

Table S1. Narrative, Factors, Circumstances, and Consequences of Fall Events

	Narratives	Direct factors	Indirect circumstances	Fall consequences
<p>Informant 1 65-year-old woman On sick leave ABC score: 94 EDSS score: 3.0</p> <p>Tripped on the vacuum cleaner hose while cleaning the car</p>	<p>Well, it was because I was so tired that evening, or the day before. I was out cleaning the car and vacuuming it, and I happened to tangle, well, simply got stuck in the vacuum cleaner hose and just fell helplessly forwards. I have new shoes; they're a bit higher and I've felt this before—that I'm less steady with them on, so that's probably 1 more reason, as well as that, I have a cold, so there was probably something like that going on yesterday afternoon, that I had a bit of a headache and was generally feeling irritated. I just didn't feel [the hose]. I was just taking a step backwards, going from cleaning the front seats to the back seats...I came to a dead stop. I didn't see the hose when I backed up. That's all there was to it; my knees took a beating, I have small open wounds on my knees and my elbows got hit, because I sort of came down on my knees and wrists, so they're a bit sore.</p>	<p>Vacuum cleaning the car while standing (d650; d4106; d2200)</p> <p>Not noticing the hose; getting stuck in the hose (b140; e115)</p> <p>New, unsteady shoes (e1150)</p> <p>Stepping backwards (d450)</p>	<p>Being tired and worn out (b1300)</p> <p>Having a cold (not coded)</p> <p>Having a headache (b2801)</p> <p>Generally feeling irritated (personal factor)</p>	<p>Wounds on knees and elbow</p> <p>Tenderness in knees and wrist</p>
<p>Informant 2 35-year-old woman Working full time ABC score: 53 EDSS score: 4.0</p> <p>Foot got stuck while climbing the stairs at work</p>	<p>I usually work on the same floor; sometimes I have to go to the floor below. I was about to go up the stairs. So well, I thought I was walking and lifting my feet as I should. But then my right foot got stuck on 1 of the steps, which made me fall down on the staircase. I did what you sometimes do when you fall; jumped up really fast and looked around to see if anyone had seen me falling. And I think I just, well, I was going to climb the staircase quickly. I don't remember why I was in a hurry. And then, I had, sometimes, I think I had indoor shoes of some kind, they're comfortable but maybe not the very best to walk in...So, I really have low control of my right leg. What I'm doing, I don't really know if I'm lifting my leg high enough because sometimes when I use the stairs I lift my leg too high like this, but this time, it wasn't high enough instead. And I think I was thinking that walking up the stairs, that's, that's OK. I</p>	<p>Working (d8451)</p> <p>Going up and down stairs (d4551)</p> <p>Thinking she had lifted her feet high enough (b260)</p>	<p>A period of worse balance function (not coded)</p>	<p>Embarrassment checking if someone noticed the fall</p> <p>Reduced balance confidence</p>

	<p>think I'd have been more afraid of stumbling if I was walking down the staircase. They're relatively broad stairs, so you have to use 1 of the sides if you want something to hold onto. But I walked in the middle.</p> <p>Your balance confidence takes a beating when these little things happen. But I don't perceive my balance as really good right now. I think it changes a bit. It might feel better at times. But it's like I'm in a worse period at the moment.</p>	<p>Foot getting stuck on step (b7300; b770; e150)</p> <p>Trying to climb stairs quickly (speed not coded)</p> <p>Not the best shoes for walking (e1150)</p> <p>Low control of leg (b260; b730)</p> <p>Walking in middle of stairs, not holding on to handrail (personal factor)</p>		
<p>Informant 3 37-year-old woman Working full time ABC score: 88 EDSS score: 3.0</p> <p>Stumbled on the edge of some flagstones after</p>	<p>Well I...came home from my exercise...and I was about to go and put the rubbish out because my partner had put it outside and it's just a few meters. I'd put it [the rubbish] out. I was thinking that I needed to remember the stuff I had in the car, and that can cause problems: when you think about something else too. But there's a very small edge of flagstones that I have to get up on just before the door, and I stumbled on that edge, and I fell on all fours. And that's the thing, since I'd been working out, and when I get tired, then it's mainly noticeable in my right leg since my whole right side is a bit worse. So I guess that's what happened, but it happened so fast that I can't say for sure. Well, out of the blue, I was on all fours, and I felt like...I do have problems with lifting my foot, or, not lifting my foot, but I need to concentrate quite a</p>	<p>Putting the rubbish out (d6405)</p> <p>Thinking about something else while walking (b1402)</p> <p>Stumbling on the edge of a small</p>	<p>Coming home tired after exercising, which was mainly noticeable in the right leg (d570; b7401)</p> <p>Being a bit stressed (d2401)</p>	<p>Serious pain</p>

