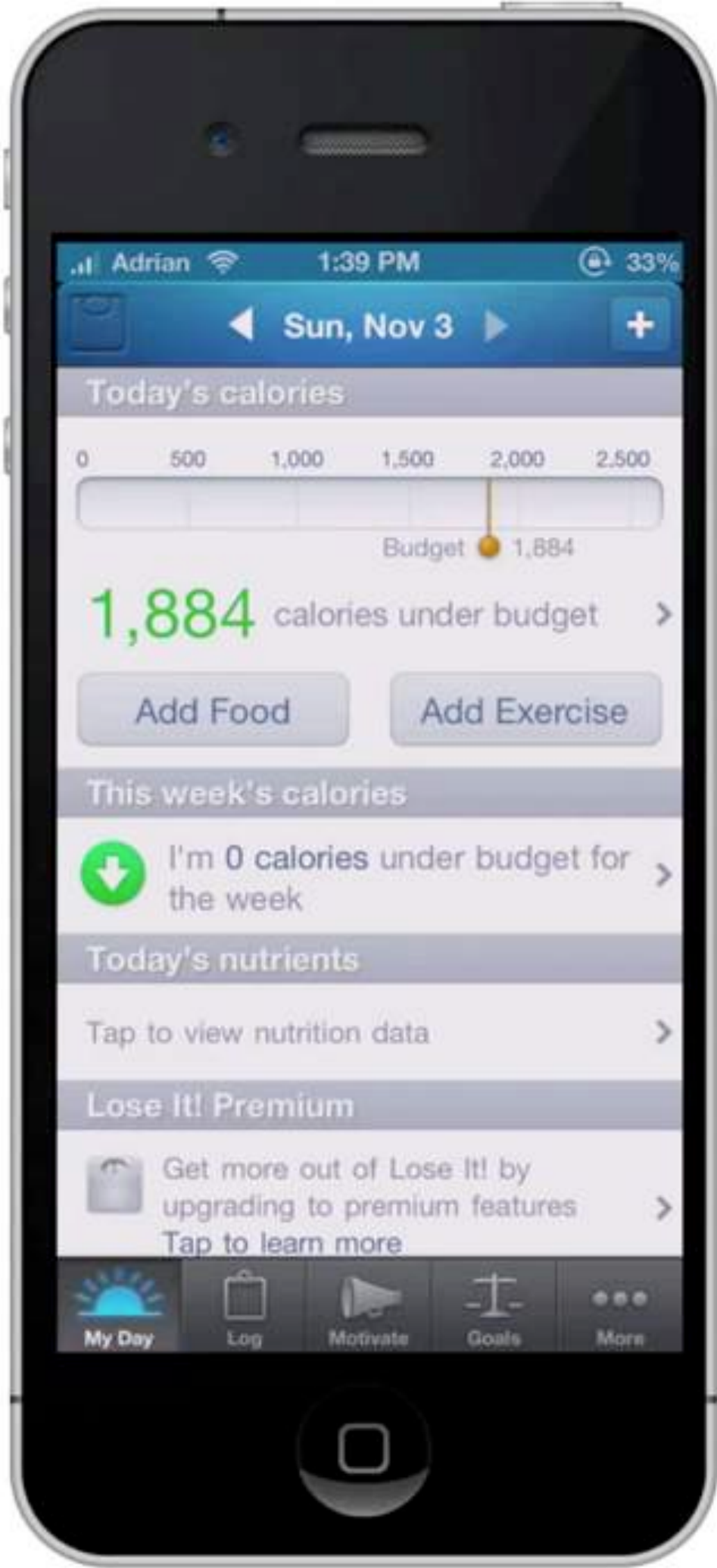


Technology-enabling tools and resources

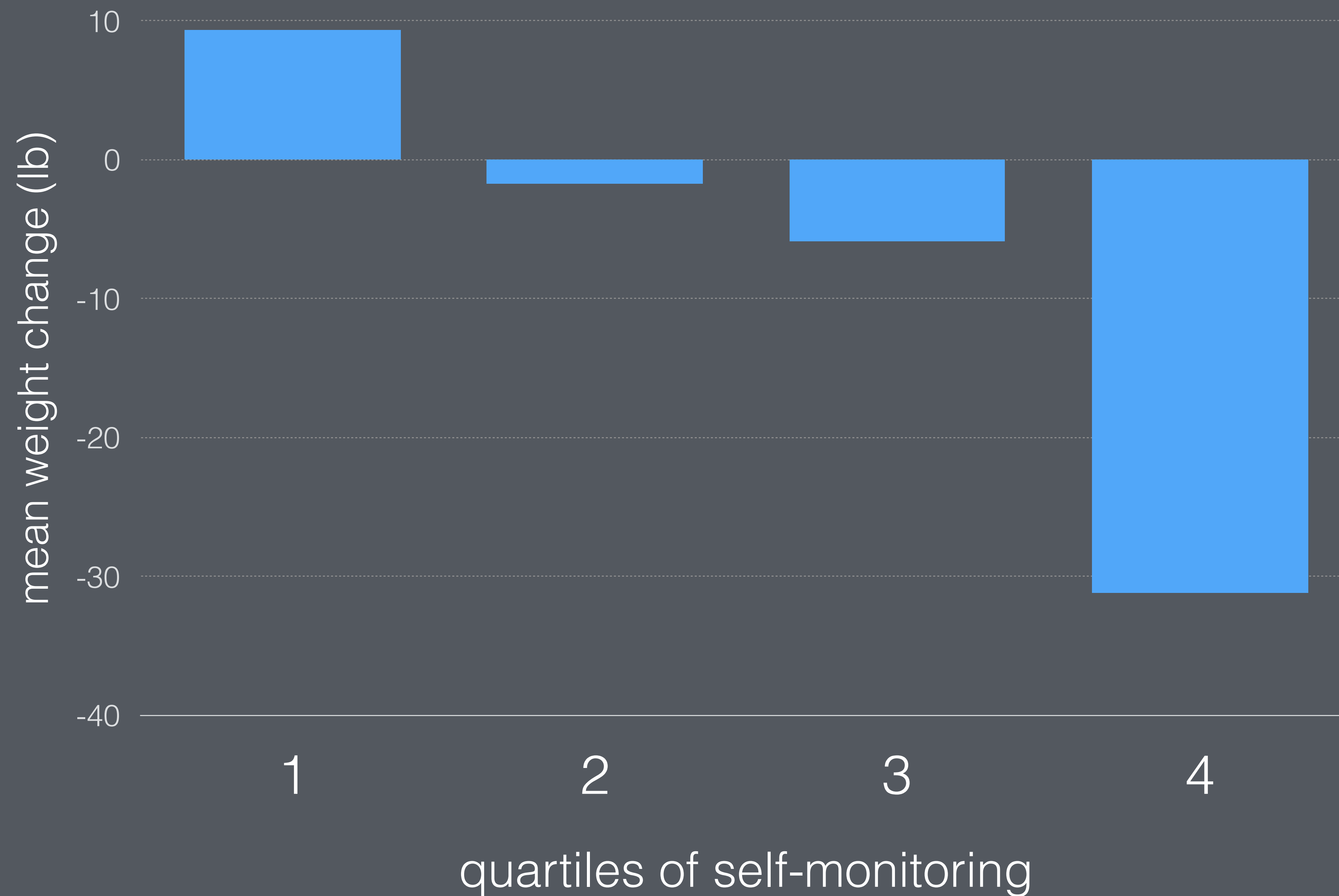
Kate Wolin, ScD, FACSM
CEO

	Meal 1	Meal 2	Meal 3	Meal 4	Meal 5	Meal 6
Mon	- Oatmeal - Peanut butter - Banana - Skimmed milk	- Yogurt (plain) - Almonds - Raspberry	- 1 tin tuna - 1 tbs mayo - 2 slices of whole grain bread - Cucumber slice	- Whey protein shake (water)	- Chicken Breast - Raw salad - Olive oil - Pine seeds	- Casein Protein Shake (water)
Tues	- Weetabix (x2) - Skimmed milk - Honey	- Babybel - Orange - Kiwi	- Egg white Omelette (x3) - Spinach - Cheese - Onion	- Zucchini cakes - 1 tbs peanut butter	- Beef (ginger) - Cooked veg - 2 sweet potatoes	- Almonds - 1 poached egg
Wed	- Oatmeal - Peanut butter - Banana - Skimmed milk	- Greek yogurt - Almonds - mixed berries	- Baked potato - tuna (1 can) - mayo (1 tbs)	- Whey protein shake (water)	- Grilled salmon - broiled Broccoli - Brown rice	- Casein Protein Shake (water)
