Implementing Weight Loss Before Total Joint Arthroplasty Using A Remote Dietitian and Mobile App: A Randomized, Control Trial

POST-INTERVENTION QUESTIONNAIRE: Standard care group

 \cdot This survey asks about your opinions and experiences regarding lifestyle and weight loss. Your responses may help us to improve our intervention for current and future studies at Brigham and Women's Hospital.

 \cdot It will take approximately 15 minutes to complete this questionnaire.

 \cdot Read each question and answer it as best as you can. Remember, there are no right or wrong answers.

 \cdot Your answers will be kept completely confidential. We use a study identification number instead of your name on all our forms.

What is your Study ID number?	
During the last 3 months, did you actively try to lose weight?	○ Yes ○ No
How did you try to lose weight? (check all that apply.)	 Weighing yourself frequently Eating fewer calories Eating less fat Eating less carbs Exercising Eating breakfast daily Working to reduce stress Using meal replacements (liquid shakes or bar from companies like Slim Fast, Optifast, or HMR) Maintaining a consistent eating pattern throughout the week (eating similar food on weekdays and weekends) Using diet pills, laxatives, diuretics, water pills Purging or making yourself vomit
Other method:	
Are you currently following a specific diet?	⊖ Yes ⊖ No
Which diet? (Please check all that apply.)	 Vegetarian or Vegan Atkins Diet South Beach Diet Ornish Diet Paleo Diet Mediterranean Diet Other low carbohydrate diet Other low fat diet My Fitness Pal, Lose it, or another web/mobile app Other (please specify):

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Other diet:		
Are you currently targeting a daily calorie goal?	○ Yes ○ No	_
If yes, how many calories?		
	(calories/day)	
How often do you weigh yourself?	 Never Monthly Weekly Daily 	_
Over the next 3 months, how interested are you in losing weight?		-
	Not interested Very Interested (Place a mark on the scale above)	
Over the next 3 months, how confident are you that	· · · · · · · · · · · · · · · · · · ·	—
you can lose weight?	Not confident Very confident	
	(Place a mark on the scale above)	
How satisfied are you with your current weight?	 Very dissatisfied with my weight Somewhat dissatisfied with my weight Neither dissatisfied nor satisfied with my weight Somewhat satisfied with my weight Very satisfied with my weight 	_
Please read through each description given below, pick the ONE description that best describes your regular daily activity and select that box (Check only one box).	 I am confined to bed all day. I am confined to bed most of the day except for minimal transfer activities (going to the bathroom, etc) I am either in bed or sitting in a chair most of the day. I sit most of the day, except for minimal transfer activities, no walking or standing. I sit most of the day, but I stand occasionally and walk a minimal amount in my house. (I may rarely leave the house for an appointment and may require the use of a wheelchair or scooter for transportation.) I walk around my house to a moderate degree but I don't leave the house on a regular basis. I may leave the house on a regular basis. I may leave the house occasionally for an appointment. I walk around my house, go outside at will, walking one or two blocks at a time. I walk around my house and go outside at will and walk several blocks at a time without any assistance (weather permitting). I am up and about at will in my house and can go out and walk as much as I would like with no restrictions (weather permitting). I am up and about at will in my house and outside. I also work outside the house in a minimally active job I am up and about at will in my house and outside. I also work outside the house in a moderately active job 	
	Are you currently targeting a daily calorie goal? If yes, how many calories? How often do you weigh yourself? Over the next 3 months, how interested are you in losing weight? Over the next 3 months, how confident are you that you can lose weight? How satisfied are you with your current weight? Please read through each description given below, pick the ONE description that best describes your regular daily activity and select that box (Check	If yes, how many calories? (calories/day) How often do you weigh yourself? Wever (Monthiy) Over the next 3 months, how interested are you in losing weight? Over the next 3 months, how confident are you that you can lose weight? Not confident Piece a mark or the scale above! Over the next 3 months, how confident are you that you can lose weight? Not confident Please read through each description given below, pick the ONE description that best describes your regular daily calor bed with my weight Please read through each description given below, pick the ONE description that best describes your regular dails an inimial amount in my house. (I may rarely leave the house for an appointment and may require the use of a wheelchair or scooter for transportation.) I am confined to bed all day. I sit most of the day, except for minimal transfer activities, no weight on a stabiling with thout any are yell as calor most of the day. I sit most of the day, but I stand occasionally and wik a minimal amount in my house. (I) may rarely leave the house for an appointment and may require the use of a wheelchair or scooter for transportation.) I walk around my house, go outside at will my house and outside to all day. I walk around my house, go outside at will my house and outside is a time weight or the day were to a moderate degree but I don't leave the house on a regular babils. I my leaves the house an a outside the house in a m