<p>putting out the rubbish</p>	<p>bit more; the left is more automatic. It's the same thing when I'm exercising, during a warm-up using my knees for example; I can't get the right one as far up as the left one and so on. In general it just doesn't work quite as well. I got myself indoors, trying not to cry, because it hurt really badly. But then, that's why I was a bit stressed, because the exercise is actually a bit late in the evening for me to put the children to sleep and so on, so I walked in and tried to keep a poker face. I went and sat by my partner on the sofa and whined a bit later on.</p>	<p>step (d4502; e1550)</p> <p>One leg being tired (b7401)</p> <p>Needing to concentrate to lift the foot (b1400)</p>		
<p>Informant 4 49-year-old woman Working part time ABC score: 76 EDSS score: 5.5</p> <p>Feet got tangled in a mop while cleaning floor at work</p>	<p>Well it was at work, which is where I most commonly fall. I work in maintenance, so I was holding one of these mops, I was wiping the floor. I managed to tangle my feet in the mop in an awkward sort of way. So I just took a dive onto the floor like that. It was just that I'd been walking a lot, so my legs were a bit tired, too. Then I react a bit slower. Yesterday, for example, everything was really good, but today my muscles were more floppy. It gets like that; it differs from day to day. I simply stated that I had fallen, OK, I got a sore knee. I just had to get up again and continue.</p>	<p>Cleaning the floor [at work] (d8451; d6402)</p> <p>Using floor mop while standing (e135; d4106; d2200)</p> <p>Feet getting tangled in mop (b7300)</p> <p>Legs being tired (b7401)</p> <p>Impaired reactivity when fatigued (b1300; b755; b798)</p> <p>Impaired leg control</p>	<p>Having walked a lot (d4501)</p> <p>Muscular fatigue (b7401)</p> <p>Capacity varying between days (not coded)</p>	<p>Sore knee</p>

		(b760)		
<p>Informant 5 67-year-old man Retired ABC score: 47 EDSS score: 6.0</p> <p>While visiting friends, stepped on a stone and fell backwards when his friends called him</p>	<p>It was in the evening. I was sort of standing on 1 spot and then they called me—"Come on, it's time for dinner." So I was standing on a small slope. We were visiting friends. And then I stepped on a stone and fell backwards. Like a catapult, I don't know where it came from. I fell backwards and I guess I hit the back of my head and my arm and my back. I don't know if I got a concussion because I, for several days, I was so tired and I had a headache. I don't have strength in my left side. I have nothing to stabilize me so my foot simply gave way. I hurt my back and the terrain was bad there so I don't know if I hit my head on a rock. Well, after a while I managed to get up with some help and sat there feeling a bit shocked for a while. Then next day it started, well, yes, a headache and some double vision so I guess I hit my head harder than I first thought.</p>	<p>Being called while standing still (d4154; b1401)</p> <p>Standing on light slope (d4154; e2100)</p> <p>Ankle giving way after stepping on stone (d4502; b7300)</p>	<p>Darkness during evening (e240)</p> <p>Lacking strength in left side (b7302)</p>	<p>Hit back of head, arm, back</p> <p>Possible concussion (tiredness, double vision, headache)</p>
<p>Informant 6 39-year-old woman On sick leave ABC score: 87.5 EDSS score: 4.0</p> <p>Lost balance while climbing wire fence to take shortcut</p>	<p>Well, you know those fences that look like small squares, chicken wire, and at the top, there was a wire standing straight out of a chicken wire fence that I was about to climb over. I did climb over with 1 leg, and then there was this very, very small slope on the other side of the fence. So when I had climbed over, I lost my balance and got that spiky wire right into my thigh. It didn't feel very nice. It's not something I'd recommend. My boyfriend caught me; if he hadn't, I guess I'd have torn my thigh up even more. I climbed over with 1 leg, then I was about to put all my weight on that leg to lift the other leg over, so I lost my balance since the leg I had on the slope didn't carry my body weight. The thing is, when I was about to climb that chicken wire and I said, in my head, "Don't climb it; you know you're going to fall 'cause you're going to lose your balance." I did it anyway. I know that I'm not as</p>	<p>Climbing over fence (d4551; d4106)</p> <p>Sloping ground (e2100)</p> <p>Leg being unable to carry weight (b7603)</p>	<p>Bodily exhaustion (b1300; b7402)</p> <p>Not listening to inner voice (d2303; b1645; d177)</p>	<p>Thigh injury that needed stitches</p> <p>Going to hospital for care</p> <p>Will listen better to her body next time</p>

