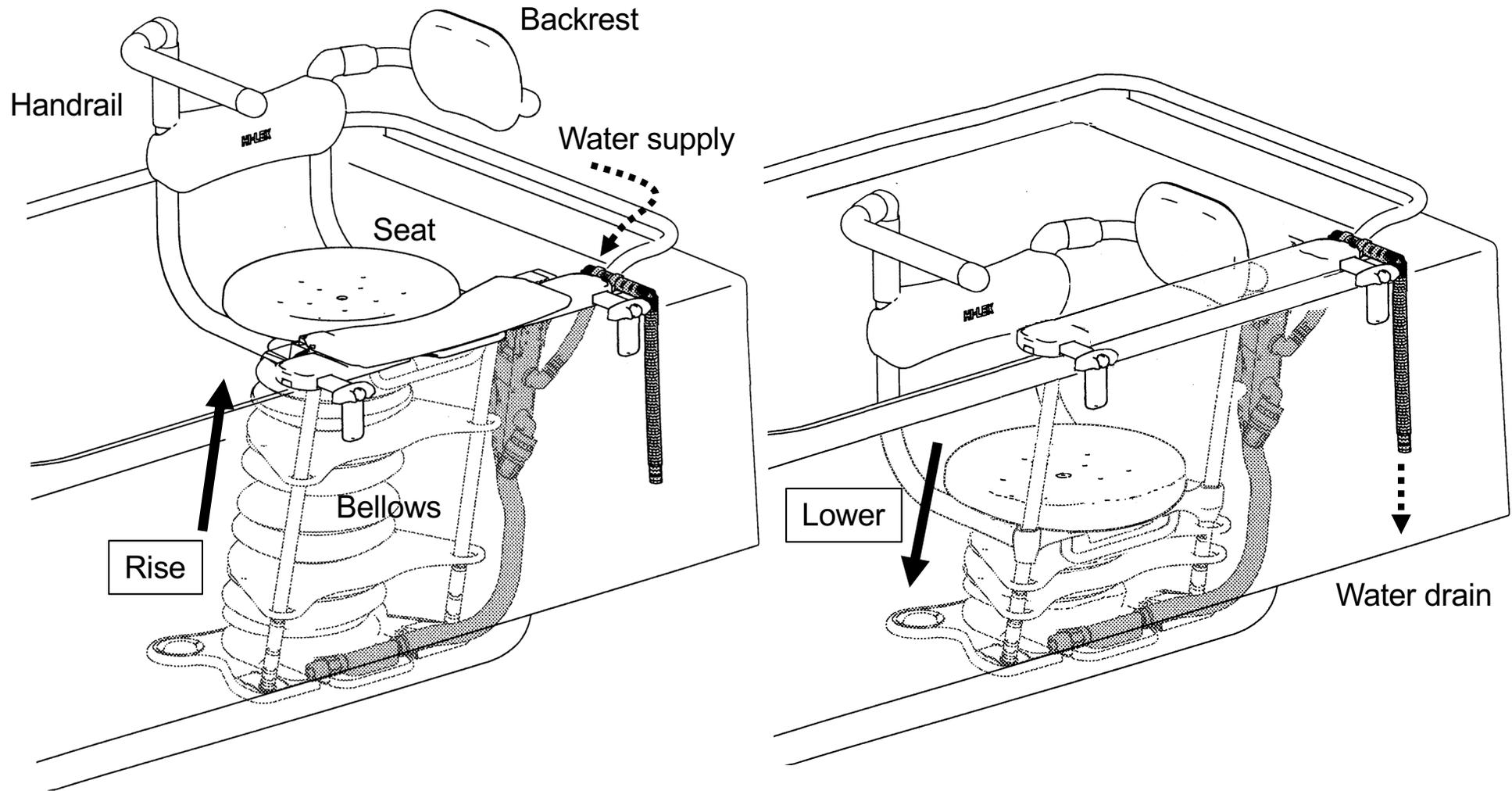


# Supplementary Figure S1



Schematic diagram showing the operation of the device

The BA seat rises to the top when the bellows water tank is full and lowers when the water is drained. Minimum seat height is 80mm.

**Table S1. User Attitude Survey**

ID	Date	
	MM	DD

1. Your feeling when using the device						
(1) How did you feel when you used the newly introduced device? Please circle one scale that best describes the degree of change compared to the case without the device.						
		Could not performed	Couldn't performed much	No change	Performed almost	Could performed
1	Was the simulated bathing experience comfortable?	-2	-1	0	1	2
2	Could the transfer to and from the bathtub be performed safely?	-2	-1	0	1	2
		Did not think	Did not think so much	No change	Thought a little	Thought so
3	Was it easier to get into the bathtub?	-2	-1	0	1	2
4	Did you feel anxious while ascending or descending?	-2	-1	0	1	2
5	Was the speed appropriate during the ascent and descent?	-2	-1	0	1	2
6	You don't have to worry about your caregiver	-2	-1	0	1	2
7	Makes it easier to ask caregivers for assistance	-2	-1	0	1	2
8	Preventing your own physical and mental decline.	-2	-1	0	1	2
9	More secure than human care	-2	-1	0	1	2
10	Can receive long-term care using the latest equipment	-2	-1	0	1	2
		Increased	Slightly increased	No change	Slightly decreased	Decreased
11	Psychological burden on yourself	-2	-1	0	1	2
12	Physical burden on yourself	-2	-1	0	1	2
(2) Please circle the scales that apply to the ease of use of the device.						
		←Don't agree at all		Middle	Very much agree→	
1	The assistive device was easy to use	1	2	3	4	5
2	The assistive device can be used well	1	2	3	4	5
3	Would like to continue using this assistive device	1	2	3	4	5

**2. What you felt about the device.**

The following questions are free to answer.

(1) Please let us know if there are any good points about this device.

(2) Please let us know if there is something wrong with this device.

(3) In addition, please tell us your impressions of using the device.

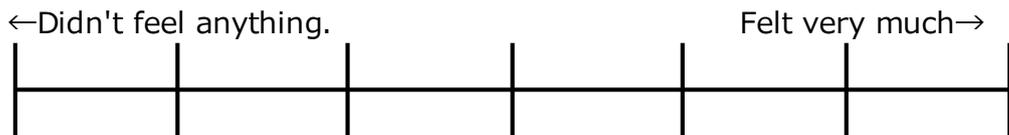
**Table S2. Psychological and Physical Burden Survey (VAS)**

ID	Date
	MM DD

Read the statement and circle the place on the scale that best describes your condition.

**(1) Status of workload**

1 How much psychological stress did you feel during the work? (without the robot)



2 How much physical stress did you feel during the work? (without the robot)



3 How much psychological stress did you feel during the work? (with the robot)



4 How much physical stress did you feel during the work? (with the robot)



**(2) Status of physical pain**

1 If "10" is your greatest body pain, where is your current pain?

