


FORCE 117-32528

## RESULTS

### Field Trial at Tretton37 using Back App Equipment Baseline, First and Second follow up surveys

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## Field Trial with Tretton37 employees using Back App Equipment

The data presented here is generated from a field trial executed in the company Tretton37, Sweden. The field trial consists of 3 surveys, one prior to the use of Back App 2.0 and Back App 360, and two follow up surveys. The First follow up was performed after 6 weeks and the Second follow up after 6 months.

When reading this presentation, it is highly recommendable to have a copy of the questionnaires at hand. Due to the nature of the survey design, some questions did vary in their formulations across the Baseline, First and Second follow up.

All participant's responses to all questions will be presented here, and it is important to demonstrate caution on the interpretation of the results and possible trends spotted. The limitations in interpretations are presented at the relevant tables below.

### Background data

Initially the field trial included 34 employees, but for various reasons 7 people have been excluded from the study, leaving 27 participants, whom have all completed the BASELINE, FIRST FOLLOW UP (after 6 weeks) and the SECOND FOLLOW UP (after 6 months).

As shown, some  $\frac{3}{4}$  of the participants are male, 1 person labeled "other".

	No. of participants	Percent
Female	6	22,2
Male	20	74,1
Other	1	3,7
Total	27	100

The average age is 35,6 years, the youngest being 26 years and the oldest 49 years.

67% of the participants indicates their height as one between 160 cm and 182 cm. The rest is taller than 182 cm:

	No. of participants	Percent
Lower than 160 cm	0	0,0
Between 160 and 182 cm	18	66,7
Taller than 182 cm	9	33,3
Total	27	100,0

The overall majority, 90%, indicates their weight as being between 50 and 125 kg:

	No of participants	Percent
Less than 50 kg	1	3,7
Between 50 and 125 kg	25	92,6
More than 125 kg	1	3,7
Total	27	100,0

## Which type of chair did people use prior to the field trial?

At the baseline measure, we asked people the following question:

**What type of chair have you been using before the upcoming Back App test period?**

**One choice only.**

- Standard office chair with back rest
- Standard office chair with back rest and arm rest
- Elevated office stool with foot ring
- Perching stool

**Other (please specify)**

The responses are shown in the following table:

	No of participants	Percent
Standard office chair with back rest	3	11,1
Standard office chair with back and arm rest	23	85,2
Elevated office stool with foot ring	0	0,0
Perching Stool	1	3,7
Total	27	100,0

## How do participants rate their old chair?

We also asked them to rate their old chair:

**How would you rate your current chair?**

Very comfortable, good      Quite comfortable      Comfortable, fair      Quite uncomfortable      Very uncomfortable, poor



Other (please specify)

The responses where:

	No of participants	Percent
Very comfortable, good	1	3,7
Quite comfortable	10	37,0
Comfortable, fair	13	48,1
Quite uncomfortable	3	11,1
Very uncomfortable, poor	0	0,0
Total	27	100,0


Note that **3 people** rate their chair as “**quite uncomfortable**”. Using a chair with that experience for many hours every day should raise concern.

## How many hours do you **sit** during a normal work day?

This question varied slightly from **BASELINE** to **FIRST** and **SECOND FOLLOW UP**  
Please refer to the questionnaire printouts for inspection of the questions asked.

Think of a normal/average work day:  
How many hours per day are you **SITTING** at your computer work station?

0-2 hours                      2-4 hours                      4-6 hours                      More than 6 hours



	No of participants BASELINE	Percent	No of participants FIRST Follow up	Percent	No of participants SECOND Follow up	Percent
0-2 hours	3	11,1	4	14,8	8	29,6
2-4 hours	1	3,7	5	18,5	3	11,1
4-6 hours	12	44,4	10	37,0	10	37,0
More than 6 hours	11	40,7	8	29,6	6	22,2
Total	27	100,0	27	100,0	27	100,0

This pattern **did not change in any significant** way throughout the field trial period.

## How many hours do you **stand** during a normal work day?

This question varied slightly from **BASELINE** to **FIRST** and **SECOND FOLLOW UP**  
Please refer to the questionnaire printouts for inspection of the questions asked.

Think of a normal/average work day:

How many hours per day are you **STANDING** at your computer workstation?

