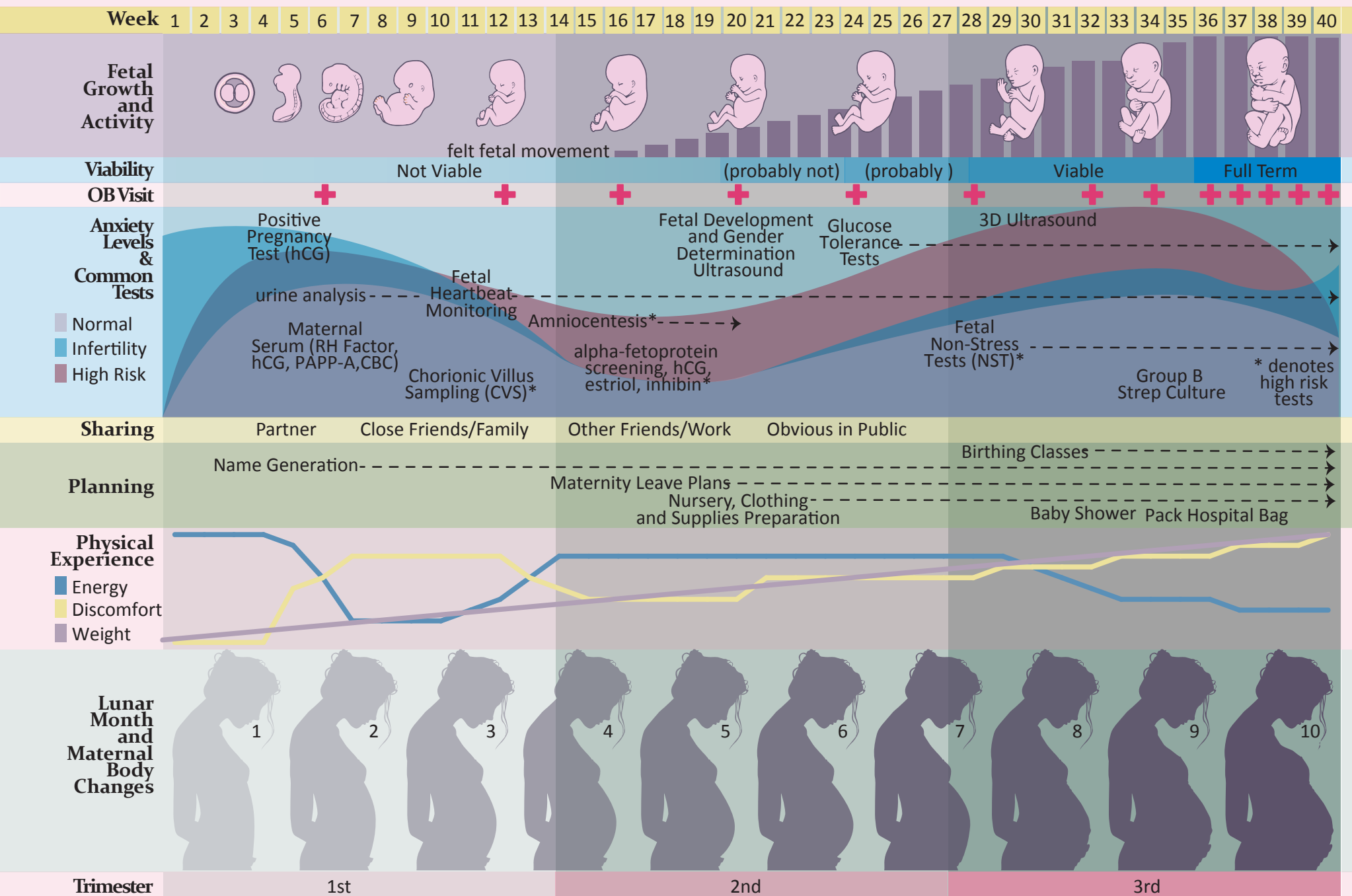
You worry about the 'how' and the 'when' of the **birth** of your child, and when it happens, you and your **partner** can finally share in this amazing experience.



