

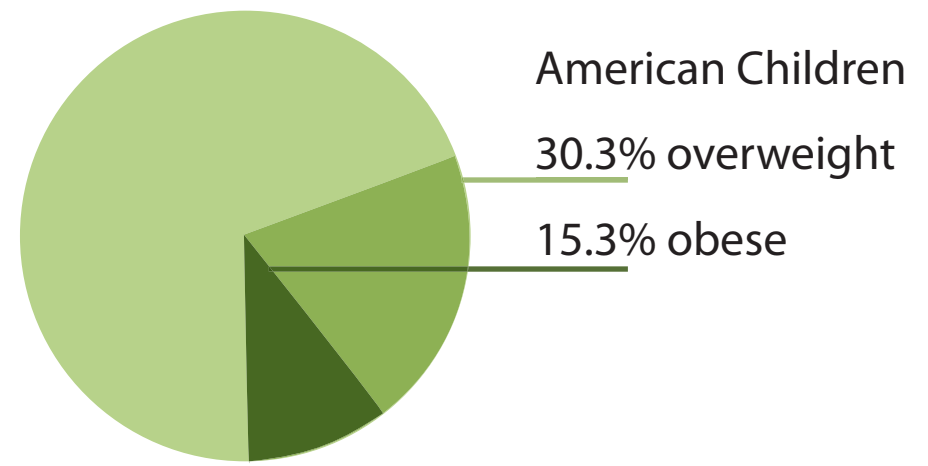
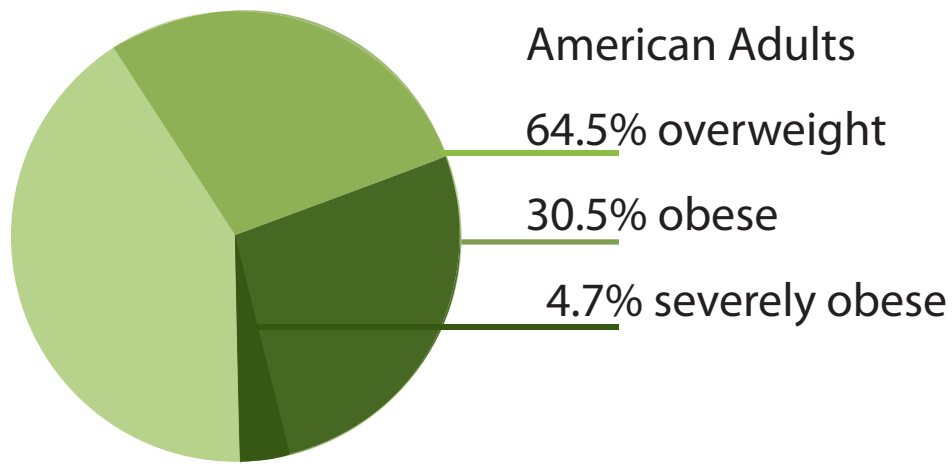
kinetics

Family Activity Awareness System



Anne Connell . Josh Ehlke . Saara Kamppari
Interaction & Interface Design
Spring 2007





Source: American Obesity Association



Physically Active Families



Frick Park - Sunny Saturday Afternoon

Our goal is to create an intelligent agent for the home that would support families with teens and pre-teens to be physically active together.



Physically Active Families



Frick Park - Sunny Saturday Afternoon

Our goal is to create an intelligent agent for the home that would support families with ~~teens and pre-teens~~ to be physically active together. **children**



Physically Active Families



Frick Park - Sunny Saturday Afternoon

Our goal is to create an intelligent agent for the home that would support families with ~~teens and pre-teens~~ to be physically active together. **children**

Children

Organized physical activities

Unstructured play time

Parents

Parents socialize while guarding children in playground area



Exploratory Research



Interviews with 2 families



Interview with
professional health coach



Magazine Analysis



Family Interviews

Two Moms

Atypical mother with overzealous need for physical fitness

Design Implications

We have to be careful to avoid an obsessive focus on children's health



Family Interviews

Two Moms

Atypical mother with overzealous need for physical fitness

Typical mother who wants to be with her children, but does not have enough time

Design Implications

We have to be careful to avoid an obsessive focus on children's health

Create a product that creates opportunities for parents to spend time with their children