0-1 hour      1-2 hours      2-3 hours      3-4 hours      More than 4 hours



	No of participants BASELINE	Percent	No of participants FIRST Follow up	Percent	No of participants SECOND Follow up	Percent
0-1 hour	11	40,7	14	51,9	16	59,3
1-2 hours	8	29,6	4	14,8	3	11,1
2-3 hours	4	14,8	4	14,8	2	7,4
3-4 hours	1	3,7	4	14,8	4	14,8
More than 4 hours	3	11,1	1	3,7	2	7,4
Total	27	100,0	27	100,0	27	100

The pattern in time spent standing **did not change in any significant** way throughout the field trial period.

## How **often** have you experienced pain in the upper body?


This question varied slightly from **BASELINE** to **FIRST** and **SECOND FOLLOW UP**  
Please refer to the questionnaire printouts for inspection of the questions asked.

How often have you experienced pain in either the

- back
- shoulder(s)
- neck
- head
- arm(s) or
- hand(s)

at work during the past 6 months?

Never, almost never      Once a week      2-3 days a week      Almost every day



	No of participants BASELINE	Percent	No of participants FIRST Follow up	Percent	No of participants SECOND Follow up	Percent
Never, almost never	8	29,6	11	40,7	11	40,7
Once a week	9	33,3	9	33,3	12	44,4
2-3 days a week	5	18,5	5	18,5	3	11,1
Almost every day	5	18,5	2	7,4	1	3,7
Total	27	100,0	27	100,0	27	100



Looking at the FIRST follow up column, 3 people have moved out of the category “Almost every day” (4 people when 6 months past) and the number of participants in the “Never, almost never” has increased with 3. The people leaving the highest category are not the same as those entering the lowest, though albeit they have all 4 entered a lower category.

To check for the trend of participants experiencing pain in various areas less frequently when using Back App for 6 weeks (FIRST follow up), we have used the Wilcoxon Signed Ranks Test.

**Ranks**

		N	Mean Rank	Sum of Ranks
How often pain (FIRST) vs How often pain (BASELINE)	Negative Ranks	10 <sup>a</sup>	6,60	66,00
	Positive Ranks	2 <sup>b</sup>	6,00	12,00
	Ties	15 <sup>c</sup>		
	Total	27		

**a. How often pain (FIRST) < How often pain (BASELINE)**

**b. How often pain (FIRST) > How often pain (BASELINE)**

**c. How often pain (FIRST) = How often pain (BASELINE)**

*The Wilcoxon signed ranks test:  $Z=-2,3$ ,  $p<0,05$  ( $p=0,020$ ; 2-tailed).*

As shown the “negative ranks” = 10, which means that 10 participants have indicated to experience pain **less frequently** after using Back App for 6 weeks compared to their frequency of pain experience prior to the use of Back App equipment. 15 participants experience no difference and 2 participants a higher frequency in pain experiences. The tables tell us nothing about the ‘amount’ or level of pain experienced. However, this is a statistically significant result (as opposed to a random pattern) and it could indicate, that a fair amount of people (37%, 10 out of 27, approx. 1 out of 3) tend to experience pain **less frequently** in the upper body when using Back App for 6 weeks, compared to the use of ordinary office chairs.

Please note, that the time frame in question differs between baseline and first follow up. In the baseline, we ask people to think back 6 months and only 6 weeks in the first follow up questionnaire. This might have an influence on the accuracy of the given responses since it is harder to remember the “history of pain” through 6 months rather than through 6 weeks. However, the table and the Wilcoxon test shows the same pattern after using Back App equipment for 6 months. **The trend is the same whether we ask people after 6 weeks or 6 months.**


## The experienced level of lower back pain

This question varied slightly from **BASELINE** to **FIRST** and **SECOND FOLLOW UP**  
Please refer to the questionnaire printouts for inspection of the questions asked.

Do you experience lower back pain during a normal work week?

