

Falling Competence and the "Safe Falling Pin"



3rd Conference on Safe Falling for Older People through Judo
Tokai University, 12 – 14, december, 2025



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Today's Presentation



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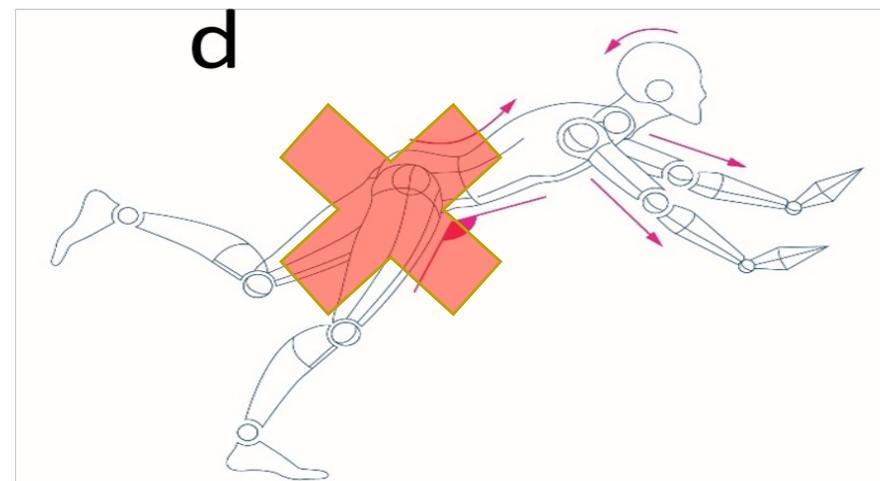
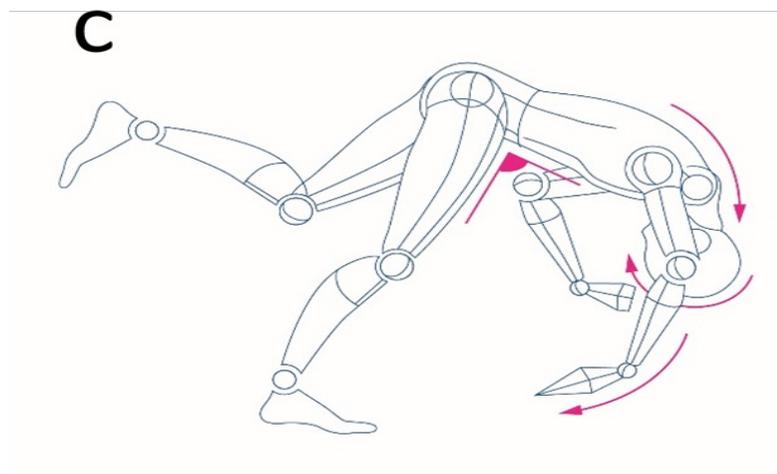
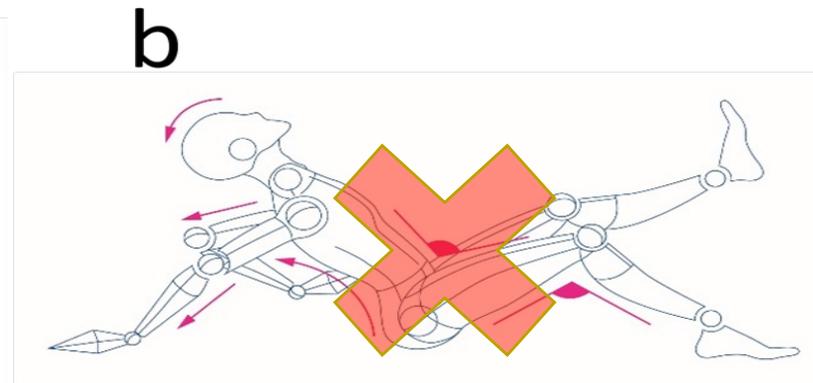
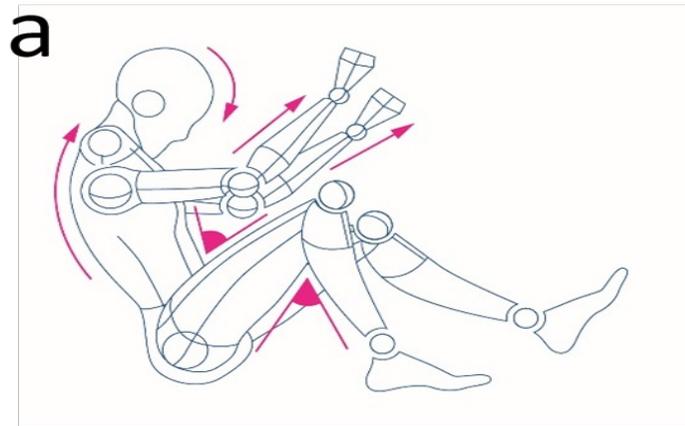
- **Falling Competence – What is it? Explaining it to the outside & scientific world**
- **Measuring progress – Strömqvist Bååthe Falling Competence Test**
- **Celebrating Success – Falling Competence/Safe Falling Pin**