Expert Interview

Professional Health Coach

Approaches coaching from all aspects of healthy living

Implications

We acknowledge this, but we need to keep our focus narrow



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Approaches coaching from all aspects of healthy living

Must have internal motivation, and set goals to become more healthy

Implications

We acknowledge this, but we need to keep our focus narrow

Our target audience has preexisting internal motivation; we need to support setting and maintaining goals



Expert Interview

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Approaches coaching from all aspects of healthy living

Must have internal motivation, and set goals to become more healthy

Pedometers are a vital tool for providing immediate feedback about activity, and can be used for friendly competition

Implications

We acknowledge this, but we need to keep our focus narrow

Our target audience has preexisting internal motivation; we need to support setting and maintaining goals

Monitoring activity and providing progress statistics needs to be the core of our system



Magazine Analysis





Magazine Analysis

FAMILY FITNESS MAKEOVER: AN AGE-BY-AGE GUIDE

Twelve minutes. That's how much more exercise slim kids get each day than overweight children do, according to a recent Swedish study of 8- to 11-year-olds. Those dozen extra minutes can burn 100-plus calories, and that really adds up, says lead researcher Magnus Dencker, M.D. Use our monthly get-moving guide to ensure that you and your kids get those 12 additional minutes—and then some!

AGE & ACTIVITY

CALORIES BURNED

2 to 18 MONTHS

Put your little one in a baby carrier and tote her around—pick up groceries, hit the mall, take a walk with a friend.



IN ONE HOUR
470

18 MONTHS to 5 YEARS

Teach your child how to fly a kite, and make sure to use a good running start each time to get it off the ground.



IN 45 MINUTES
315

5 to 8 YEARS

Make it a family ritual to go for a stroll after dinner. Bundle up and head out for at least 15 minutes. If your kids protest, suggest scootering or a game of chase.



IN 30 MINUTES
139

8 to 13 YEARS

Be an active volunteer: Jog with disabled athletes or plant flowers in your local park. To find opportunities in your area, go to volunteer.solutions.org and plug in your zip code.



IN 1 HOUR
336

13-plus YEARS

Give your teen's bedroom a spring update—let him pick a fresh new color, move the furniture, clean up all the dust bunnies, and paint the room together.



IN 2 HOURS
756

It is mom's "job" to keep the family healthy

Poll of readers showed a considerable amount of embarrassment in going to the gym

There is a desire to be healthy by all ages



Design
Competition

Final
Design

Conceptual

Design
Development

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kinetics

Family Activity Awareness System



Reminder &
Encouragement

Parents

Control

Family Status

Privacy

Rewards



Reminder &
Encouragement

Parents

Control

Family Status

Privacy

Rewards

I need to be reminded and encouraged
to do physical activities.



Reminder &
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Parents

Control

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Rewards

I need to be reminded and encouraged
to do physical activities.

I want to feel like a good parent.



Reminder &
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Rewards

I need to be reminded and encouraged
to do physical activities.

I want to feel like a good parent.

I don't want a thing to dictate my life. I
want to set my own goals.



Reminder &
Encouragement

I need to be reminded and encouraged
to do physical activities.

Parents

I want to feel like a good parent.

Control

I don't want a thing to dictate my life. I
want to set my own goals.

Family Status

I need to know about my family
member's activity status.

Privacy

Rewards



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Privacy

I am not willing to share the details
of my health with others.