Very little lower back pain
Some lower back pain
Quite a bit of lower back pain
A lot of lower back pain

No lower back pain
pain
pain
back pain
pain



Note that this question (at **BASELINE**) aims to the level of experienced pain in the lower back in general, and not with reference to the “past 6 months”. The responses where:

	No of participants BASELINE	Percent	No of participants FIRST Follow up	Percent	No of participants SECOND Follow up	Percent
No lower back pain	10	37,0	9	33,3	11	40,7
Very little lower back pain	6	22,2	10	37,0	7	25,9
Some lower back pain	8	29,6	6	22,2	8	29,6
Quite a bit of lower back pain	1	3,7	2	7,4	1	3,7
A lot of lower back pain	2	7,4	0	0,0	0	0,0
Total	27	100,0	27	100,0	27	100,0

Even though the number of participants with an overall experience of pain in the lower back characterized as “Very little lower back pain” increases from 22,2 % to 37,0 % the trend is not statistically significant (tested with Wilcoxon Signed Ranks Test,  $p=0,22$ ). From this question concerning **lower back pain specifically**, it is not possible to conclude a positive (nor negative) effect of the use of Back App (during either a period of 6 weeks or 6 months).

However, as shown with the **red marking** in the table above, two persons indicated that they experienced “A lot of lower back pain”, prior to the use of Back App equipment. No participants in the follow ups experienced this high level of lower back pain. The table above could indicate that people with a lot of lower back pain, find the Back App equipment very helpful (i.e. pain-relieving). The more the pain, the more the gain when using Back App 2.0?

## A significant reduction in the number of painful areas on the body

### Baseline:

Which of the following have you experienced during a normal work week that included pain? Multiple choices allowed.

<input checked="" type="checkbox"/> Lower back pain/stiffness	→	1 point
<input type="checkbox"/> Shoulder and neck pain/stiffness		
<input checked="" type="checkbox"/> Headaches during or after work	→	1 point
<input checked="" type="checkbox"/> Arm and/or hand pain	→	1 point
<input type="checkbox"/> None of the above		
<input type="checkbox"/> Other (please specify)		

Total: 3 point

In this question participants can check several boxes to indicate the number (and which) painful areas on the upper body. In the example above a participant has indicated three areas, which translates into a "pain score" of three. Thus, it is possible for a participant to achieve a pain score of 0 (zero) through 4 (max). Reviewing the comments made in the "other"-category could of course qualify for an extra point, however no comments have been noted in the data collection that gave reason to add a point. The points achieved where:

The same question during FIRST and SECOND follow up looked like this:

This question regards the period you have been using Back App 2.0 and Back App 360.

Which of the following have you experienced during a normal work week that included pain? Multiple choices allowed.

- Lower back pain/stiffness
- Shoulder and neck pain/stiffness
- Headaches during or after work
- Arm and/or hand pain
- None of the above
- Other (please specify)

1 point

Total: 1 point

As was the case with the Baseline questionnaire, participants could make use of several check boxes in the First and Second follow up. The example above shows one participant's follow-up pain score of 1.

The points achieved where:

	No of participants BASELINE	Percent	No of participants FIRST Follow up	Percent	No of participants SECOND Follow up	Percent
Pain score = 0	1	3,7	8	29,6	10	37,0
Pain score = 1	12	44,4	8	29,6	6	22,2
Pain score = 2	4	14,8	8	29,6	8	29,6
Pain score = 3	7	25,9	3	11,1	2	7,4
Pain score = 4	3	11,1	0	0,0	1	3,7
Total	27	100,0	27	100,0	27	100,0

At **BASELINE**, it is noteworthy that only one participant indicates to be without any pain (Pain score = 0) in the upper body during a normal week.

The top scorer among the painful areas was "Shoulder and neck pain/stiffness" (box checked 18 times), follow by "Lower back pain/stiffness" (14 times), "Headaches during or after work" (10 times) and "Arm and/or hand pain" (8 times checked).

At **SECOND** follow up: Note that the number of participants with a "pain score" of zero has increased to 10 people.

The top scorer among the painful areas was "Shoulder and neck pain/stiffness" (13 times) followed by "Lower back pain/stiffness" (11 times checked), "Headaches during or after work" (7 times) and "Arm and/or hand pain" (1 time checked).