	<p>steady on my feet as I think I am. Somehow, my brain told me “Yes, you can do it, it’ll be just fine, let’s go,” but actually somewhere there was also “No, it’s not going to be fine; it’s going to hell.” I was physically exhausted after having walked uphill, that’s the reason why we took this shortcut. Blood was running all the way down my leg. It was quite serious; I had to get stitches. I have a feeling that I’ll never climb a fence again. I learned something, if you can say that. I won’t overestimate my capacity again, at least I hope not, and it wasn’t worth it. I think my reason told me one thing and my pride another thing, I think that was the problem.</p>			
<p>Informant 7 59-year-old woman Working part time ABC score: 76 EDSS score: 4.5</p> <p>Lost balance while riding a bike to the grocery shop</p>	<p>It was in June, I was riding my bike to the shop and...got to this red traffic light...you know what it’s like at traffic lights, there’s a rod where...this button is that you push if you want a green light. And I felt like “No, I don’t want to put my foot down to the ground; I’m going to grab that rod,” and so I did. But...I think I ended up a bit too far from the rod, so I didn’t have the strength to hold onto the rod until the light shifted to green. And I wasn’t standing up straight, I was...mostly just hanging on. And in the end I was thinking “No, I can’t stay like this; I can’t maintain my balance like this,” so, well, I just had to let go. At that time both my feet were on the pedals; I had 1 hand on the handlebars and the other one was holding onto the rod. So I just let go, there was nothing else to do. And then I fell to the ground. And subluxed my shoulder. And...I got help from people passing by. They called for an ambulance, so I went in an ambulance to the university hospital. They helped me by repositioning my shoulder. The physiotherapist did an ultrasound and found tendon ruptures so I had to have surgery. With MS maybe...umm...it’s this with...the brain and thinking and so on. It feels as if you’re not so good at it when you have MS. It was very warm out, the sun was shining, and I’ve noticed after this incident that I’m really affected by heat.</p>	<p>Riding bike to buy groceries (d4750; d6200)</p> <p>Grabbing traffic light rod (d4452)</p> <p>Hanging onto rod but having to let go (d415; b1646)</p>	<p>Warm weather (e2250)</p> <p>Heat sensitivity (b2700)</p> <p>Difficulty thinking (b164)</p>	<p>Ambulance transportation</p> <p>Dislocated shoulder, ruptured tendons</p> <p>Surgery</p>

<p>Informant 8 59-year-old woman Working part time ABC score: 34 EDSS score: 5.0</p> <p>Took sidestep to manage walking in narrow space indoors</p>	<p>I'd hung a quilt on a door so the space was very narrow. I was about to take a step to the side but then it gave way. I have a bad left side, so I know I usually stumble when I turn quickly. But then I, well, I just fell helplessly. I was lucky to fall on the bed. That's what usually happens, that I don't have the strength in that leg, or my knee gives way. There's no stability. This time, I didn't turn too quickly. Instead I took a step to the left and sort of changed direction. I'm usually on guard since I know I walk unsteadily all the time. This time I wasn't so alert. I know that as soon as I turn to the left I need something close by, and I don't do these thoughtless moves any more. I have to have something to support myself on. Nonslip socks are very helpful, but they can also make it hard to rebalance yourself. I was thinking about that yesterday, that I would probably have handled that fall if I hadn't had those socks on because they make you get stuck, in a way, if you know what I mean. Otherwise, you can fend off a fall by sliding a bit.</p>	<p>Passing through narrow doorway (d4503)</p> <p>Stepping aside to change direction (d4600; d4106)</p> <p>Legs giving way (b7603)</p> <p>Nonslip socks hindering reactive step (e1150)</p>	<p>Having bad left side (b7302)</p> <p>Not being on guard (b140)</p> <p>Having nothing to hold on to (e155)</p>	
<p>Informant 9 47-year-old woman Working full time EDSS score: 5.5 ABC score: 63</p> <p>Fell while taking in flowers and flower boxes from balcony</p>	<p>I was on the balcony, and I had lots of flowers there that I needed to take indoors, and then there are flower boxes in a, well, we have a rack and things, so I was lifting. And I was actually really tired. I went swimming earlier today, aquatic exercise, so I was already physically tired, and then I had to take [the flowers] in, so my energy was running out; my legs just gave way, and I fell straight down. But I didn't hurt myself too badly. When you land on your knees, but then when your legs don't work, the hard thing is to get up again. It's when I do things that I'm not able to do, uh, to the allotment a lot since I test my limits there because I enjoy it so much.</p>	<p>Lifting flower boxes (d6505; d4301)</p> <p>Legs giving way (b7603)</p>	<p>Being really physically exhausted after aquatic exercise (b1300; b7402 d570)</p> <p>Doing things beyond one's capability—testing one's limits (d2303; b1645)</p>	<p>Not too badly hurt</p>
<p>Informant 10 56-year-old woman</p>	<p>I was doing stuff at home, dusting, and well, I have one of these robot vacuum cleaners that I'd turned on. And the robot vacuum cleaner runs into me, touching my feet just a little bit. I was trying to fend it off but I didn't manage. I couldn't keep my balance, I fell helplessly head over</p>	<p>Dusting (d4600; d6402)</p>	<p>Being generally tired and worn out (b1300)</p>	