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Rewards

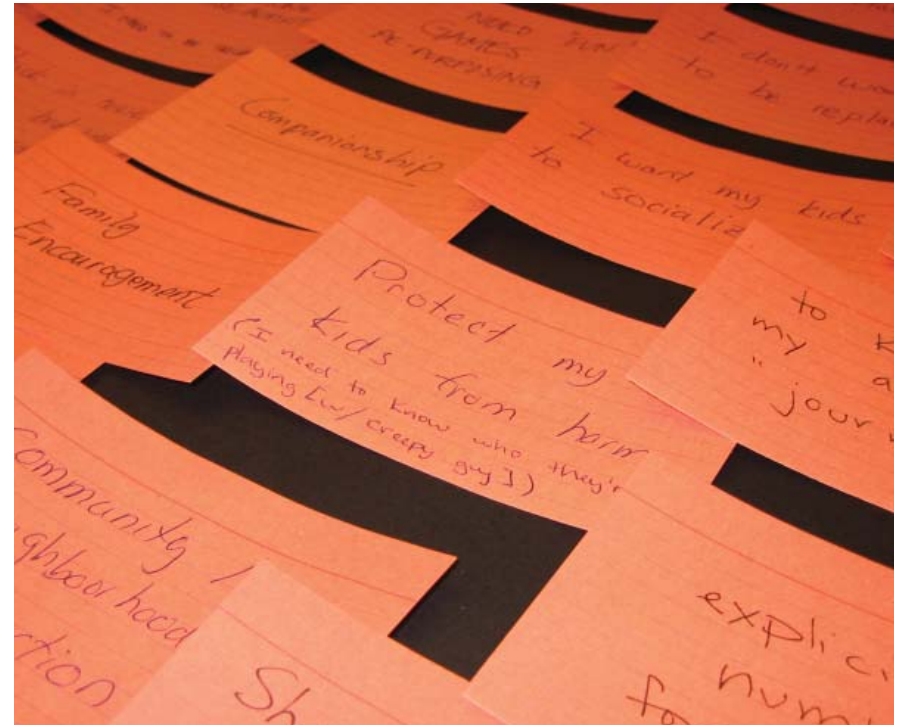
I need to be rewarded for my good
activity. I need to feel good about it.



Concept Generation



Brainstormed 60+ Concepts

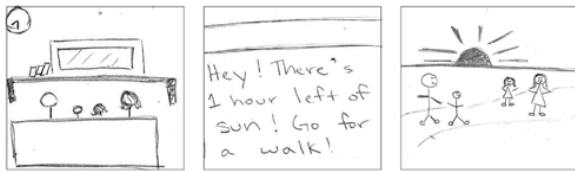


Categories of Needs Addressed



Scenarios for Concept Validation

1. Family Watching TV



Everyone in the family has been feeling kind of lazy today, and has been watching hours of television.

The Health Coach shuts off the TV at the end of their favorite show, and suggests they take a family walk before it gets dark.

The family goes to the park, and watches the sunset together.

4. Fridge Center & Scheduling



The Health Coach lets Jessica know that Dad skipped his after lunch walk today.

She wants to help him meet his daily goals, so she schedules a bike ride together for when he gets home.

Dad gets an email at work. He feels better about skipping the walk because he knows he'll get to be active and spend time with Jessica after work.

7. Family Activity Selection



Family members put ideas for activities into the Fitness Activity Jar.

Brandon likes to ride his bike, so he adds that to the jar.

Every week, they pick one of the activities to do as a family. Everyone must participate and cheer each other on.

This week, they chose Brandon's biking idea. Next week, it's mom's turn to pick an activity.

2. Bunny & Morning Cartoons



Brandon and Jessica have been watching cartoons all morning, while Mom and Dad were busy doing household chores and errands.

TV Bunny wakes up and dances around to try to get the kids off the couch and play.

TV Bunny tells Brandon and Jessica about the afternoon kite festival during a commercial.

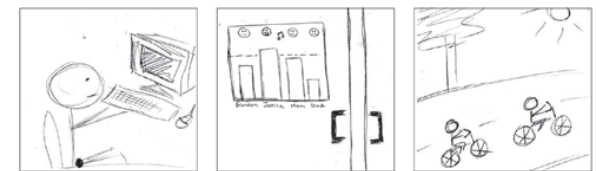
5. Mirror



Dad wakes up and sees a record of his activity and health progress while he is getting dressed.

The house mirror compliments him since he has been keeping up with his activity goals.