The trend seems to be that participants indicate a lower number of painful areas both in the first and second follow up. This trend is supported using Wilcoxon Signed Ranks Test (next page):

**Ranks**

	N	Mean Rank	Sum of Ranks
PainScore_FIRST - Negative Ranks	14 <sup>a</sup>	9,64	135,00
PainScore_Baseline Positive Ranks	3 <sup>b</sup>	6,00	18,00
Ties	10 <sup>c</sup>		
Total	27		

- a. PainScore\_FIRST < PainScore\_Baseline
- b. PainScore\_FIRST > PainScore\_Baseline
- c. PainScore\_FIRST = PainScore\_Baseline

*Wilcoxon signed ranks test: Z=-2,87, p<0,05 (p=0,004; 2-tailed).*

As shown the “negative ranks” = 14, which means that 14 participants experience pain in a **fewer** upper body areas after using Back App for 6 weeks compared to their experienced number of painful areas prior to the use of Back App equipment. 10 participants experience no difference and 3 participants a higher number of painful areas. The tables tell us nothing about the ‘amount’ or level of pain experienced. However, this is a statistically significant result (as opposed to a random pattern) and strongly indicates, that a lot of people (approx. 52%, 14 out of 27) tend to experience pain in fewer areas of the upper body when using Back App for 6 weeks, compared to the use of ordinary office chairs.

Since this field trial did not include a control group, caution must be taken when trying to conclude on the causes of the reduction in pain score. We cannot know for sure, whether other factors have contributed to the effect registered (confounding variables). The lower number of painful areas, could stem from people going more outdoors during spring compared to winter time. The Baseline was completed during January and the first follow up during March. Also, we do not know what else has happened in the company in question here (Tretton37); Did any organizational changes happen that could explain a reduction in the experienced number of painful areas, etc.?

Interestingly, the pattern was the same at the Second follow up (next page)

**Ranks**

	N	Mean Rank	Sum of Ranks
PainScore_SECOND - Negative Ranks	15 <sup>a</sup>	10,20	153,00
PainScore_Baseline Positive Ranks	3 <sup>b</sup>	6,00	18,00
Ties	9 <sup>c</sup>		
Total	27		

a. PainScore\_SECOND < PainScore\_Baseline

b. PainScore\_SECOND > PainScore\_Baseline

c. PainScore\_SECOND = PainScore\_Baseline

*Wilcoxon signed ranks test: Z=-3,03, p<0,05 (p=0,002; 2-tailed).*

## The management of pain

This question varied slightly from BASELINE to FIRST and SECOND FOLLOW UP  
Please refer to the questionnaire printouts for inspection of the questions asked.

**If you experience pain during a normal work week:  
How often do you eat "pain killers" to reduce this pain?**

Never, almost never    1-2 days during the week    3-4 days during the week    5-6 days during the week    All week    Not relevant to me

Responses to this where:

	No of participants BASELINE	Percent	No of participants FIRST Follow up	Percent	No of participants SECOND Follow up	Percent
Never, almost never	22	81,5	19	70,4	19	70,4
1-2 days during the week	4	14,8	5	18,5	4	14,8
3-4 days during the week	0	0,0	0	0,0	0	0
5-6 days during the week	0	0,0	0	0,0	0	0
All week	0	0,0	0	0,0	0	0
Not relevant to me	1	3,7	3	11,1	4	14,8
Total	27	100,0	27	100,0	27	100

Note that the category "Not relevant to me" is included, so that participants not experiencing any pain or not wanting to answer the question, can give a meaningful answer to this question as well.

The pattern in responses across the field trial stays the same, making no additional analysis meaningful.




## How often do you feel tired?

This question varied slightly from **BASELINE** to **FIRST** and **SECOND FOLLOW UP**  
Please refer to the questionnaire printouts for inspection of the questions asked.

**How often do you feel tired at the end of a normal work day?**

Frequently/every day      Quite often      Every now and then      Infrequently      Never



	No of participants BASELINE	Percent	No of participants FIRST Follow up	Percent	No of participants SECOND Follow up	Percent
Frequently/every day	3	11,1	2	7,4	3	11,1
Quite often	10	37,0	8	29,6	9	33,3
Every now and then	7	25,9	12	44,4	8	29,6
Infrequently	5	18,5	4	14,8	5	18,5
Never	2	7,4	1	3,7	2	7,4
Total	27	100,0	27	100,0	27	100,0

Analyzing the data reveals a very random pattern in the number of participants who experienced an increase/decrease or tie in the number of days where they feel tired. This leads us to conclude that there is no significant reduction nor increase in the number of days where people feel tired when they use Back App equipment.


## Grading the ability to work

This question varied slightly from BASELINE to FIRST and SECOND FOLLOW UP  
Please refer to the questionnaire printouts for inspection of the questions asked.

During a normal week:

How would you grade your productivity and mental sharpness at work?