Thurs	- Weetabix (x2) - Skimmed milk - Honey	- Fruit salad (apple, pear, orange, kiwi)	- 1 slice of chicken breast - lettuce - Cucumber - 2 whole grain bread	- 1 carrot - 1 Babybel - Almonds	- Cooked pork - Egg noodles - bean shoots - Onion	- mixed nuts
Fri	- Oatmeal - Peanut butter - Banana - Skimmed milk	- Yogurt (plain) - Honey - Raspberry	- 3 scrambled eggs on whole grain toast	- Whey protein shake (water)	- Grilled salmon - Grilled veg - Brown rice	- Casein Protein Shake (water)
Sat	- Weetabix (x2) - Skimmed milk - Honey	- Smoothie - Oatmeal - berries - peanut butter - Skimmed milk - Ice	- Cheese - 2 slices of whole grain toast	- Fruit salad (apple, pear, orange, kiwi)	- Chicken Breast - Grilled veg - Sweet potato	- 2 scrambled eggs.
Sun	- 3 Poached eggs - 2 slices of whole grain bread (toasted)	- 2 oatcakes - 1 tbs cottage cheese	- Baked potato - Chicken Breast - mayo	- Smoothie - oatmeal - berries - peanut butter - Skimmed milk - Ice	- Omelette - cheese, onion - peppers - Ham, mushroom	- mixed nuts.