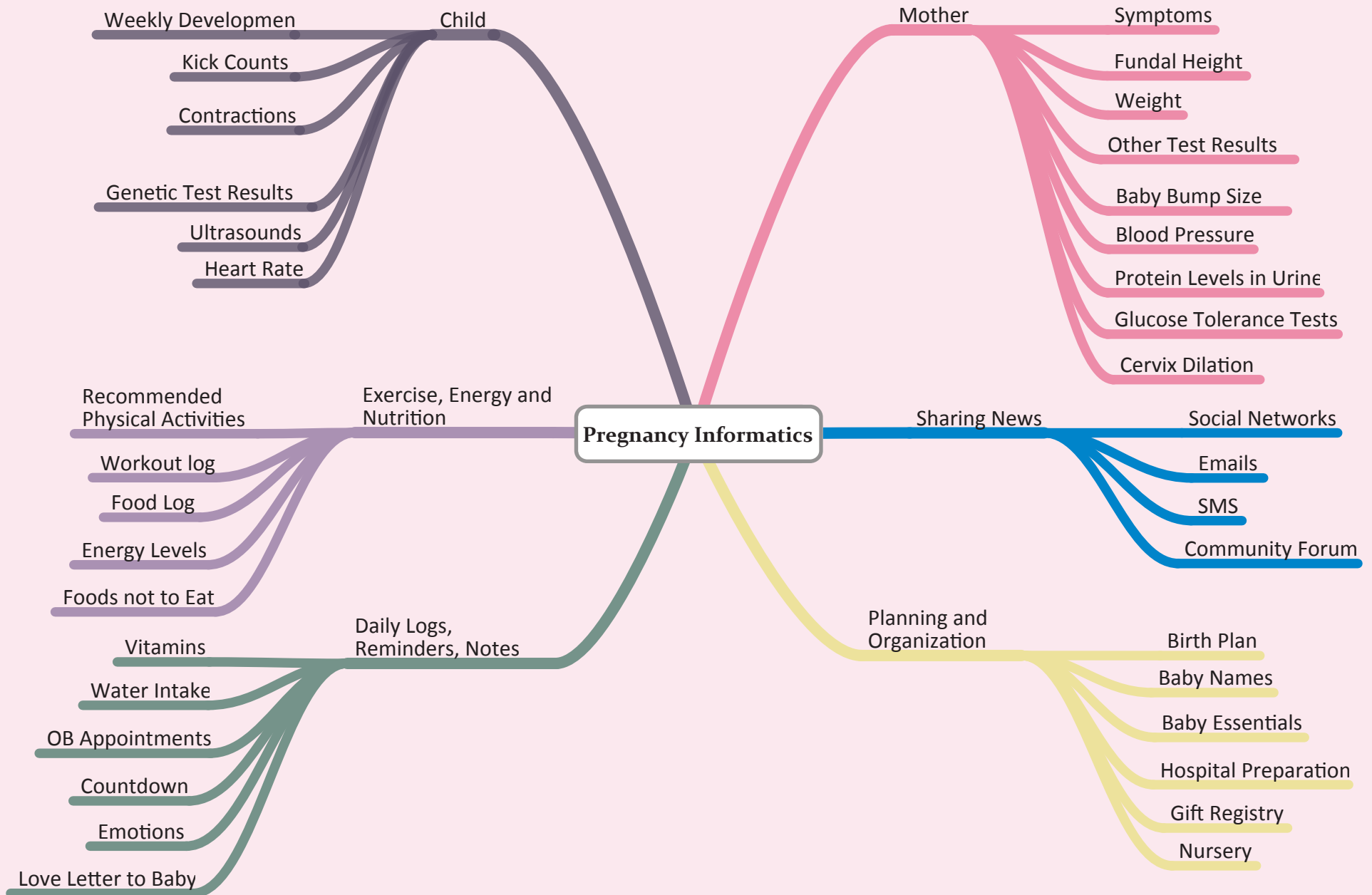


In the end,
what part of this
experience do you
want to remember?
What do you think
your newborn child
will want to know
about what happened
to them during their
development?

Pregnancy Experience Map



Personal Informatics and Pregnancy



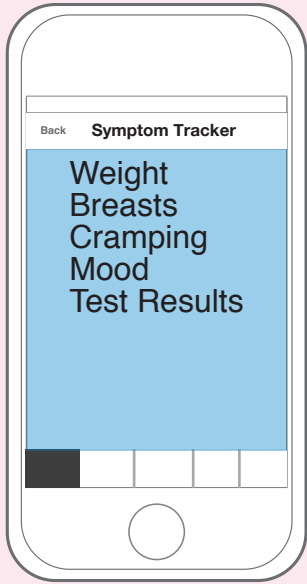
Exemplars

- Mobile Pregnancy Tracking Applications

-Applications for sharing Pregnancy experience



Concept - Symptom Tracker



Track symptoms on regular basis.



Compare current symptoms to previous pregnancies.



Share current symptoms with other women.

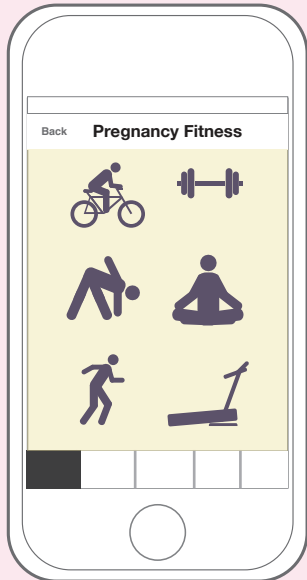
In the early stages of Pregnancy, or for those who have experienced miscarriage or infant loss, the symptom tracker would ease anxiety and/or identify issues at an earlier time.