Low
Somewhat low
Moderate
Somewhat high
High



To improve the meaningfulness and proper English, the formulation of this question was changed prior to the follow up survey (“How would you grade your ability to work”). Of course, asking participants to answer two differently formulated questions calls for caution when comparing the responses, even though the overall meaning of the questions would seem similar. The response patten from the baseline:

	No of participants BASELINE	Percent	No of participants FIRST Follow up	Percent	No of participants SECOND Follow up	Percent
Low	0	0,0	0	0,0	1	3,7
Somewhat low	2	7,4	0	0,0	0	0,0
Moderate	5	18,5	1	3,7	2	7,4
Somewhat high	11	40,7	11	40,7	9	33,3
High	9	33,3	15	55,6	15	55,6
Total	27	100,0	27	100,0	27	100,0

Assuming consistency in the meaning of the two (differently formulated) questions (baseline vs First and Second follow up), we have looked at each individuals responses and ranked them:

**Ranks**

		N	Mean Rank	Sum of Ranks
Ability_work_FIRST vs	Negative Ranks	1 <sup>a</sup>	11,00	11,00
Mental_sharpness_	Positive Ranks	12 <sup>b</sup>	6,67	80,00
Baseline	Ties	14 <sup>c</sup>		
	Total	27		

- a. Ability\_work\_FIRST < Mental\_sharpness\_Baseline
- b. Ability\_work\_FIRST > Mental\_sharpness\_Baseline
- c. Ability\_work\_FIRST = Mental\_sharpness\_Baseline

*Wilcoxon signed ranks test:  $Z=-2,50$ ,  $p<0,05$  ( $p=0,012$ ; 2-tailed).*

As shown at note b., the "Positive ranks" = 12, which means that 12 participants experience their ability to work as higher at the time of the first follow up, than was the case at baseline. 14 participants experience no difference and 1 participant scored lower at the first follow up. This is a statistically significant result (as opposed to a random pattern) and it seems to indicate, that a fair amount of people (approx. 44%, 12 out of 27) tend to experience their ability to work as higher when using the Back App equipment, compared to a situation using an ordinary office chair. However, caution must be taken here: The question answered are not directly comparable, and as mentioned before this field trial did not include a control group. This limits the power of any conclusion regarding cause and effect: We do not know if eg. organizational changes during the period between baseline and the first follow up could explain the pattern, or some other confounding variable is having an influence. Also, no control group was part of the study design.

Unfortunately, the statistical significance is **not identified** at the Second follow up:

**Ranks**

	N	Mean Rank	Sum of Ranks
Ability_work_SECOND vs Negative Ranks	4 <sup>a</sup>	8,75	35,00
Mental_sharpness_ Positive Ranks	11 <sup>b</sup>	7,73	85,00
Baseline Ties	12 <sup>c</sup>		
Total	27		

a. Ability\_work\_SECOND < Mental\_sharpness\_Baseline

b. Ability\_work\_SECOND > Mental\_sharpness\_Baseline

c. Ability\_work\_SECOND = Mental\_sharpness\_Baseline

*Wilcoxon signed ranks test: Z=-1,46, p=0,15; 2-tailed.*

## Would you like to change your regular chair to a Back App 2.0?

Would you like to replace your regular office chair with Back App 2.0 and Back App 360?

Yes

No

For obvious reasons this question was not asked in the baseline survey, but only and the first follow up. Based on the comments given (shown below), we will include a "Not sure yet" category when the second follow up is deployed. The response pattern looks like this:

	No of participants FIRST Follow up	Percent	No of participants SECOND Follow up	Percent
Yes	13	48,1	16	59,3
No	14	51,9	11	40,7
Total	27	100,0	27	100,0

Which, after 6 weeks is approximately fifty-fifty. If we divide participants by gender, the response pattern does not change – it is still fifty-fifty within the gender categories. The trend towards "Yes" increases somewhat after usage of Back App for 6 months. 1 person changed from yes to no, 4 people from no to yes.

Of course, the responses given should be seen in the light of "who is paying". The respondents here are not paying for a chair out of their own pocket. Maybe the response pattern would be different if they were to pay themselves.

## Yes or no - elaborations

Please help us understand why you selected the answer above:  
(why yes or why no)

On the following pages we have divided the statements into those stemming from yes or no indications, respectively. Note that all statements (typos and misspellings included) are the originals.

Please, also be aware that even though all statements are numbered, it is not possible to view equal numbered lines of statements as stemming from the same person.