3. Fridge Center



Dad is busy at work, so he skips his regular after lunch walk. His doctor has recommended walking or doing some activity at least 30 mins a day.

Jessica gets home from school and has been very active today. The Health Coach plays her victory tune for her as she walks by.

She was going to ride her bike, but decides to wait until Dad gets home.

She asks him, and they go riding together after dinner.

6. Family Mural



Mom walks by the family mural and sees that Brandon has not been active for the last 4 hours.

She selects Brandon's and her own picture, and the mural recommends something they could do together.

Mom asks Brandon if he wants to go for a bike ride around the block, and off they go.

8. Goal Setting, Kids



Health Coach helps Brandon set his weekly goals. But since he was feeling tired, he set them lower than usual.

Mom was reviewing the kids' status, and sees that Brandon's goals are low.

She changes Brandon's goal for the week to encourage him to get more exercise.

9. Goal Setting, Dad



Dad has been very busy at work lately, so he hasn't reviewed his activity goals or changed them in a while.

Mom can see that Dad's goals haven't changed and she is concerned he isn't improving.

Mom and Dad discuss Dad's goals.

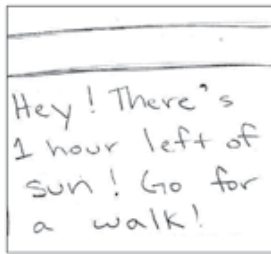


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The Health Coach shuts off the TV at the end of their favorite show, and suggests they take a family walk before it gets dark.



The family goes to the park, and watches the sunset together.

"What kind of parent are you if you don't know that your child has been watching 4 hours of TV?!?"

"If I'm being lazy, I know I'm being lazy."

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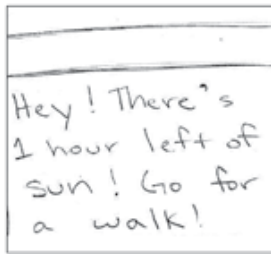


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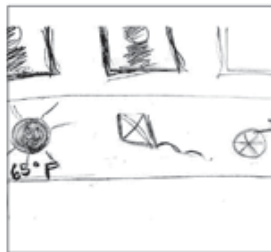
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Trends of are more informative to parents than current activity status

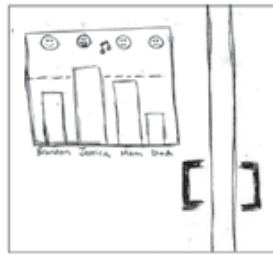


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"Knowing my progress would keep me motivated."

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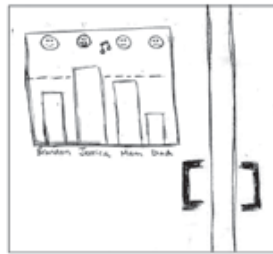


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“Kids never need to see their health status or their parents.”

“Knowing my progress would keep me motivated.”

Only parents need to review activity status in private locations such as the bedroom

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Concept Validation

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Supporting scheduling and activity suggestion empower the parents





kinetics - Monitoring

Shoe Inserts

These shoe inserts monitor physical activity discretely, and report it back to the kinetics system.

Parent Pedometer Device

The parents carry a pedometer like device that helps record additional health information about adults. The device also acts as a key to access the kinetics application.



kinetics - Goals & Progress

Personal Goals

The kinetics application shows personal progress, with goals and trends. These help parents gauge their own physical health.



kinetics - Private Status

Family Status

Once in the kinetics application, which is only accessible with the parent device, parents can check the status of their other family members.

They also control their privacy settings regarding how much their family members can see about them.



kinetics - Life Integration

Scheduling Family Life

The kinetics system helps track the family's activity schedule, providing reminders when appropriate.

Activity Suggestions

The kinetics application provides activity suggestions based on individual and family preferences, and on local information such as weather and discounts.



kinetics in Action



Time to meet Jessica and Amanda's family...

kinetics

Family Activity Awareness System



Family Activity Awareness

Through our research, ideation, and concept validation, we created kinetics to help parents monitor their own and their family's activity, and coordinate physical activities.