Exemplars

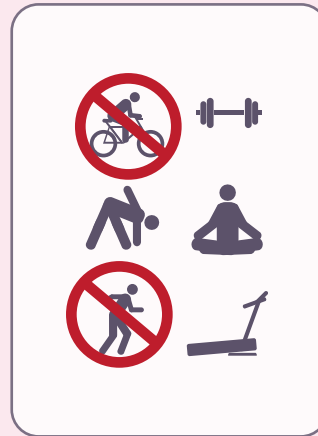


- Fitness logs for pregnant women
- Sites with recommended exercises

Concept - Pregnancy Fitness App



Track daily
log of fitness
activities



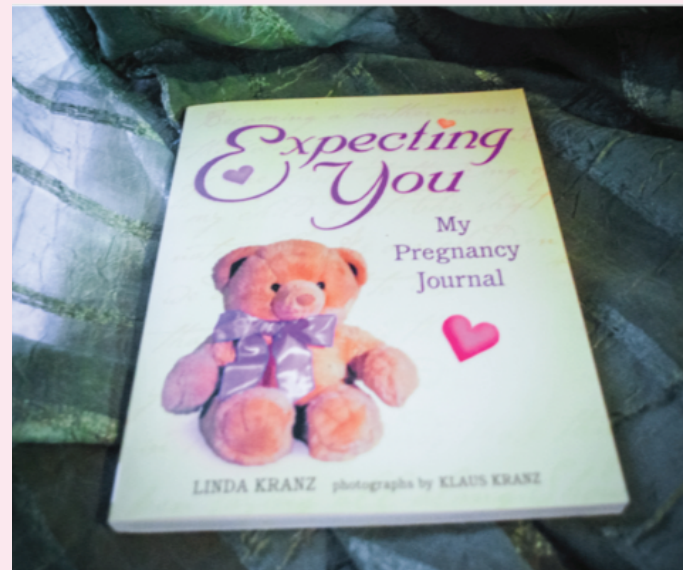
Access list
of exercises you
should and should
not do when
pregnant.

The pregnancy fitness
app is specific to
exercise during
pregnancy to promote
healthy gestation.

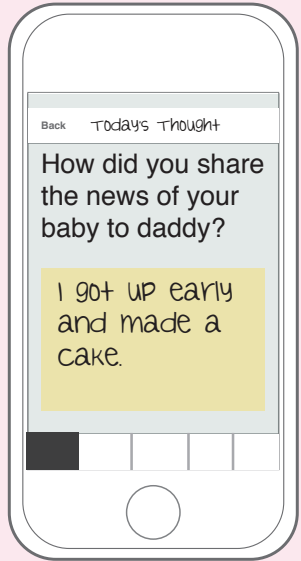
Exemplars

- Parenting Diary Apps with printing features
- Existing guided journals for pregnancy

The screenshot shows the Tweekaboo website. At the top, the logo 'tweekaboo' is displayed with the tagline 'YOUR PRICELESS LITTLE MEMORIES'. There are social media icons for Facebook, Twitter, and Pinterest, and a badge for 'Available on the App Store'. The main heading is 'Start your Pregnancy Journal today!' with a 'Sign up now!' button. Below this, it states 'Tweekaboo beta is free... Sign up now!'. The main content is titled 'Tweekaboo is a free online Pregnancy and Baby Journal'. It describes the app as a way to capture and record every milestone and moment. It lists features like creating an online pregnancy journal, updating it with photos and notes, and printing memories into a baby memory book. A smartphone image shows the app interface with a 'My Diary' section and a photo of a fetus. At the bottom, it says 'Tweekaboo is simple to use, its private and its free.'



Concept - Digital Journal/Printable Book

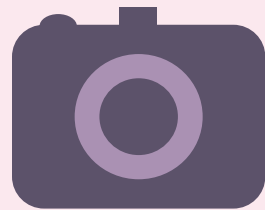


Mobile device provides daily journal prompt.

Add insightful quotations.



Create a book that is a 'Love Letter' to your unborn child.



Add images to document the experience.