The statements shown are merely included to give a flavor of the thoughts and reflections from the pro- and con-users of Back App equipment.

## Yes – FIRST FOLLOW UP - I would like to change my regular chair to Back App 2.0

1. Feel it helps me sit in a better position, and motivates me to stand up more often and take more micro-pauses.
2. Feel much better after usin BA chair
3. Feels better in my back after working a full day.
4. Had no issues afaik with it, seems ok, guess it's good for the body.
5. Haven't been missing my ordinary chair even once since I switched
6. I can not sit on regular office chairs. I get lower pack pain when sitting on regular chairs in meetings, in the kitchen area or at home. I try to avoid it as it damages me almost instantaneous due to previous problems with back before using back app. I cant imagine doing my work properly without backapp.
7. I feel stronger in my back even I felt tired in the beginning
8. I have lower- and mid-back issues and the tools helps me maintain a better posture
9. I like sitting and standing on them, and it gives a bit of exercise, variation during work day and less static slouching.
10. I think it's a great companion. Great to sit on and exercise your gut. And i get reminded to stand up. Moore than i did before.
11. I think it is better for my health.
12. It feels you naturally are reminded to think about and work on your posture.
13. Jag känner starkt att jag sitter med bättre hållning. Stolen bidrar också till att jag står upp oftare.
14. Man sitter bättre och märker att man rätar på ryggen.
15. Would need better knowledge of fundamental ergonomics together with coaching on how to best use BackApp, maybe with a revisit after 1-2 weeks of testing

## Yes – SECOND FOLLOW UP - I would like to change my regular chair to Back App 2.0

1. Decreased pain and getting more conscious around the seating positions
2. I prefer it as it helps me switch between standing and sitting more easily and i do not have any problems with my back.
3. nice
4. Love the chair and balance board. Forces me to have a better posture and think about the way I sit
5. The chair helps me sit in the right position and it has also contributed to me standing way more often than before. Now I either stand or use the back app by my desk. I never sit on a regular chair at my desk anymore
6. Better posture while sitting and leads to a bit more standing than when sitting in a regular chair all day.
7. The Back App products are better than a regular chair although not a silver bullet for getting rid of my problems
8. Den får mig att sitta med bättre hållning.

9. I do feel a tiredness in my legs after a day of using the Back App chair. But at the same time I feel my posture is improved and I'm sitting more correctly.
10. I feel stronger in my back
11. With a background in having severe back problems, having put a lot of time getting a strong and functional body again - i just simply cant go back to where I was before because it will wreck my mind and body
12. I think it helps me to keep attentive.
13. Feels better for the back when I'm using it. I get a better posture without any discomfort
14. It's providing better ergonomics.
15. I like it! :) good variation, a little bit of exercise and more standing up is good for me
16. While I do agree that the Back App chair helped improve things like neck pain, I got other problems from it instead. I got extreme pain in my hips for example, I did not like that you had to sit with you legs so "spread out". I have quite narrow hips so this position didn't work for me at all. My thighs also felt numb after sitting on the chair.



## No – FIRST FOLLOW UP - I would not change my regular chair to Back App 2.0

1. Don't want back app all the time. Hard to learn forward or back
2. For me the best solution has been to switch between the Back App chair, the standing board and a regular chair. Variety is key
3. I don't think it's comfortable and I don't think I have a better posture when using it. So I don't really see anything on the plus side.
4. I like Back App 360 but the chair is a little annoying to use and find a good position.
5. I like the chair for the most part, what I don't like is that I have to sit with my legs very widely spread. This doesn't feel very comfortable for me as I have quite narrow hips, so this gives me pain in my hips.
6. I like the ergonomics of my regular office chair.
7. I like to switch between Back App and my regular chair + standing.
8. I think it'n comfy and a bit novel, but I didn't have any problems with my previous chair either.
9. If I don't use it every day (stand for a whole day and adjacent to weekend) I usually get pain in my tailbone. Sitting for to long is not comfortable for the groin.
10. If the seat was a bit more comfortable I would love to change it out. The problem is the back end of the seat pushing me into the front and that is not comfortable.
11. it makes the genital area tingly and uncomfortable, i have talked with other people that are using it has the same problem.
12. Not replace entirely since some days i need to sit on a normal chair for tasks. Otherwise i use the BackApp more than my regular one nowdays.
13. Not sure if it is yes or no yet
14. This chair gives me a better posture than my previous one.