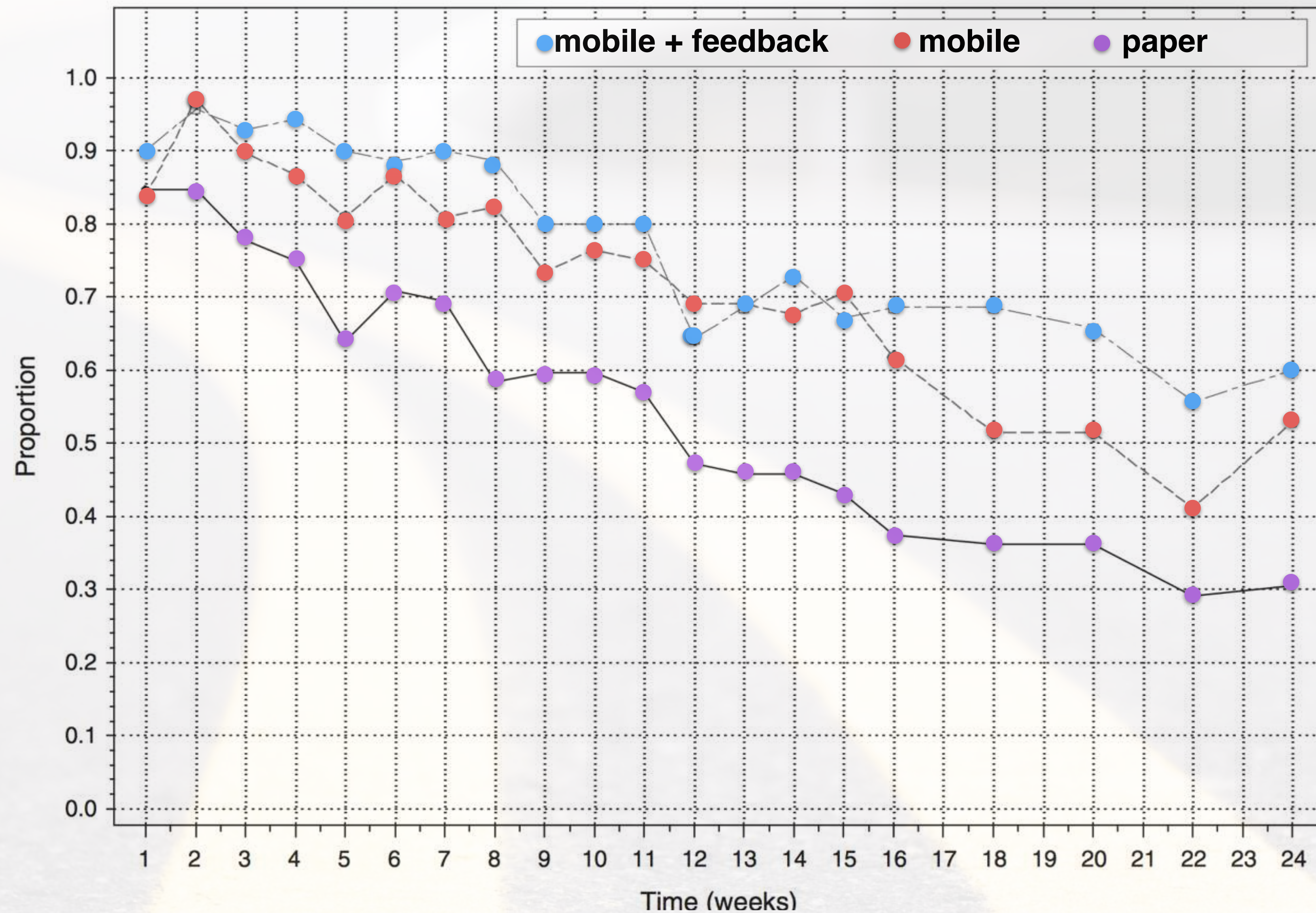


“self-monitoring is the **cornerstone** of behavioral treatment for weight loss”