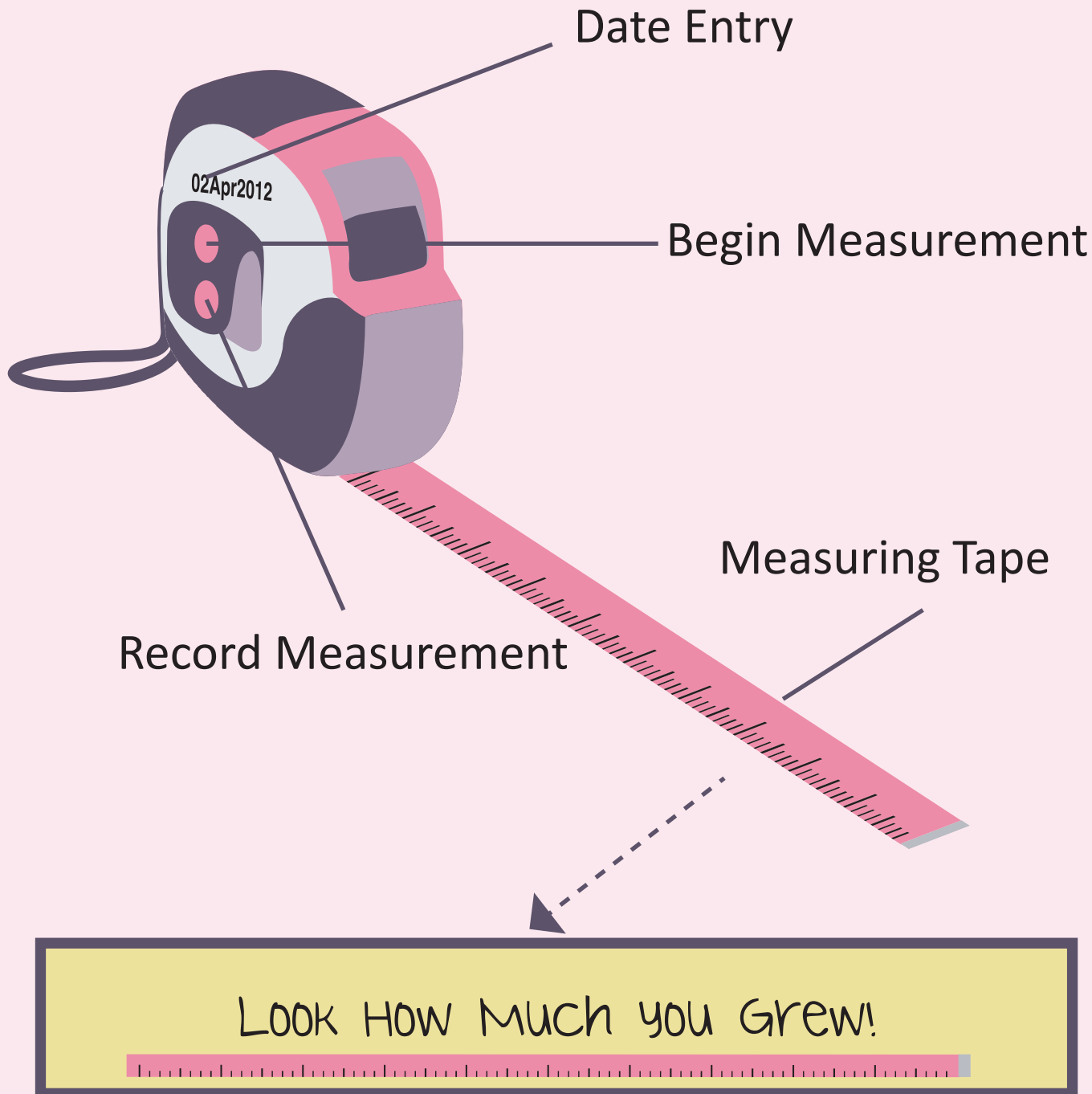
Parents are already anticipating what their new child will be like, and what they want to share with them. This journal guides them through the wait, and provides a way to communicate the hopes, fears, joy and excitement to their child after they are born.

Exemplars



- Photos of Growth
- Digital Tape Measure

Concept - Digital Bump Tracker

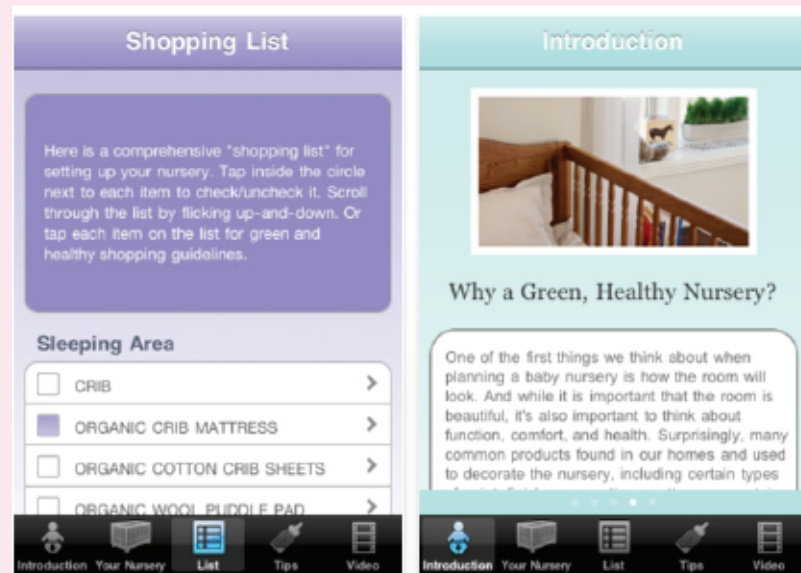


Instead of a photo representation of the growth of the baby bump, the mother uses a digital tape measure on a regular basis. This is then accessible via a site that provides tools to remember the growth such as posters for the nursery.