The "no" elaborations bring to mind a methodological problem: We do not know for sure, if people actually use the Back App equipment all the time. Have a look at comment no. 2 above. How much time is spent using the Back App? The interpretation of all results rely heavily on an assumption that people do use the Back App 2.0 and 360. Likewise, that people do not switch back to their old, regular office chair during the day.

Not all comments seem relevant in the no-commentary. Please read comment no. 14, for instance.

## No – SECOND FOLLOW UP - I would not change my regular chair to Back App 2.0

1. While I do agree that the Back App chair helped improve things like neck pain, I got other problems from it instead. I got extreme pain in my hips for example, I did not like that you had to sit with you legs so "spread out". I have quite narrow hips so this position didn't work for me at all. My thighs also felt numb after sitting on the chair.
2. If you are not using it actively as a training chair, it's not that comfortable, so I usually tend to stand more now than before
3. I don't think I want only a Back App chair, it would be nice to be able to use a normal chair some days
4. I like to rotate my position from standing, to normal sitting, to backapp sitting.
5. I don't think it's very comfortable to sit on (too hard by the balls). It's a decent chair otherwise and better compared to my normal chair but worse than some I've tried before in comfort. So I would prefer another chair
6. I'm more comfortable with a "regular" chair.
7. After months i still feel tingly, uncomfortable in some gender specific places that really bothers me.
8. It just didn't suit me
9. Not relevant for me
10. I feel comfortable with my regular office chair
11. The chair is not comfortable for the gender.

## Please tell us about your experience with Back App 2.0/360

Please tell us about your experience with Back App 2.0 and Back App 360 so far:



Again, it makes sense to divide the responses between those in favor of switching chairs and those not keen on the idea.

## Yes – FIRST follow up (elaborations on the general experience with Back App)

1. Backapp is as essential as my computer. I wish my desk could raise a bit more because it's a bit low when using the standup pad.
2. Feel stronger in my back
3. First week I experienced pain in different areas, both upper and lower body. Tried to sit shorter periods on the Back App and regular chair/sofa, worked my way up to using only Back App/standing. Have been raising it to the red zone.
4. Good, but I have used my normal chair also.
5. Great
6. I have marked that I have quite frequent pains in shoulder, neck and head. I have had these issues on and off for the past four years. I am gradually getting better due to going to the gym exercising with PT and on my own, getting regular massages, seeing a "Naprapat" and doing yoga. The Back App 2.0/360 is part of that bigger process but no solution on their own.
7. I like it!
8. I like it. It takes a bit getting used to, but it's nice. Not revolutionary (for me at least), and no major changes, but I can feel that my lower back gets a bit of a work out, and it helps my posture somewhat I think.
9. Jag är positiv över stolen och vad den gör med min sittning.
10. Lack of good ergonomics makes me still feeling of a workday in regards of stiffness, pain and tiredness, anyhow, I'd never change back to an ordinary chair. Would appreciate emphasis given on not being a one-stop-solution, bad ergonomics is still ergonomics, no matter back-app or not

11. Mycket bra stol, känner att den hjälper mig. Dock har jag haft ont i ryggen under senaste månaden pga innebandy. Därav vissa svar i denna undersökning.
12. nothing extraordinary, the 360 feels nicer than other products such as rubber mats or balancing boards.
13. One thing i felt was that i got a kind of pain in the groin area after sitting on it for a while. Not that painful but still noticeable. Other than that? Great work and keep on improving the product! Because it's great!
14. Overall a positive experience. The only downside is that it's a bit uncomfortable in the region around the scrotum compared to an everyday office chair.
15. Was rough first couple of days until I got used to it. Now I feel much better using it then regular chair at the office.