baker & kirschenbaum 1993



diet and physical activity tracking declines

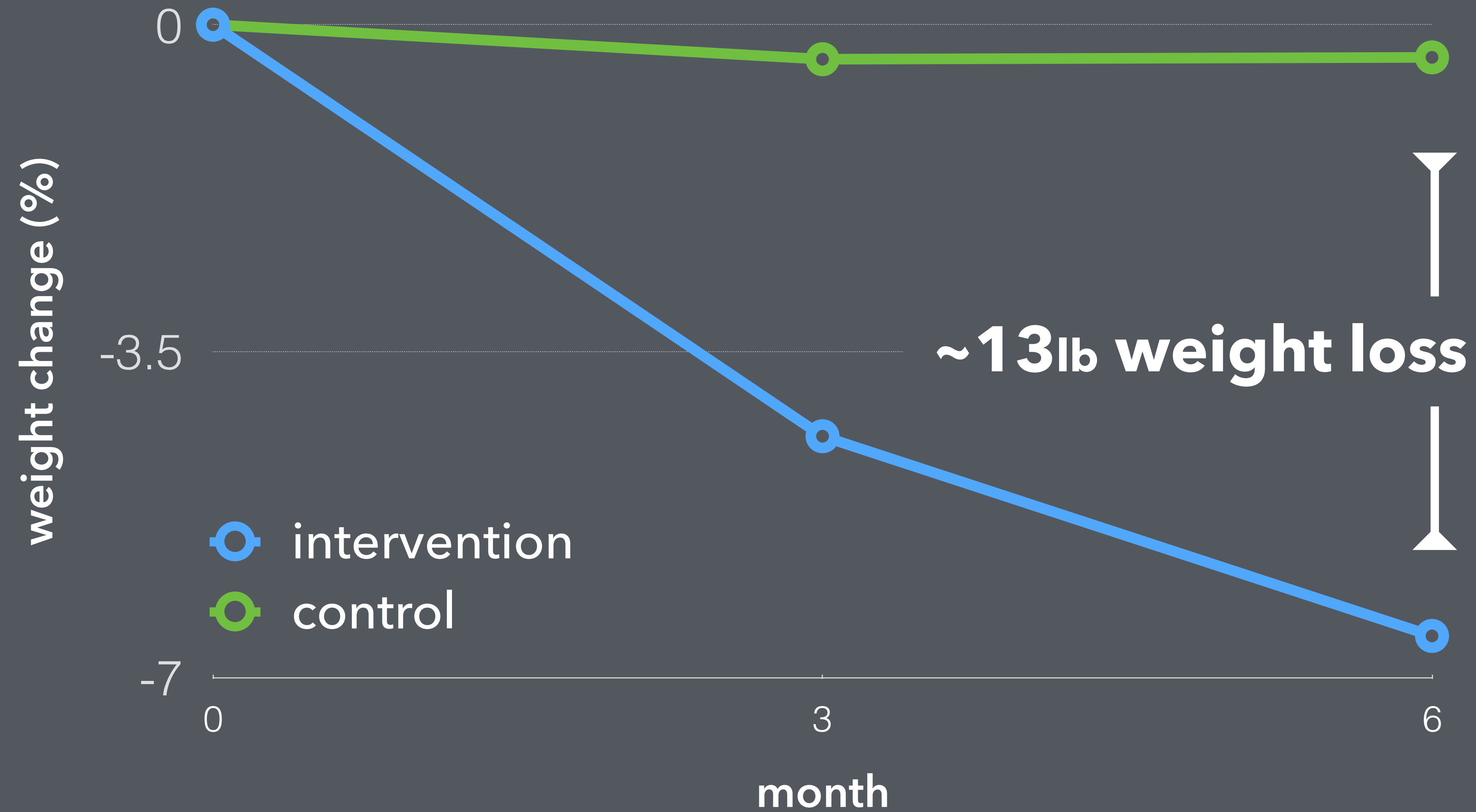


the science self-monitoring

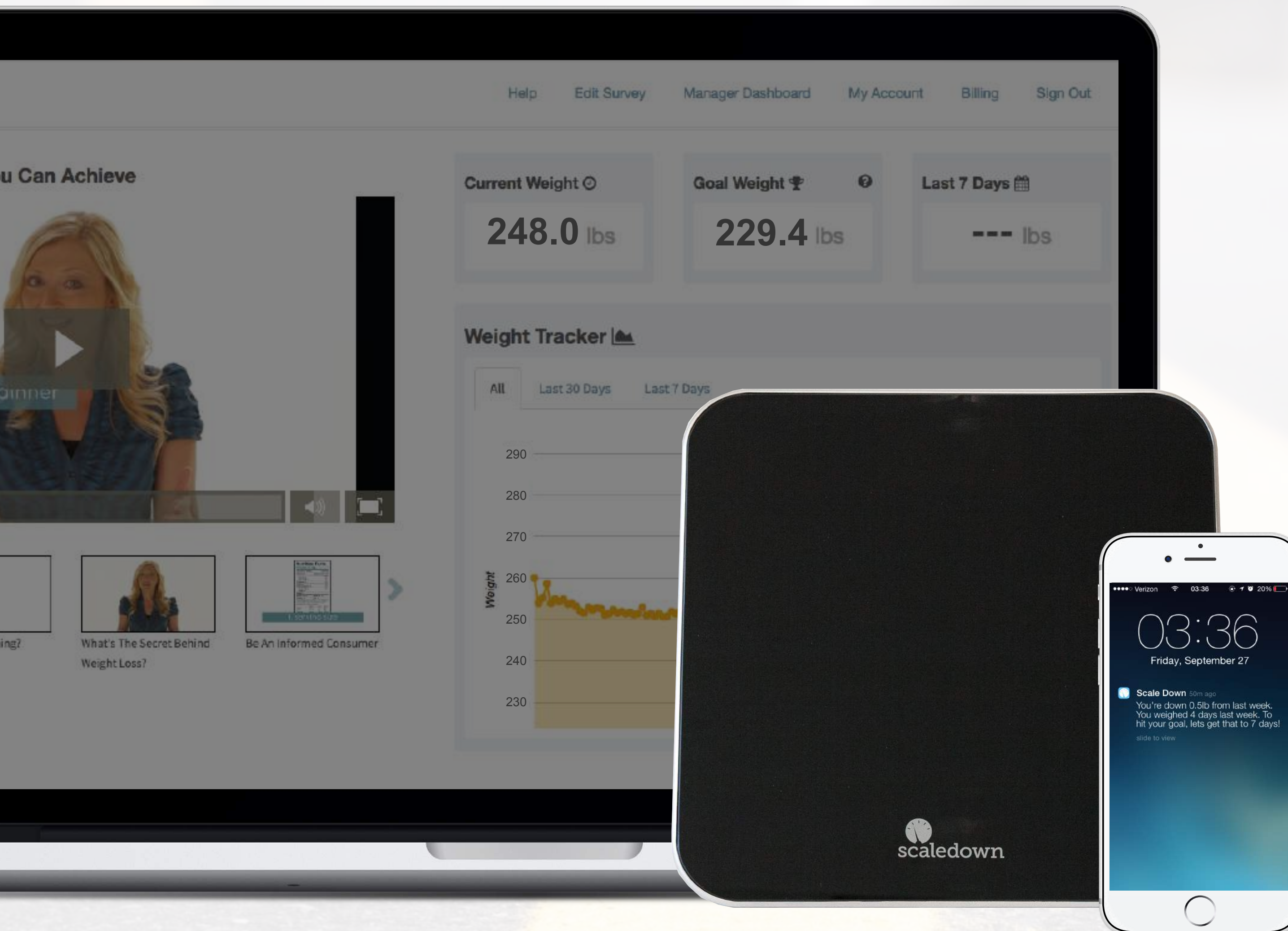
- :: tracking ➤ self-regulation ➤ weight loss
- :: most **fail** with diet/exercise tracking
- :: tracking weight is **easy** to make habitual
- :: daily weighing ➤ largest weight losses