Judo break falls – more than 100 years of “proof of concept” but how do we explain it to the world outside martial arts?



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Judo Break fall techniques – Key points



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- Lower center of gravity
- Tuck in the head
- Avoid extending arms and trying to "brace the fall"
- Absorb the force of the fall in a "rolling motion"
- Avoid landing impact on a small surface of the body instead spread the impact on a larger area.





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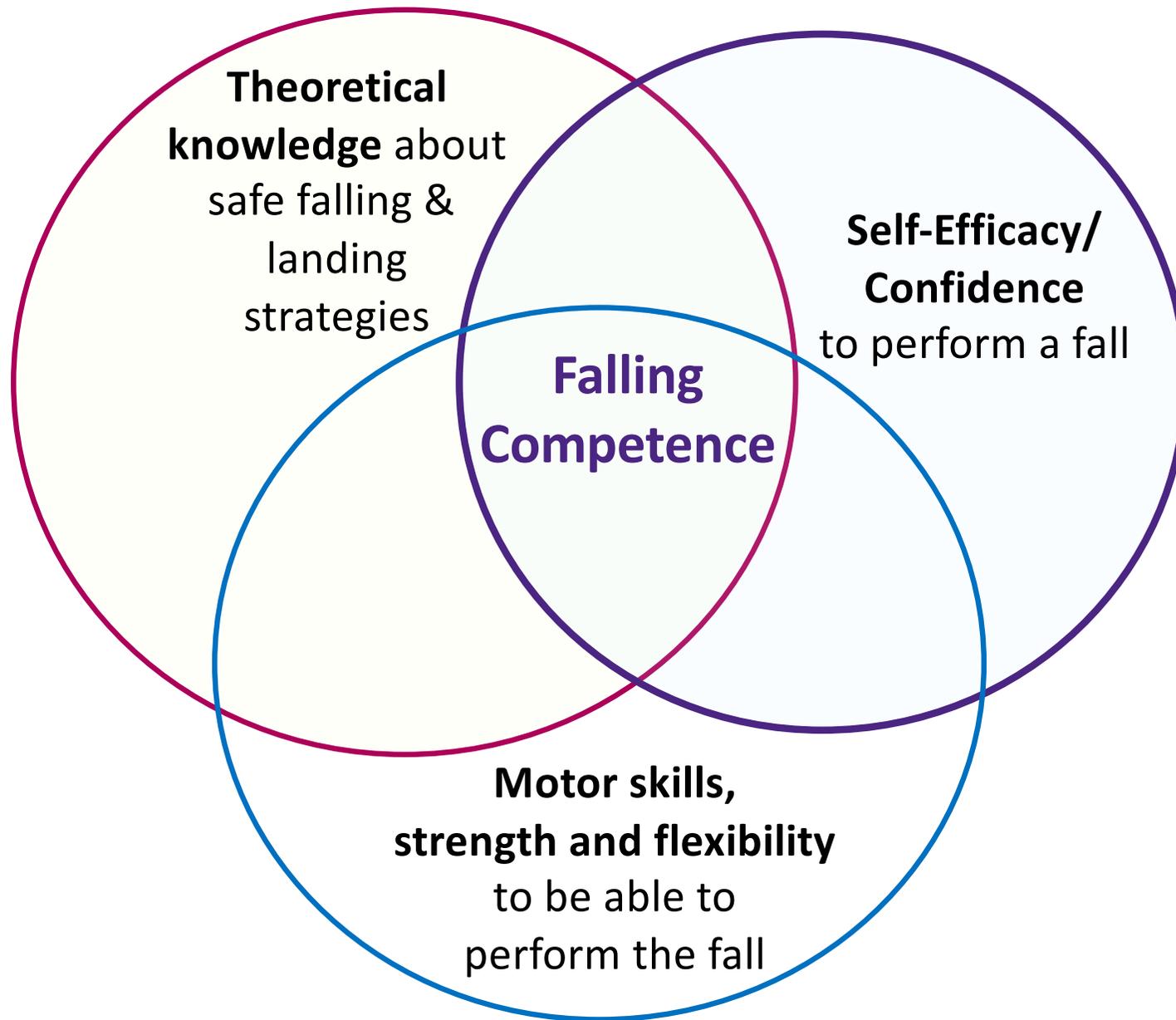
“The break fall training saved Linnea 82. Didn't break anything”