Exemplars

- Online Nursery preparation Resources

- Mobile Nursery planning apps

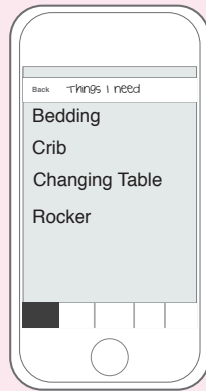


Concept - Nursery Planner

Plan ahead for the nursery with a mobile tracking device.



Link to a shopping list and/or Gift Registry.



Identify Local Tag Sales or Garage Sales.

\$20.00

The nursery planner focuses on having one place to organize all of the 'stuff' that comes with a baby. It helps to reduce clutter and identifies ways to save money.

Exemplars

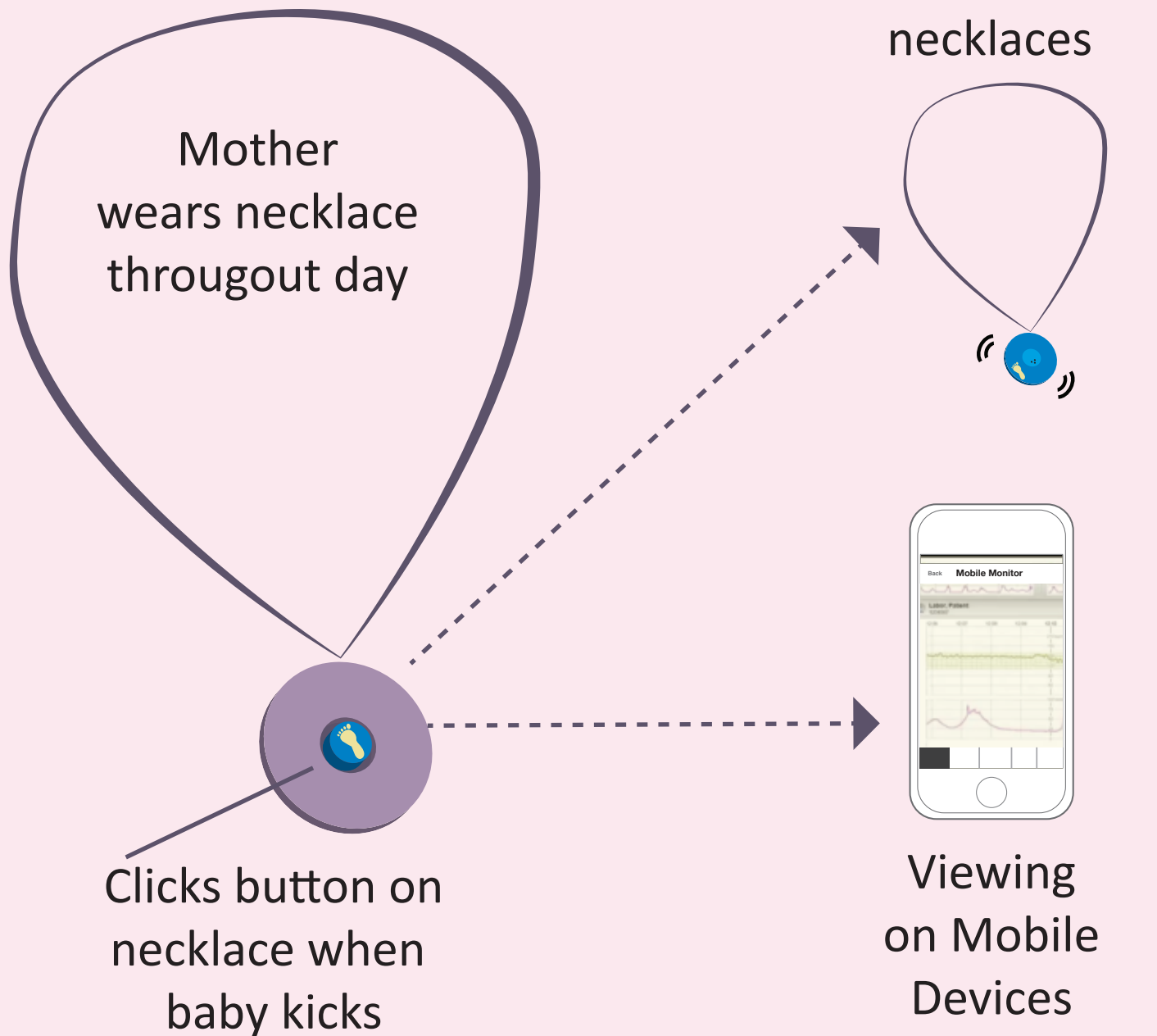
- Handheld fetal movement monitoring devices



- Mobile Apps to help fathers connect with the pregnancy



Concept - Fetal Movement Sharing



The Fetal Movement Sharing Necklace gives other people such as fathers or adoptive parents the ability to experience the activity of the baby. It also provides a record of fetal activity for monitoring.