outside. I also participate in relaxed physical activity such as jogging, dancing, cycling, swimming occasionally (2-3 times per month) \bigcirc I am up and about at will in my house and outside. I also participate in relaxed physical activity such as jogging, dancing, cycling, swimming 2-3 times per week \bigcirc I am up and about at will in my house and outside. I also participate in relaxed physical activity such as jogging, dancing, cycling, swimming daily ○ I am up and about at will in my house and outside. I also participate in vigorous physical activity such as competitive level sports occasionally (2-3 times per month) \bigcirc I am up and about at will in my house and outside. I also participate in vigorous physical activity such as competitive level sports occasionally 2-3 times per week \bigcirc I am up and about at will in my house and outside. I also participate in vigorous physical activity such as competitive level sports daily

INSTRUCTIONS: This survey asks for your view about your knee. This information will help us keep track of how you feel about your knee and how well you are able to perform your usual activities.

Answer every question by ticking the appropriate box, only one box for each question. If you are unsure about how to answer a question, please give the best answer you can.

Symptoms

These questions should be answered thinking of your knee symptoms during the last week.

S1. Do you have swelling in your knee?

Never
Rarely
Sometimes
Often
Always

S2. Do you feel grinding, hear clicking or any other type of noise when your knee moves?	 Never Rarely Sometimes Often Always
S3. Does your knee catch or hang up when moving?	 Never Rarely Sometimes Often Always
S4. Can you straighten your knee fully?	 Always Often Sometimes Rarely Never
S5. Can you bend your knee fully?	 Always Often Sometimes Rarely Never
Stiffness	
The following questions concern the amount of join	t stiffness you have experienced during
the last week in your knee. Stiffness is a sensation which you move your knee joint.	of restriction or slowness in the ease with
S6. How severe is your knee joint stiffness after first wakening in the morning?	 None Mild Moderate Severe Extreme
S7. How severe is your knee stiffness after sitting, lying or resting later in the day?	 None Mild Moderate Severe Extreme
Pain	
P1. How often do you experience knee pain?	 Never Monthly Weekly Daily Always



What amount of knee pain have you exp	What amount of knee pain have you experienced the last week during the following activities?				
P2. Twisting/pivoting on your knee	 None Mild Moderate Severe Extreme 				
P3. Straightening knee fully	 None Mild Moderate Severe Extreme 				
P4. Bending knee fully	 None Mild Moderate Severe Extreme 				
P5. Walking on flat surface	 None Mild Moderate Severe Extreme 				
P6. Going up or down stairs	 None Mild Moderate Severe Extreme 				
P7. At night while in bed	 None Mild Moderate Severe Extreme 				
P8. Sitting or lying	 None Mild Moderate Severe Extreme 				
P9. Standing upright	 None Mild Moderate Severe 				



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Function, daily living					
The following questions concern your physical fun	ction. By this we mean your ability to move				
around and to look after yourself. For each of the following activities please indicate the					
degree of difficulty you have experienced in the las	st week due to your knee.				
A1. Descending stairs	 None Mild Moderate Severe Extreme 				
A2. Ascending stairs	 None Mild Moderate Severe Extreme 				
For each of the following activities please indicate experienced in the last week due to your knee.	the degree of difficulty you have				
A3. Rising from sitting	 None Mild Moderate Severe Extreme 				
A4. Standing	 None Mild Moderate Severe Extreme 				
A5. Bending to floor/pick up an object	 None Mild Moderate Severe Extreme 				
A6. Walking on flat surface	 None Mild Moderate Severe Extreme 				
A7. Getting in/out of car	 None Mild Moderate Severe Extreme 				
A8. Going shopping	 None Mild Moderate Severe Extreme 				



A9. Putting on socks/stockings	 None Mild Moderate Severe Extreme 				
A10. Rising from bed	 None Mild Moderate Severe Extreme 				
A11. Taking off socks/stockings	 None Mild Moderate Severe Extreme 				
A12. Lying in bed (turning over, maintaining knee position)	 None Mild Moderate Severe Extreme 				
A13. Getting in/out of bath	 None Mild Moderate Severe Extreme 				
A14. Sitting	 None Mild Moderate Severe Extreme 				
A15. Getting on/off toilet	 None Mild Moderate Severe Extreme 				
For each of the following activities please indicate the degree of difficulty you have experienced in the last week due to your knee.					
A16. Heavy domestic duties (movign heavy boxes, scrubbing floors, etc)	 None Mild Moderate Severe Extreme 				
A17. Light domestic duties (cooking, dusting, etc)	○ None ○ Mild				