## Yes – SECOND follow up (elaborations on the general experience with Back App)

1. A positive experience with good results health wise. The only complaint would be that the chair is somewhat straining on the groin/inner thigh area.
2. I have loved it except for one thing, the seat is to high in the back and this has made me slide down towards the front and this has been unpleasent, making me adjust my seating often.
3. great surprice
4. Only good experience while using
5. Same as above. It has contributed to a better way of sitting for me and also encourage me tpo stand more when I get tired of sitting on the back app. The only thing I have a slight problem with is to get on it ;-)
6. Have used the back app chair frequently and raised the chair to the red lines.. sometimes lowered it to the green again. Sometimes I have alternated with a regular chair. Have not used the standing-board that much.
7. I enjoy them both very much. Although I sometimes miss sitting down and leaning back into a nice reclinable Kinnarps office chair.
8. Den är skön att sitta på, ger mig bättre hållning och jag blir mer medveten om att ha bättre hållning och sitta bättre.
9. I've changed from sitting slouched, or half laying down in a normal office chair to a better position. Even if I'm still slouching a bit at times, I'm now more aware of it.
10. I still sit to much but I feel stronger in my back
11. I enjoyed it and I will keep it :) Im thankful that I had the ability to evaluate back app. It clearly exceeds other "ergonomic chairs" I used in the past.
12. Overall good, but it is hard to sort of lean back and think about a problem. On a day of muscular tiredness, it can feel quite awkward to sit on, since I fail to keep my posture and end up sitting with a curved back, propped up on one of the edges of the stool.

13. Its been a good experience, haven't used it now for a couple of months due to vacation etc but felt good when I used it. will continue to use when I'm back from parental leave.
14. I have had a positive experience. Mostly used the stand boards and sometimes the chair. A little bit annoying getting on and off the chair and storing it when using the stand board. Can't think of any other negative or positive experiences.
15. I've used them daily and enjoy them, I think they help my back but at least not sitting in the same chair in the same way every day has been beneficial to me
16. I've used them daily and enjoy them, I think they help my back but at least not sitting in the same chair in the same way every day has been beneficial to me

## No – FIRST follow up (elaborations on the general experience with Back App)

1. As I mentioned above, I get a pain in my hips. I really like to stand with the balance board though.
2. Hard at the beginning but works great now
3. I like how my back get straighter but it's a bit too much sitting on it all day. I've noticed it generated static electricity..
4. I like to use them from time to time.
5. i makes me sit more straight but i wasn't able to judge the pros and cons.
6. It's been good! I have no particular feedback.
7. It has worked ok, but the back of the seat needs adjustment.
8. No problems with the 360, used it almost everyday. Some aches in the feet after many hours of use.
9. Not bad, but also not super good
10. Not sure if it is yes or no yet
11. Not that good
12. Pretty decent except for the discomfort. Every chair I've sat in is causing some pain/discomfort sooner or later. At the beginning i rocked around on it a lot more and I felt that I was getting some exercise and strengthening my back, which is good. Did not like the wheels on it so I removed them after just 2 weeks or so. I really like the whipping board for standing.
13. This chair gives me a better posture than my previous one.
14. Very positive sofar. Never been person who is standing but now i do it more or less every day and prefer the backapp over my regular one. But having all three choices is pefect for me at the moment.

## No – FIRST follow up (elaborations on the general experience with Back App)

1. I really like the idea of the chair, but the fact that you sit with spread legs is a deal breaker for me. It doesn't feel comfortable for me at all. I really like the Back App 360 though.
2. I have not used it by and rocked around on it, just been sitting on it for the most part, and when just sitting on it, it's not that comfortable. I tend to get a bit of an itchy feeling on my groin (like the legs almost fall a sleep). When I do sit and rock around on it, I feel that it helps with the lower back pain. Also when actively thinking about sitting straight also helps, but usually when your very into your work, you don't want to think about how to sit or that you should move around. Bec
3. It was unusual in the beginning but quickly got better. It is sometimes hard to choose between using the wheels or not and I can feel that I sometimes lend over the desk and support some of my weight on my arms.
4. Very positive. Was sceptical at first but didn't take long until it was the preferred sitting choice when i need to be as most productive. It encourages you to work rather than leaning back on a normal chair that gets you into a more relaxed feeling which makes you less productive.
5. You do get used to it. It's quite discrete which is nice from an aesthetic point of view but since not everyone is using them it looks a bit off. I am sure it might be helpful for those that have pain normally, but I am not one of them and for me if anything it's made it worse.
6. Haven't used it that much.
7. I haven't used stand that much mostly chair. it probably helped my posture but the tingly, uncomfortable feel is worse and doesn't get better with time. After all these months i'm still not comfortable. i will probably stop using it in a short while.
8. Good [but it "just didn't suit me"]
9. Not much experience
10. I felt more comfortable using the Back App 360 than using the Back App 2.0
11. Used it rarely. Standing on the board is fine though.

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