the weigh trial

steinberg et al 2013



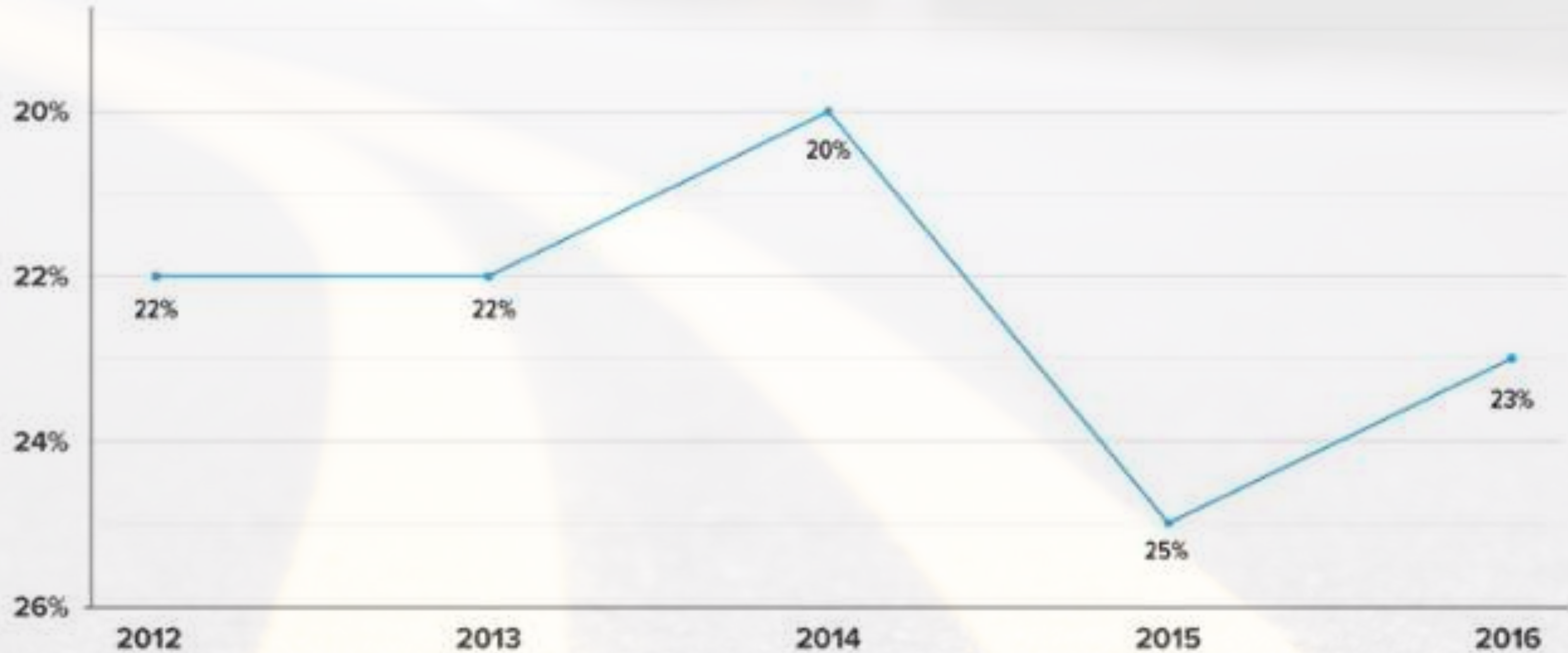
SCALEDOWN SOLUTION



- ✓ Cellular Connected Smart Scale
- ✓ Just-In-Time Daily Feedback
- ✓ Weekly Progress Report
- ✓ Skills Training Lessons
- ✓ Resource Dashboard

App Abandonment

% of users who abandon an app after one use



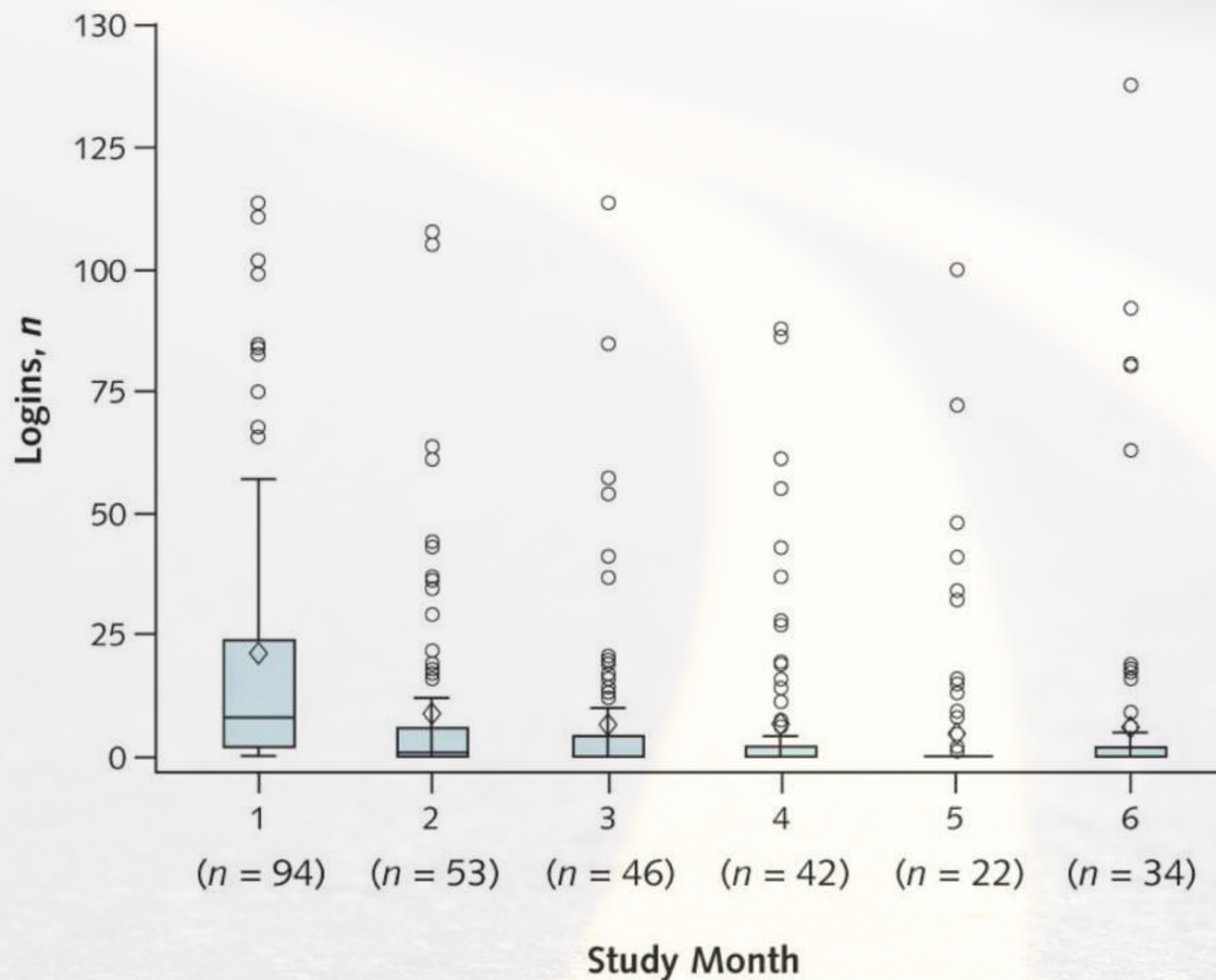


Table 4. Logins Among Intervention Group Participants, by Month

Characteristic	Month					
	1	2	3	4	5	6
Participants who logged in, <i>n</i> (%)	94 (97)	53 (55)	46 (47)	42 (43)	22 (23)	34 (35)
Mean logins, <i>n</i>	20.9	8.6	6.5	6.3	4.3	6.2
Median logins, <i>n</i>	8	1	0	0	0	0
Interquartile range	2–24	0–6	0–4	0–2	0–0	0–2
Range	0–114	0–108	0–114	0–88	0–100	0–138