Function, sports and recreational activities The following questions concern your physical function when being active on a higher level.				
during the last week due to your knee.				
SP1. Squatting	 None Mild Moderate Severe Extreme 			
SP2. Running	 None Mild Moderate Severe Extreme 			
SP3. Jumping	 None Mild Moderate Severe Extreme 			
SP4. Twisting/pivoting on your injured knee	 None Mild Moderate Severe Extreme 			
SP5. Kneeling	 None Mild Moderate Severe Extreme 			
Quality of Life				
Q1. How often are you aware of your knee problem?	 Never Monthly Weekly Daily Constantly 			
Q2. Have you modified your life style to avoid potentially damaging activities to your knee?	 Not at all Mildly Moderately Severely Totally 			
Q3. How much are you troubled with lack of confidence in your knee?	 Not at all Mildly Moderately Severely Totally 			



Q4. In general, how much difficulty do you have with your knee? ONone Mild Moderate Severe Extreme
INSTRUCTIONS: This section asks for your view about your hip. This information will help us keep track of how you feel about your hip and how well you are able to do your usual activities. Answer every question by ticking the appropriate circle, only one circle for each question. If you are uncertain about how to answer a question, please give the best answer you can.
Symptoms
These questions should be answered thinking of your hip symptoms and difficulties during the last week.
S1. Do you feel grinding, hear clicking or any other type of noise from your hip?
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always
S2. Difficulties spreading legs wide apart
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme
S3. Difficulties to stride out when walking
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme
Stiffness
The following questions concern the amount of joint stiffness you have experienced during the last week in your hip. Stiffness is a sensation of restriction or slowness in the ease with which you move your hip joint.
S4. How severe is your hip joint stiffness after first wakening in the morning?
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme
S5. How severe is your hip stiffness after sitting, lying or resting later in the day?
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme
Pain
P1. How often is your hip painful?
○ Never ○ Monthly ○ Weekly ○ Daily ○ Always
What amount of hip pain have you experienced the last week during the following activities?
P2. Straightening your hip fully
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme



P3. Bending your hip fully						
⊖ None	⊖ Mild	⊖ Moderate	⊖ Severe	⊖ Extreme		
P4. Walki	P4. Walking on a flat surface					
⊖ None	⊖ Mild	⊖ Moderate	⊖ Severe	⊖ Extreme		
P5. Going	up or dov	vn stairs				
⊖ None	⊖ Mild	⊖ Moderate	⊖ Severe	⊖ Extreme		
P6. At nig	ht while ir	n bed				
⊖ None	⊖ Mild	⊖ Moderate	⊖ Severe	⊖ Extreme		
P7. Sitting	g or lying					
⊖ None	⊖ Mild	⊖ Moderate	⊖ Severe	⊖ Extreme		
P8. Stand	P8. Standing upright					
⊖ None	⊖ Mild	⊖ Moderate	⊖ Severe	⊖ Extreme		
P9. Walki	P9. Walking on a hard surface (asphalt, concrete, etc.)					
⊖ None	⊖ Mild	⊖ Moderate	⊖ Severe	⊖ Extreme		
P10. Walking on an uneven surface						
⊖ None	⊖ Mild	⊖ Moderate	⊖ Severe	⊖ Extreme		

Function, daily living

The following questions concern your physical function. By this we mean your ability to move around and to look after yourself. For each of the following activities please indicate the degree of difficulty you have experienced in the last week due to your hip.

A1. Descending stairs					
⊖ None	⊖ Mild	⊖ Moderate	⊖ Severe	⊖ Extreme	
A2. Ascen	A2. Ascending stairs				
⊖ None	⊖ Mild	⊖ Moderate	⊖ Severe	⊖ Extreme	
A3. Rising	A3. Rising from sitting				
⊖ None	⊖ Mild	○ Moderate	⊖ Severe	⊖ Extreme	



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A4. Standing					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					
A5. Bending to the floor/pick up an object					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					
A6. Walking on a flat surface					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					
A7. Getting in/out of car					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					
A8. Going shopping					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					
A9. Putting on socks/stockings					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					
A10. Rising from bed					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					
A11. Taking off socks/stockings					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					
A12. Lying in bed (turning over, maintaining hip position)					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					
A13. Getting in/out of bath					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					
A14. Sitting					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					
A15. Getting on/off toilet					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					
A16. Heavy domestic duties (moving heavy boxes, scrubbing floors, etc.)					
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme					