Exemplars

- Empathy Belly, used by midwives

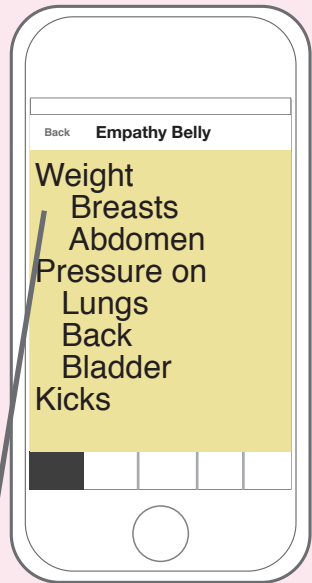
- Instant Pregnancy Experience belly that applies pressure to person wearing to simulate feeling of pregnancy.



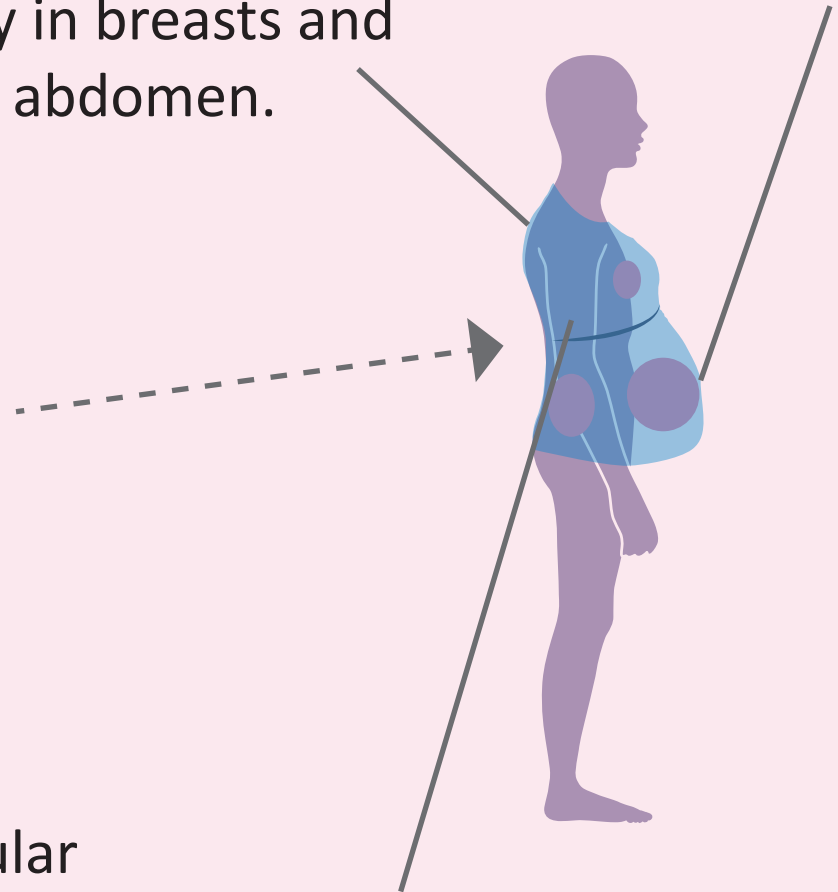
Concept - Interactive Wearable Belly

Man wears suit where weight increases daily in breasts and abdomen.

Fetal movement is simulated.



Mother logs regular physical experience of pregnancy.



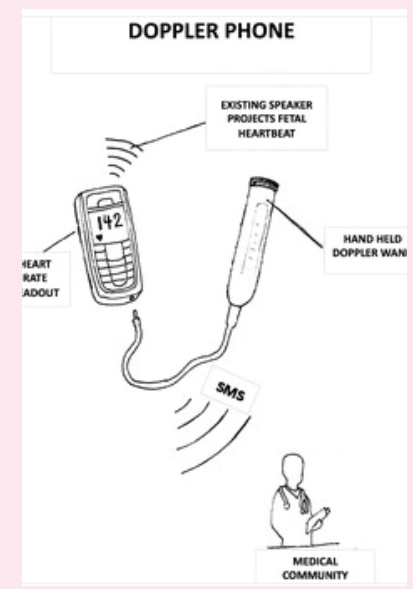
Lungs, back and lower abdomen are restricted.

An Interactive Wearable Belly would use existing Empathy Belly techniques, incorporating real statistics of the mother by a mobile device to allow another person to understand her current physical situation and its limitations.