from: Effectiveness of a Smartphone Application for Weight Loss Compared With Usual Care in Overweight Primary Care Patients: A Randomized, Controlled Trial
Smartphone Application for Weight Loss in Overweight Primary Care Patients

Laing et al (2015)

A woman with reddish-brown hair, wearing a dark blue short-sleeved shirt, is standing in a bathroom. She is looking down at a scale on the counter, which is reflected in a large mirror. The mirror also shows her face as she looks at the scale. On the wall to the left, there is a circular mirror and a light switch. On the counter, there is a blue cup and a glass. The scene is brightly lit.

You lost 0.7 lbs since yesterday. Nice job weighing everyday! To avoid high calorie lunches, bring a salad to work.

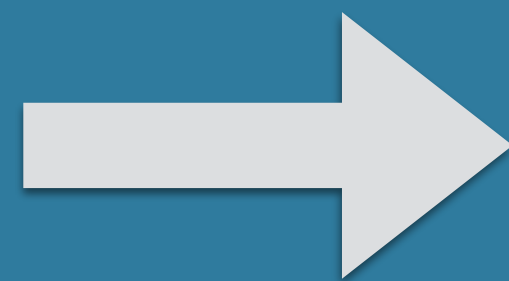
	Device/Equipment Requirements		User Actions			
Pairing Method	Sending Device	Receiving Device	Phase I: Setup	Phase II: Exchange	Phase III: Outcome	OOB Channels
Resurrecting Duckling*	Hardware port (e.g., USB) on both and extra cable		Connect cable to both devices	NONE	NONE	Cable
Talking to Strangers*	IR port on both		Activate IR on both & find /align IR ports	NONE	NONE	IR
Visual Comparison: Image, Number or Phrase	Display + user-input on both		NONE	Compare two images, or two numbers, or two phrases	Abort or accept on both devices	Visual
Seeing is Believing (SiB)*	Display + user-input	Photo camera + user-output	Activate photo mode on receiving device	Align camera on receiving device with displayed barcode on sending device, take picture	Abort or accept on sending device based receiving device decision	Visual
Blinking Lights*	LED + user-input	User-output + Light detector or video camera	Activate light detector or set video mode on receiving device	Initiate transmittal of OOB data by sending device	Abort or accept on sending device based receiving device decision	Visual
Loud & Clear ▪Display-Speaker ▪Speaker-Speaker	User-input on both + ▪display on one & speaker on other, or ▪speaker on both		NONE	Compare: two vocalizations, or display with vocalization	Abort or accept on both devices	▪Audio, or ▪audio + visual
Button-Enabled (BEDA) ▪Vibrate-Button* ▪LED-Button* ▪Beep-Button*	User input + ▪vibration , or ▪LED, or ▪beeper	User output + One button +	Touch or hold both devices	For each signal (display, sound or vibration) by sending device, press a button on receiving device	Abort or accept on sending device based receiving device decision	▪Tactile, or ▪Visual + tactile, or ▪Audio + tactile
Button-Enabled (BEDA) ▪Button-Button*	One button on both + user-output on one		Touch or hold both devices	Simultaneously press buttons on both devices; wait a short time, repeat, until output signal	NONE (unless synch. error)	Tactile
Copy-and-Confirm*	Display + user-input	Keypad + user-output	NONE	Enter value displayed by sending device into receiving device	Abort or accept on sending device based on receiving device decision	Visual
Choose-and-Enter*	User input on both devices		NONE	Select “random” value and enter it into each device	NONE (unless synch. Error)	Tactile
Audio Pairing* (HAPADEP variant)	Speaker + user-input	Microphone + user-output	NONE	Wait for signal from receiving device.	Abort or accept on sending device	Audio
Audio/Visual Synch. ▪Beep-Beep ▪Blink-Blink ▪Blink-Beep	User-input on both + ▪Beeper on each , or, ▪LED on each, or ▪Beeper on one & LED on other		NONE	Monitor synchronized: ▪beeping, or ▪blinking, or ▪Beeping & blinking	Abort on both devices if no synchrony	▪Visual, or ▪ Audio, or ▪Audio + visual
Smart-its-Friends*, Shake-Well-Before-Use*	2-axis accelerometers on both + user-output on one		Hold both devices	Shake/twirl devices together, until output signal	NONE (unless synch. error)	Tactile + motion