A17. Light domestic duties (cooking, dusting, etc.)				
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme				
Function, sports and recreational activities				
The following questions concern your physical function when being active on a higher level. The questions sho answered thinking of what degree of difficulty you have experienced during the last week due to your hip.	JId be			
SP1. Squatting				
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme				
SP2. Running				
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme				
SP3. Twisting/pivoting on loaded leg				
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme				
SP4. Walking on uneven surface				
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme				
Quality of Life				
Q1. How often are you aware of your hip problem?				
○ Never ○ Monthly ○ Weekly ○ Daily ○ Constantly				
Q2. Have you modified your life style to avoid activities potentially damaging to your hip?				
○ Not at all ○ Mildly ○ Moderately ○ Severely ○ Totally				
Q3. How much are you troubled with lack of confidence in your hip?				
○ Not at all ○ Mildly ○ Moderately ○ Severely ○ Extremely				
Q4. In general, how much difficulty do you have with your hip?				
○ None ○ Mild ○ Moderate ○ Severe ○ Extreme				
Overall Health				
In general, would you say your health is: Very good Good Fair Poor				
In general, would you say your quality of life is: O Excellent O Very good O Good Fair O Poor				



In general, how would you rate your physical health?	 Excellent Very good Good Fair Poor
In general, how would you rate your mental health, including your mood and your ability to think?	 Excellent Very good Good Fair Poor
In general, how would you rate your satisfaction with your social activities and relationships?	 Excellent Very good Good Fair Poor
In general, please rate how well you carry out your usual social activities and roles. (This includes activities at home, at work and in your community, and responsibilities as a parent, child, spouse, employee, friend, etc.)	 Excellent Very good Good Fair Poor
To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair?	 Completely Mostly Moderately A little Not at all
In the past 7 days How often have you been bothered by emotional problems such as feeling anxious, depressed or irritable?	 Never Rarely Sometimes Often Always
In the past 7 days How would you rate your fatigue on average?	 None Mild Moderate Severe Very severe
In the past 7 days How would you rate your pain on average?	 0 (No pain) 1 2 3 4 5 6 7 8 9 10 (Worst Imaginable Pain)



How often do you do or experience the following?							
	Never do this	Rarely do this	Sometimes do this	Often do this	Regularly do this as part of my routine		
I enjoy myself when I exercise.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc		
I perform strength training exercises twice a week.	0	0	0	0	0		
I am optimistic about the day.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	0		
I like to try new activities.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc		
l have a friend who l know energizes me.	0	0	0	0	0		
I have identified at least one activity that brings me joy and energy.	0	0	0	0	0		
I am involved with a group (activity, exercise class, art class, religious affiliation or the like)	0	0	0	0	0		

How often do you do or experience the following?							
	Never do this	Rarely do this	Sometimes do this	Often do this	Regularly do this as part of my routine		
l eat 4 fruits a day.	\bigcirc	\bigcirc	0	0	0		
l eat 5 or more vegetables a day.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc		
l know proper portions for protein, carbohydrates, and fats, and l eat those portions.	0	0	0	0	0		
I think about the food that I eat and ask myself if it is good for my body.	0	0	0	0	0		
l view food as fuel, as medicine, and enjoyment too.	\bigcirc	0	0	0	0		



How often do you do or experience the following?							
	Never do this	Rarely do this	Sometimes do this	Often do this	Regularly do this as part of my routine		
l set long-term goals for myself, share them with someone, and review them.	0	0	0	0	0		
l set monthly goals and share them with someone.	0	0	0	0	0		
l set weekly goals and share them with someone.	0	0	0	0	0		
l set daily goals for myself and keep myself accountable for them.	0	0	0	0	0		

During the past month, how often did you drink each of the following beverages. A serving is one 8-ounce glass or can of the drink or beverage. If you drink a 16-ounce bottle, please count that as 2 servings.