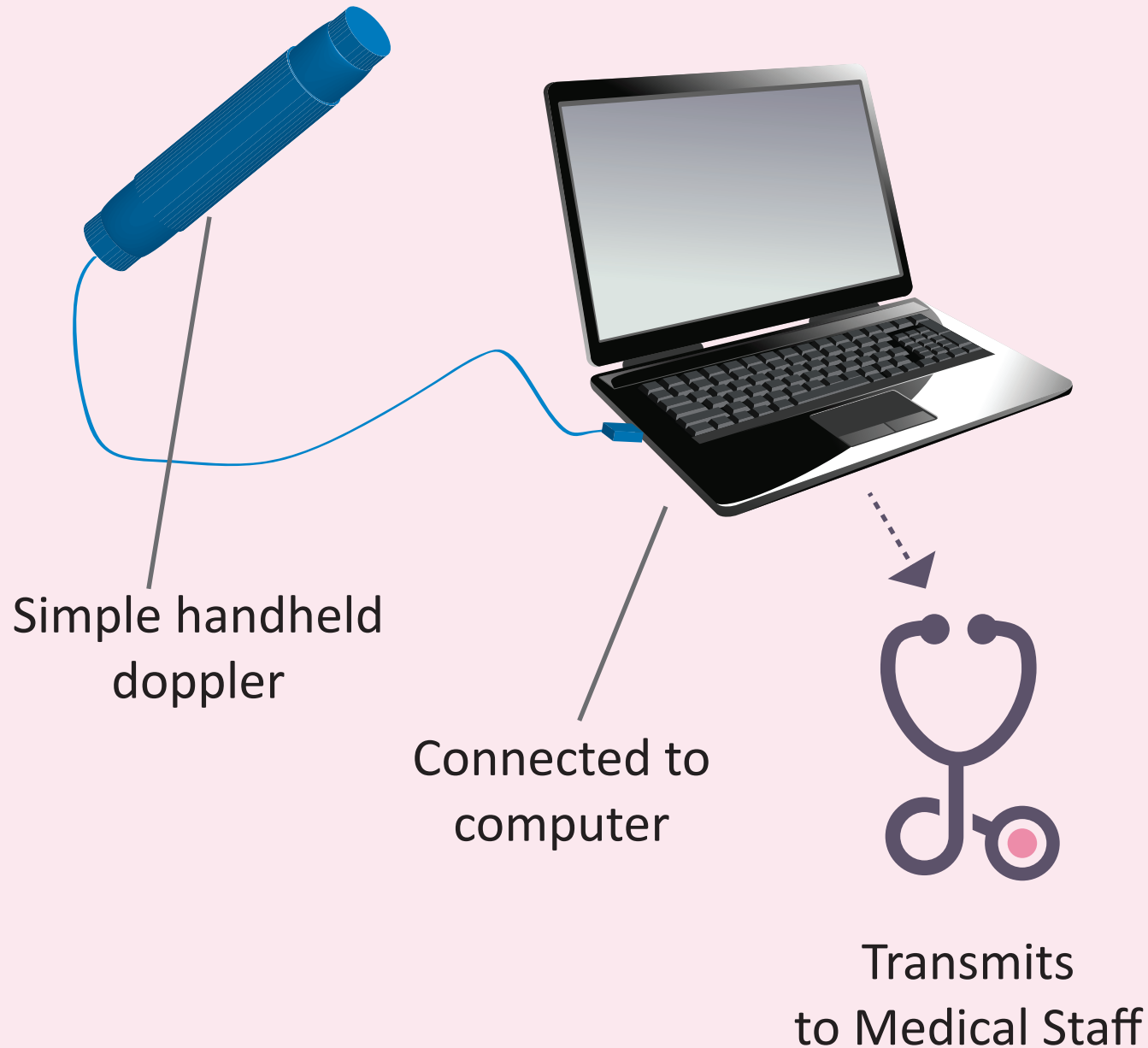
Exemplars

- Handheld dopplers

- Doppler concepts connected to early smart phone technology



Concept - Connected Doppler

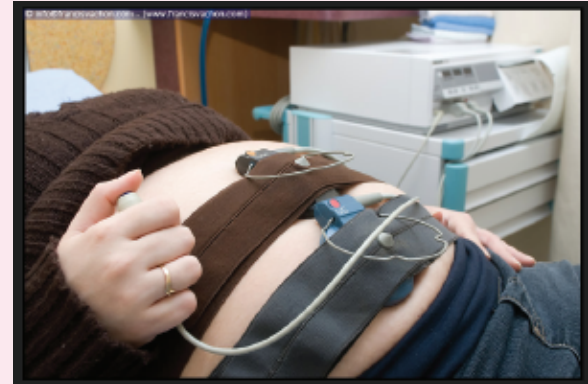


A connected doppler would provide more detailed tracking of fetal heart rates for both the mother and the medical staff.