*Resistant to a “rushing user” behavior

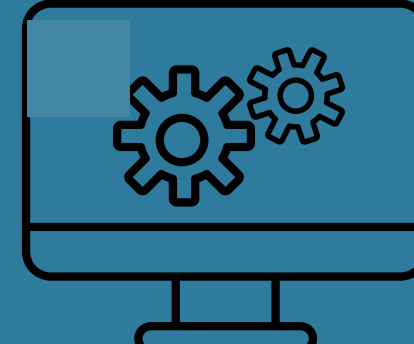


ScaleDown

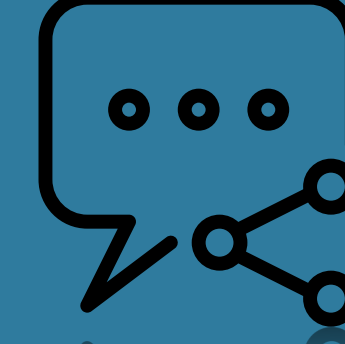
collection



analytics



integration



decision support



apps &
wearables

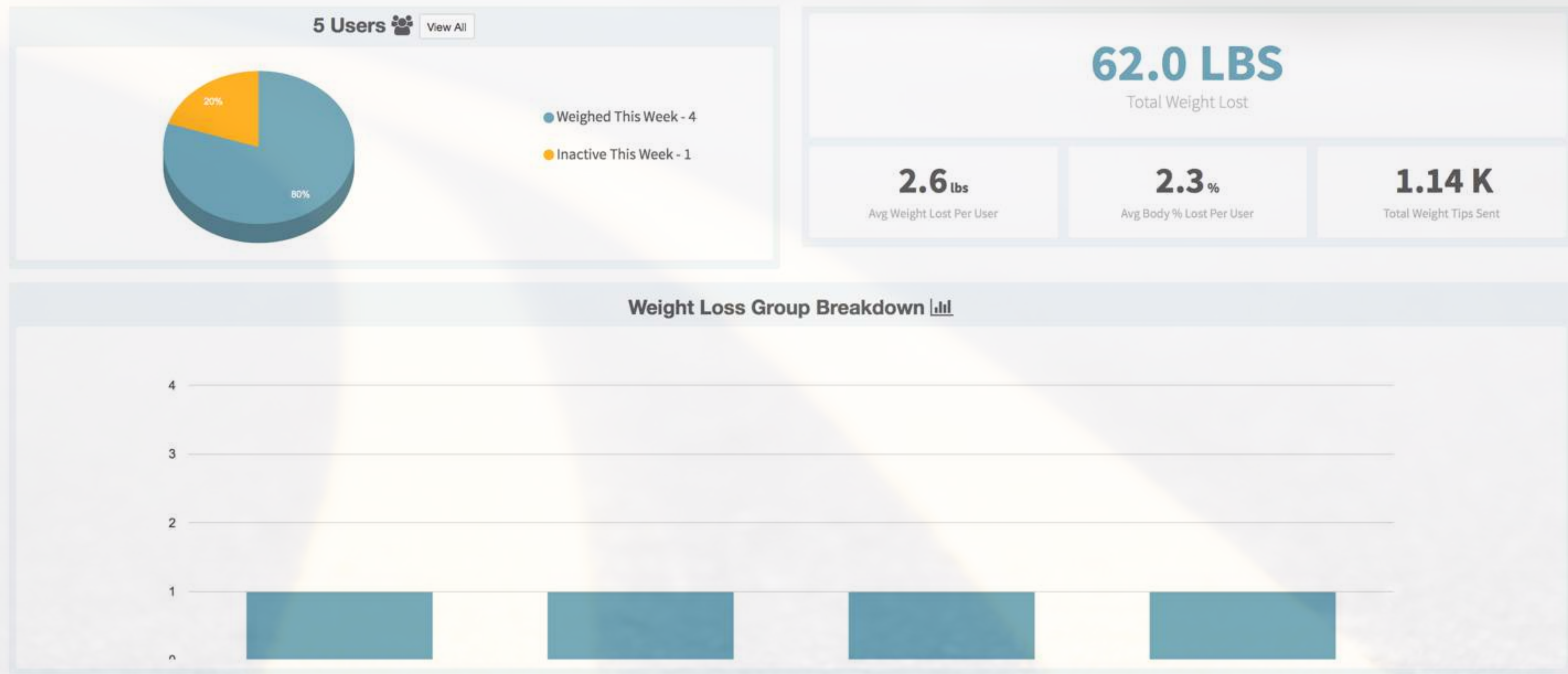
data
processing

prediction
algorithm

actionable
data

provider

Dunder-Mifflin



affiliate dashboard

Michael Scott

Starting Weight

248.0

02/13/16

Current Weight

229.4

05/02/16

Goal Weight ⓘ

223.2

6.2 lbs to goal

Days Weighed

7

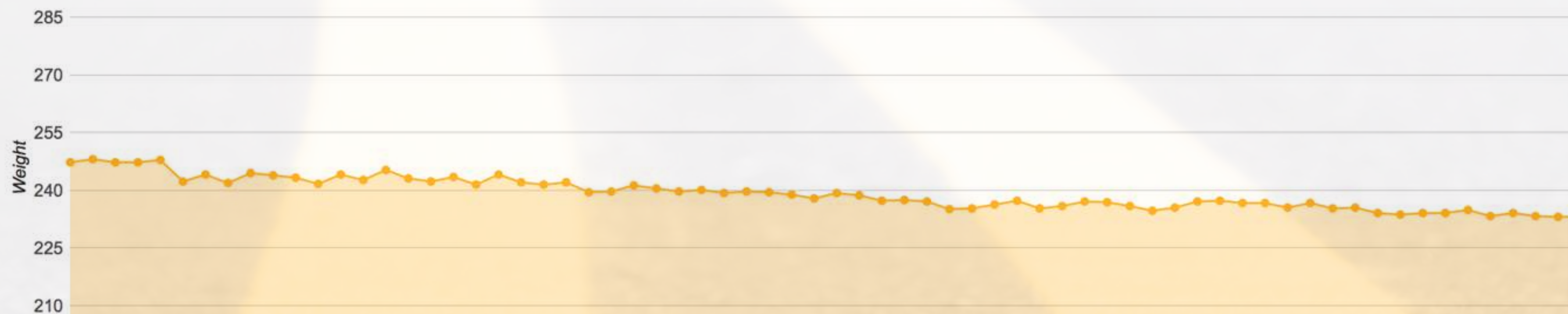
Last 7 Days

Weight Tracker

All

Last 30 Days

Last 7 Days



affiliate dashboard: track users

OUR TEAM

Kate Wolin, ScD

CEO/Co-Founder



- Wash U, Loyola Professor
- Exercise Science Leader
- Predictive Algorithm Expert
- Harvard & Northwestern Graduate