“I think everybody who retires should be offered this program”

Falling Competence = 3 main skills



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Strömqvist Bååthe Falling Competence Test 9-steps



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OBS! Safety First – always STOP test at first harmful maneuver

0. Is **NOT** willing or able to get down or rise up from the floor

0.5 Is willing to try to get down och the floor and rise but unsuccessful

1.0 Successful down on the tatami and rise up independently

1.5 Is willing to try falling from a sitting position but unsuccessful

2.0 Falling successfully from a sitting position

2.5 Tried falling from a squatting position but unsuccessful

3. Falling successfully from a squatting or kneeling position

3.5 Tried falling from a standing position but unsuccessful

4. Falling successfully from a standing position

Do **NOT** progress to next step if the test subject is unsure or the testleader identify harmful maneuvers: Mark which mistake in the list in the protocol i.e. putting out hands, not holding up head etc.

Published scientific articles - using SBFC- Test (5-step scale)



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Arkkukangas, M., Bååthe, K. S., Hamilton, J., Ekholm, A., & Tonkonogi, M. (2020). Feasibility of a novel Judo4Balance - fall preventive exercise programme targeting community-dwelling older adults. *Journal of frailty, sarcopenia and falls*, 5(3), 47–52. <https://doi.org/10.22540/JFSF-05-047>

Arkkukangas, M., Bååthe, K. S., Ekholm, A., & Tonkonogi, M. (2021). A 10-week judo-based exercise programme improves physical functions such as balance, strength and falling techniques in working age adults. *BMC public health*, 21(1), 744. <https://doi.org/10.1186/s12889-021-10775-z>

Arkkukangas, M., Strömquist Bååthe, K., Ekholm, A., & Tonkonogi, M. (2022). High Challenge Exercise and Learning Safe Landing Strategies among Community-Dwelling Older Adults: A Randomized Controlled Trial. *International journal of environmental research and public health*, 19(12), 7370. <https://doi.org/10.3390/ijerph19127370>

Arkkukangas, M., Strömquist Bååthe, K., Ekholm, A., & Tonkonogi, M. (2020). Health promotion and prevention: The impact of specifically adapted judo-inspired training program on risk factors for falls among adults. *Preventive medicine reports*, 19, 101126. <https://doi.org/10.1016/j.pmedr.2020.101126>

Arkkukangas, M., Strömquist Bååthe, K., Ekholm, A., & Tonkonogi, M. (2022). Short Multicomponent Group Exercise Intervention Promotes Long-Term Physical Activity Habits among Community-Dwelling Older Adults during COVID-19 Restrictions: A Cohort Study. *International journal of environmental research and public health*, 19(22), 15140. <https://doi.org/10.3390/ijerph192215140>

Name/Code: _____ Date: _____ Test leader: _____ Place: _____

"Strömquist - Bååthe Test" - Measuring Falling Competence - Backwards:

1a) Would you be comfortable lying down on your back and lifting your head from the mat (tuck your chin in), putting your arms beside you (palms down) and then standing up again? 0.5 Points

YES, SURE (go to 1b - 0.5 points) UNSURE (stop test) NO/REFUSES (stop test)

1b) Performs the exercise - Lies down on the back, lifts the head of the mat, lays arms beside and then stands up again from the floor without help: 1.0 Points

Successful (go to 2a) Unsuccessful (stop test & provide reason):
 Cannot lift the head off the mat Cannot get down on the mat
 Cannot get up from the mat independently

2a) Would you be comfortable sitting down on your buttocks (legs forward) and falling backward safely? 1.5 Points

YES, SURE (go to 2b - 0.5 points) UNSURE (stop test) NO/REFUSES (stop test)

2b) Performs the exercise - Falls backward safely from sitting (legs forward) (no instruction given): 2.0 Points

Successful (go to 3a) Unsuccessful (stop test & provide reason):
 Not rolling up with legs Puts down hands
 Puts down elbow/forearm/s Does not hold up the head
 Other injury prone manoeuvre: _____

3a) Would you be comfortable falling backwards safely from a squatting position? 2.5 Points

YES, SURE (go to 3b - 0.5 points) UNSURE (stop test) NO/REFUSES (stop test)

3b) Performs the exercise - Falls backward safely from squatting (no instruction given): 3.0 Points

Successful (go to 4a) Unsuccessful (stop test & provide reason):
 Not rolling up with legs Puts down hands
 Puts down elbow/forearm/s Does not hold up the head
 Other injury prone manoeuvre: _____

4a) Would you be comfortable falling backwards safely from a standing position? 3.5 Points

YES, SURE (go to 4b - 0.5 points) UNSURE (stop test) NO/REFUSES (stop test)

4b) Performs the exercise - Falls backward safely from standing (no instruction given): 4.0 Points

Successful (=4p) Unsuccessful (stop test & provide reason):
 Does not bend knees Not rolling up with legs
 Puts down hands/s Puts down elbow/forearm/s
 Does not hold up the head "Crawling" instead of rolling backwards
 Other injury prone manoeuvre: _____

TOTAL POINTS BACKWARD FALL _____ (SCORE 0-4)



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Published scientific articles - using SBFC- Test (5-step scale)

Arkkukangas, M., Bååthe, K. S., Hamilton, J., Hassan, A., & Tonkonogi, M. (2024). FallFitness exercise program provided using the train-the-trainer approach for community-dwelling older adults: a randomized controlled trial. *BMC geriatrics*, 24(1), 983. <https://doi.org/10.1186/s12877-024-05575-0>

+

Spain

Australia

?

Name/Code: _____ Date: _____ Test leader: _____ Place: _____

"Strömqvist - Bååthe Test" - Measuring Falling Competence - Backwards:

1a) Would you be comfortable lying down on your back and lifting your head from the mat (tuck your chin in), putting your arms beside you (palms down) and then standing up again? 0.5 Points

YES SURE (go to 1b - 0.5 points) UNSURE (stop test) NO/REFUSES (stop test)

1b) Performs the exercise - Lies down on the back, lifts the head of the mat, lays arms beside and then stands up again from the floor without help: 1.0 Points

Successful (go to 2a) Unsuccessful (stop test & provide reason)

Cannot lift the head of the mat Cannot get down on the mat

Cannot get up from the mat independently

2a) Would you be comfortable sitting down on your buttocks (legs forward) and falling backward safely? 1.5 Points

YES SURE (go to 2b - 0.5 points) UNSURE (stop test) NO/REFUSES (stop test)

2b) Performs the exercise - Falls backward safely from sitting (legs forward) (no instruction given): 2.0 Points

Successful (go to 3a) Unsuccessful (stop test & provide reason):

Not rolling up with legs Puts down hands

Puts down elbow/forearm arms Does not hold up the head

Other injury prone manoeuvre: _____

3a) Would you be comfortable falling backwards safely from a squatting position? 2.5 Points

YES SURE (go to 3b - 0.5 points) UNSURE (stop test) NO/REFUSES (stop test)