	Less than once per week	Once per week	2 to 4 times per week	Nearly daily or daily	Twice or more per day
100% fruit juice (e.g. apple, grape, orange)	0	0	0	0	\bigcirc
Soda with sugar (e.g. Coke, Pepsi, Sprite)	0	0	0	0	0
Other drink with sugar (e.g. sweetened iced tea, gatorade, fruit punch, fruit cocktail)	0	0	0	0	0
Diet soda (e.g. Diet Coke, Diet Pepsi, Diet Sprite)	0	0	0	0	0
Other flavored drink without sugar (e.g. sugar-free iced tea, Crystal Light)	0	0	0	0	0

15 During the past month, on average, how many times did you eat breakfast, lunch, or dinner from fast food restaurants such as McDonald's, Burger King, Wendy's, Arby's, Pizza Hut, or Kentucky Fried Chicken? \bigcirc Never \bigcirc 1 to 3 times in the past month

○ 1 or 2 times per week

○ 3 or 4 times per week

5 or 6 times per week

 \bigcirc 7 or more times per week

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	Less than once	Once per week		Nearly daily or	Twice or more
	per week	\frown	week	daily	per day
Whole milk dairy foods (whole milk, hard cheese, butter, ice cream)	0	U	0	0	0
Low-fat milk products (for example, low-fat/skim milk, yogurt, cottage cheese)	0	0	0	0	0
Whole grain foods (e.g. whole grain breads, brown rice)	0	0	0	0	0
Pasta, rice, noodles	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Baked products (donuts, cookies, muffins, crackers, cakes, sweet rolls, pastries)	0	0	0	0	0
Deep fried foods (deep fried chicken, fish or seafood, french fries, onion rings)	0	0	0	0	0
Vegetables (fresh, frozen, or canned)	0	0	0	0	0
Fruit (fresh, frozen, or canned)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Fish (not fried)	0	\bigcirc	0	0	0
Do you currently smoke tobacco o than daily, or not at all?	u currently smoke tobacco on a daily basis, less laily, or not at all?			than daily	
How often do you have a drink containing alcohol?			 ○ Never ○ Mon ○ 2 to 4 times a n ○ 2 to 3 times a w 	nonth	ore times a
How many drinks containing alco typical day when you are drinking		on a	<pre> ○ 1 or 2 ○ 3 or ○ 8, or 9 ○ 10 o </pre>		
During the past month, on averaged ay did you spend watching TV of					
			(hours per day)		
During the past month, on average, how many hours per day did you spend using the computer? (Do not include time spent at work)			(hours per day)		
During the past month, on average, how many hours per week did you spend engaged in walking for leisure?			(hours per week)		



21	During the past month, on average, how many hours per week did you spend engaged in light or moderate		
	recreational activities or sports such as bowling, yoga, stretching classes, skating, or other similar activities? (Do not include walking.)	(hours per week)	
21	During the past month, on average, how many hours per week did you spend engaged in vigorous recreational activities or sports such as jogging, swimming, cycling, aerobic dance, skiing, or other similar activities?	(hours per week)	-
21	During the past month, on average, how many hours per week did you spend engaged in resistance training or weight lifting?	(hours per week)	
22	Do you use any tracking or wearable device to measure your level of physical activity?	○ Yes ○ No	
23	During the past month, how many hours of sleep do you get in an average 24 hour period?		
		(hours per day)	-
	How do you feel you were able to achieve the	following goals during this study?	
	Did not select this	Did not Achieve Somewhat Achieve	Fully Achieve

	Did not select this goal	Did not Achieve	Somewhat Achieve	Fully Achieve
Increase vegetables and fruits intake.	0	0	0	0
Increase whole grains intake.	\bigcirc	\bigcirc	\bigcirc	0
Decrease daily calorie count	\bigcirc	\bigcirc	0	0
Decrease fast-food intake.	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Decrease sugar-sweetened beverages (SSB) intake.	0	0	0	0
Increase number of steps/day.	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Increase moderate physical activity.	0	0	\bigcirc	0
Decrease screen time.	\bigcirc	\bigcirc	\bigcirc	0
Optimize sleep duration.	0	\bigcirc	0	0
Other.	\bigcirc	0	\bigcirc	0

Other goal:



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Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
0	0	0	0	0
0	0	0	0	0
	5,		5, 5	5, 5

three months?

3

⊖ No

If you saw a registered dietitian or nutritionist in the last three months, how would you describe your experience? Please skip this question if you did not see a dietitian.

	•			
	Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
The registered dietitian (RD) was helpful in selecting and setting goals for myself.	0	0	0	0
The RD was helpful to keep me motivated.	0	0	0	0
The RD was helpful to measure and monitor my lifestyle goals.	0	0	0	0
The RD helped me to face problems and find solutions.	0	0	0	0
If given the choice, I would have preferred meeting with the RD remotely by video, phone, or in-app rather than doing so in person.	0	Ο	0	0