Gary Bennett, PhD

Co-Founder



- Duke, Harvard Professor
- Leads Duke Digital Health
- Co-Founder of Crimson Health (acquired by Health Dialog)
- Duke & Harvard Graduate



Dori Steinberg, PhD, RD

Co-Founder



- Duke Researcher
- Clinical Obesity Expert
- Leader in Self-Weighing Science
- Harvard & UNC Graduate



Ben Block

VP Tech



- COO at WeDeliver
- Lead developer for a specialty healthcare center
- Lead Developer for SAAS government contractor



scale**down**TM

CLINICALLY PROVEN WEIGHT LOSS

kate@scaledown.me

1 Personal Information

2 Diet Patterns

3 Lifestyle Information

Hey Esmerelda , welcome to Scale Down. Just a few things before we get started!

Where do you eat most of your meals?

☒ At Home

☐ Away from Home

Do you prepare meals yourself

☐ Yes

☒ No

Check at least **FOUR(4)** foods / beverages you eat or drink more than 3 days a week.

☐ - Soda, Juice, Lemonade, Flavored Coffee Drinks

☐ - Bagels, Muffins, Donuts

☐ - Candy, Cookies, Cake

☐ - Chips, Nuts, Pretzels

☐ - French Fries, Fried Chicken

☐ - Mayo, Salad Dressing

☐ - Pasta, Rice, Potatoes

☐ - Burgers, Steak, Pork

☐ - Ice Cream, Milk Shakes, Whole Milk

☐ - Beer, Wine, Liquor

Are you currently employed?

☐ Yes

☒ No

Continue

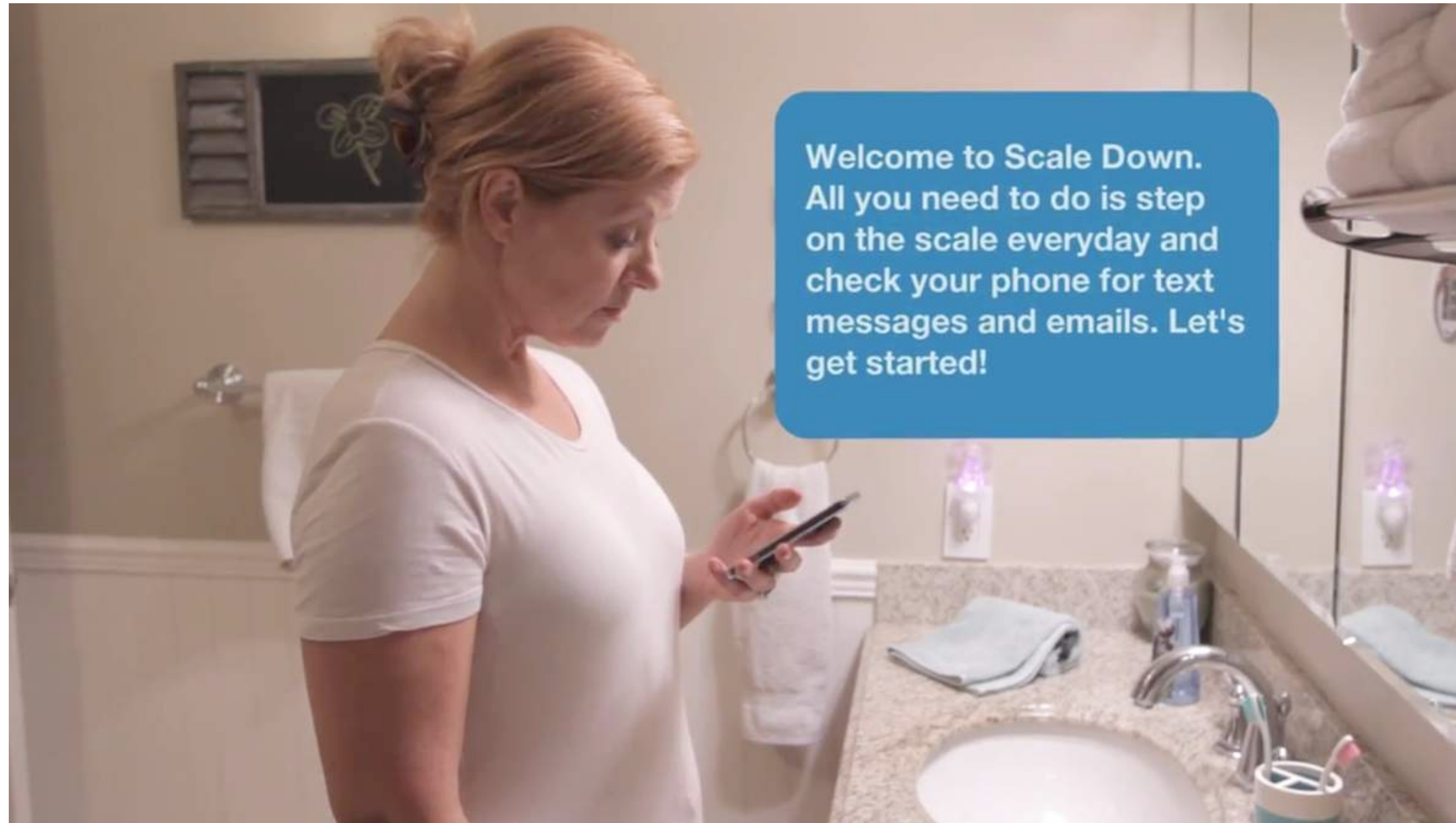
step 1: fill out a brief survey



step 2: marvel at your new scale



step 3: step on the scale



step 4: get a personalized program