3b) Performs the exercise - Falls backward safely from squatting (no instruction given): 3.0 Points

Successful (go to 4a) Unsuccessful (stop test & provide reason):

Not rolling up with legs Puts down hands

Puts down elbow/forearm arms Does not hold up the head

Other injury prone manoeuvre: _____

4a) Would you be comfortable falling backwards safely from a standing position? 3.5 Points

YES SURE (go to 4b - 0.5 points) UNSURE (stop test) NO/REFUSES (stop test)

4b) Performs the exercise - Falls backward safely from standing (no instruction given): 4.0 Points

Successful (=4p) Unsuccessful (stop test & provide reason):

Does not bend knees Not rolling up with legs

Puts down hands Puts down elbow/forearm arms

Does not hold up the head 'Crawling' instead of rolling backwards

Other injury prone manoeuvre: _____

TOTAL POINTS BACKWARD FALL _____ (SCORE 0-4)

We will all get to try the new 9 –step SBFC-Test in a practical session on Sunday morning. Tests will be available in Japanese and English!



Highlights

- Judo-inspired exercises may be effective for learning techniques for falling safely among adults.
- Physical and psychological functions increase after 10 sessions of judo-inspired exercises.
- Judo-inspired exercises may serve as an additional measure to address risk factors for falls.

BMC Public Health

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Research article | [Open Access](#) | [Published: 17 April 2021](#)

A 10-week judo-based exercise programme improves physical functions such as balance, strength and falling techniques in working age adults

[Marina Arkkukangas](#) , [Karin Strömqvist Bååthe](#), [Anna Ekholm](#) & [Michail Tonkonogi](#)

Celebrating Success ! – Pin of merit



Fallborgarmärket and the "man falling in the hand" is a registered trademark in Sweden.

Four levels of Falling Competence Pin



WHITE PIN

The White Pin is awarded after you have received basic information about fall risks and fall prevention through exercise, and have participated in introductory fall-technique training. No test or prior experience is required. The pin may be received following a lecture and trial session.

Required Falling Competence Level on the SBFC Test: Not applicable.

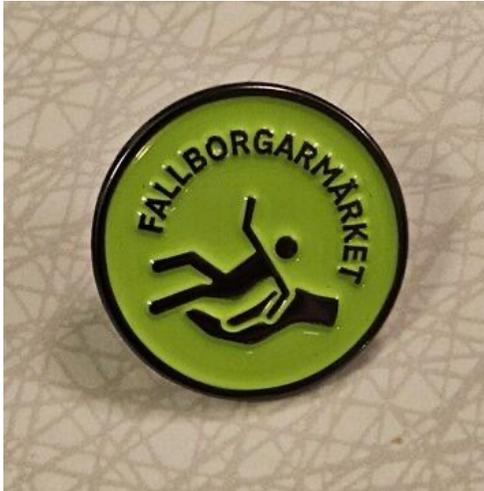


YELLOW PIN

The Yellow Pin can be obtained once you have learned the fundamental fall-techniques through a simple introductory course.

Required Falling Competence Level on the SBFC Test: 2 points (falling backwards and sideways).

Four levels of Falling Competence Pin



GREEN PIN

The Green Pin is intended for intermediate fallers and can typically be obtained after completing a more advanced fall-training course. You are able to fall safely from a squatting or kneeling position in all three directions.

Required Falling Competence Level on the SBFC Test:
3 points (falling backwards, sideways, and forwards).



BLACK WITH GOLD PIN

The Black with Gold Pin is designated for advanced fallers. It can be obtained once you demonstrate the ability to fall safely from a standing position in all directions.

Required Falling Competence Level on the SBFC Test: 4 points (falling backwards, sideways, and forwards).



Launched April 1st, 2025 and already 1237
Falling Competence pins awarded in the different
colors of white, **yellow**, **green** and **black**.

Come and join the Safe Falling pins movement for a safer world!

We are seeking partners and testleaders to represent, test and distribute the "Safe Falling/Falling Competence Pin" outside Sweden



Contact: www.sj4b.se

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THANK YOU! We welcome your questions.

