



Supplemental Materials for

Does Adding Mindfulness to Instability Resistance Training Enhance Dual-Task Mobility and Fall-Related Outcomes in Older Adults with Motoric Cognitive Risk Syndrome? A Randomized Controlled Trial

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<https://doi.org/10.5770/cgj.29.934>

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Figure S1. (Continuation) Exercise illustrations with instability progressions

SUPPLEMENTARY MATERIAL

Table S1. Description of volume and intensity during the 24 weeks of training.

Weeks	Sets	Repetitions	Rest intervals	
			Sets	Exercises
1-6	3	8-10	60 - 90 seconds	60 - 120 seconds
7-18	3	10-15	60 - 90 seconds	60 - 120 seconds
19-24	3	15-20	60 - 90 seconds	60 - 120 seconds

Table S2. Description of instability progressions for each exercise.

Exercise	Weeks	Device	Description
Leg press 180°	1-6	--	Stable
	7-18	Balance pad	Unstable level 1
	19-24	Balance disc	Unstable level 2
Horizontal dumbbell chest press	1-6	--	Stable
	7-18	BOSU [®] ball	Unstable level 1
	19-24	Balance disc	Unstable level 2
Bilateral Row	1-6	--	Stable level 1
Unilateral Row	7-18	--	Stable level 2
Row	19-24	TRX [®]	Unstable level 1
Squat	1-6	--	Stable
	7-18	Swiss ball	Stable level 1
	19-24	Swiss ball and balance pad	Unstable level 1
Abdominal	1-24	--	Stable

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Table S3. Description of Mindfulness-Based Interventions

Body Scan: Consciously observe bodily sensations by systematically monitoring each part of the body, from feet to head, providing a direct experience of physical sensations to maintain attention in the present moment. Example of the practice (photo):

https://drive.google.com/file/d/1DVGakwbV4fbW1YJq-k78cteUYIpylMae/view?usp=drive_link

Mindful Breathing: Observe the physical sensations involved in breathing at three moments: (1) inhalation/exhalation and the transition between them; (2) movements generated in the abdominal and thoracic regions; (3) counting the breathing cycles. Example of the practice (photo):

https://drive.google.com/file/d/1DiB_OwJfY1JN4k2JWj0A_kL9lsLE2X50/view?usp=drive_link

Mindful Walking: Develop bodily awareness through walking. The movement is observed in an attentive and non-judgmental manner, allowing the individual to directly experience the sensation of simply walking without the intention of reaching a destination. Example of the practice (video):

https://drive.google.com/file/d/1Gk3ZDob8C82bwg1-iwOMzih2cbFiDXgk/view?usp=drive_link

Sounds and Thoughts: Observe the flow of sensations and/or thoughts throughout the practice, establishing an accepting relationship with whatever may arise. Environmental sounds are used to maintain attentional focus, monitoring them openly and observing their characteristics without seeking anything special—simply noticing what emerges and where attention is directed. Example of the practice (photo):

https://drive.google.com/file/d/1DVGakwbV4fbW1YJq-k78cteUYIpylMae/view?usp=drive_link

Mindful Movement: Develop bodily awareness through low-complexity movements, from both motor and metabolic perspectives, such as opening and closing the hands or performing gentle stretches. This practice encourages conscious contact with bodily limits. It uses the body as an instrument to sustain attention, offering a direct pathway to experiencing sensations. Example of the practice (video):

https://drive.google.com/file/d/1SIh-2qmIUa05JWDCpEbgGeRI9Twx0yQe/view?usp=drive_link

Compassion: Invite participants to experience shared humanity and loving awareness toward themselves and others through visualization techniques. Throughout the experience, participants are encouraged to recognize that although individuals may have different life histories, they share common human experiences related to fears, distress, suffering, as well as joyful and pleasant moments.



Note: The body scan, mindful breathing, sounds and thoughts, and compassion practices were performed in a seated position with similar postures; however, the instructions differed as described above.

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Table S4. Description of the progression of Mindfulness-Based Interventions.

Practice	WEEKS																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
<i>Body Scan</i>	10'	15'											15'						15'					
<i>Breathing</i>			10'	15'										15'						15'				
<i>Mindful walking</i>					10'	15'									15'						15'			
<i>Sounds and thoughts</i>							10'	15'								15'						15'		
<i>Mindful movement</i>									10'	15'							15'						15'	
<i>Compassion</i>											10'	15'						15'						15'

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Table S5. Results of the comparison of total training volume and number of repetitions between the training groups.

Exercise (Weeks)	Group	n	Total Training Volume	Between-Group Difference
			Mean (SD)	Mean (95% CI)
Chest-press (1-6)	IRT+Mind	22	94,1 (26,7)	-7 (-23.45 to 9.45)
	IRT	21	87,1 (26,7)	
Chest-press (7-18)	IRT+Mind	22	164 (45,1)	33 (3.00 to 63.00) *
	IRT	21	197 (52,2)	
Chest-press (19-24)	IRT+Mind	22	215 (70,9)	36 (-8.17 to 80.17)
	IRT	21	251 (72,5)	
Squat (1-6)	IRT+Mind	22	112 (48,3)	14 (-12.41 to 40.41)
	IRT	21	126 (36,3)	
Squat (7-18)	IRT+Mind	22	462 (158)	54 (-45.17 to 153 to17)
	IRT	21	516 (164)	
Squat (19-24)	IRT+Mind	22	622 (236)	72 (-74.61 to 218.61)
	IRT	21	694 (240)	
<i>Leg press</i> (1-6)	IRT+Mind	22	730 (380)	35 (-188.82 to 258.82)
	IRT	20	765 (333)	
<i>Leg press</i> (7-18)	IRT+Mind	22	1391 (550)	297 (-66.42 to 660.42)
	IRT	20	1688 (582)	
<i>Leg press</i> (19-24)	IRT+Mind	22	1827 (680)	438 (-79.65 to 955.65)
	IRT	20	2265 (829)	
Row (1-6)	IRT+Mind	22	457 (184)	-46 (-170.03 to 78.03)
	IRT	21	411 (218)	
Row (7-18)	IRT+Mind	22	489 (184)	68 (-54.73 to 190.73)
	IRT	21	557 (214)	

Abbreviation: IRT + Mind, instability resistance training plus mindfulness; IRT, instability resistance training;

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Table S6. Results of the comparison of the number of repetitions performed for bodyweight exercises.

Exercise (weeks)	Group	n	Number of Repetitions
Abdominal (1-6)	IRT+Mind	20	10
	IRT	19	10
Abdominal (7-18)	IRT+Mind	20	15
	IRT	19	15
Abdominal (19-24)	IRT+Mind	20	20
	IRT	19	20
Row (19-24)	IRT+Mind	22	20
	IRT	21	20

Abbreviation: IRT + Mind, instability resistance training plus mindfulness; IRT, instability resistance training.