Exemplars

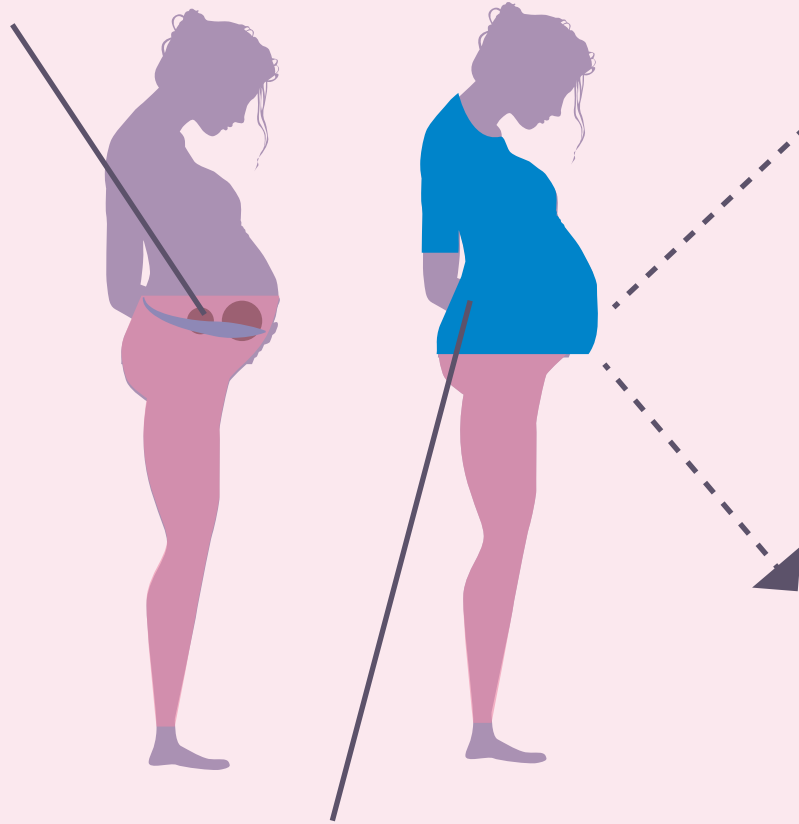
- Fetal Movement and Contraction Monitoring Devices

- Reviewed by Doctor and Nursing Staff



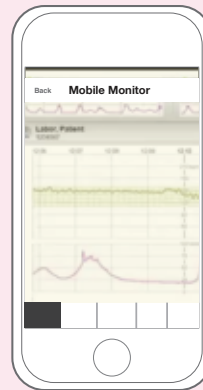
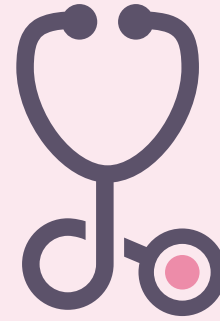
Concept - Fetal Monitoring Pants

Fetal Monitors in waist of comfortable pants.



Ability to cover and go about normal activity.

Transmits to Medical Staff



Viewing on Mobile Devices

Third Trimester and High Risk Mothers can wear these pants to monitor the fetal movement and contraction rates at home or on-the-go. The information is made accessible to mobile devices and their doctor's office for real-time screening.

Exemplars

- Urine Sample Tests
- Strips for Protein in Urine



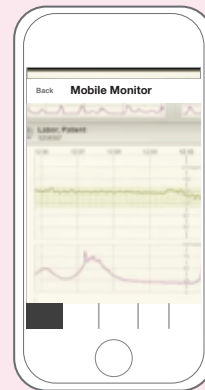
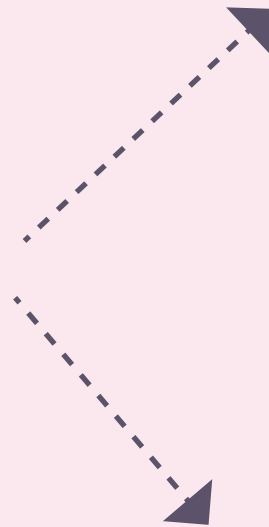
Concept - In-Home Urine Protein Tracker

A device is situated in the toilet of the home that measures protein levels.



Button to identify when mother is using restroom.

Transmits to Medical Staff



Viewing on Mobile Devices

Women at risk for Preeclampsia are monitored routinely to check the amount of protein in their urine. A home based system would possibly prevent harm to the mother and give the medical staff more frequent metrics.

Attributions

Primary Resources

Images

Charlie's Pregnancy Test, Elizabeth Kyle
Beth's Belly, Elizabeth Kyle
Delainey's Little Foot, Elizabeth Kyle
Heather and the Nursery, Elizabeth Kyle
Daddy and Zoe, Elizabeth Kyle
Zoe, Elizabeth Kyle
Expecting You, Elizabeth Kyle
Pregnancy Log, Elizabeth Kyle

Sources

Journal Study, 2012
Web Survey, 2012

Secondary Resources

Images

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<http://www.lpch.org/DiseaseHealthInfo/HealthLibrary/pregnant/tests.html>
<http://www.americanpregnancy.org>
Schlosberg, Suzanne, and Liz Neporent. *The Active Woman's Pregnancy Log: A Day-by-day Diary and Guide to a Fit and Healthy Pregnancy*. Boston: Houghton Mifflin, 2008. Print.
Kranz, Linda, and Klaus Kranz. *Expecting You: My Pregnancy Journal*. Tucson, AZ: Fisher, 2000. Print.