<p>Working part time EDSS score: 3.0 ABC score: 82.5</p> <p>Was bumped into by robot vacuum cleaner when cleaning the house</p>	<p>heels. I fell on my side. I'm generally worn out and tired at present because my parents are old and I mind them a lot. And I had had the children over for dinner the day before; I reckon I was very tired and worn out. I've started to go to a physiotherapist. Of course, it's very... but I've become very worn out by that. I end up bedridden when I get back home.</p>	<p>Being hit by robot vacuum cleaner (e1150)</p> <p>Being unable to fend it off (d4154)</p>	<p>Being physically exhausted after physiotherapy (b7402; d570)</p>	
<p>Informant 11 45-year-old woman Working part time ABC score: 71 EDSS score: 5.0</p> <p>Slipped when walking while carrying dog carrier</p>	<p>So I was about to walk, and then I fell straight. Uhh I was carrying my dog in a carrier, and then I slipped and fell straight forward. And I caught myself with my right hand. I felt, OK, this didn't go well. I think it was on the grass. It isn't totally flat but, well, and it was wet. My balance isn't the best. So my dad drove me to the emergency department since I can't drive. They X-rayed me and saw that it was a fracture in my wrist.</p>	<p>Walking on wet and uneven grass (d4602; d4502)</p> <p>Walking while carrying dog carrier (d4301; d2200)</p>		<p>Hospital visit</p> <p>Wrist fracture</p>
<p>Informant 12 38-year-old man Working full time ABC score: 90 EDSS score:4.0</p> <p>Tried to pull out chair while carrying plate of</p>	<p>I'm not sure what happened...the family was about to dine; we had guests, so there was a lot of stuff lying around on the ground. I got up from my chair—we have a terrace and we have outdoor furniture that's quite heavy and unwieldy to move. I couldn't pull the chair out as much as I wanted to since it was so crowded and there was a lot of stuff everywhere. I walked away to get my burgers on a plate, walked back to sit down. I don't remember if I stumbled right before I tried to sit down or if I actually started to sit down. As I told you, the chair wasn't pulled out enough so it was a bit narrow to get through. Anyway, I stumbled with a plate in my hand and sat down very hard over the armrest; the</p>	<p>Walking on grass (d4602; d4503)</p> <p>Many things being on ground and trying to move heavy outdoor furniture (e1150)</p>	<p>Being in crowded area without enough space to move around (b1601)</p>	<p>Scrape wounds</p>

<p>food, but failed due to lack of strength and sat down uncontrollably on armrest</p>	<p>chair tilted to the side. I scraped my arm on the wall when the chair tilted. But nothing really happened when it started to tilt, I didn't drop anything and it wasn't as if I sat down in the chair; I stumbled and fell down on the chair and it almost went down. I went down awry on the chair with my legs over the armrest. A typical thing every time I'm about to fall is that I'm having to keep my attention on something I'm carrying. That was the case this time, too, when I tried carrying the plate and the burgers—I don't feel that I have problems with carrying things, but my stumbles and falls usually happen when there's something else on my mind. There were a lot of toys and stuff like that on the ground that I could stumble on. Maybe I couldn't see where I was putting my feet because the plate was in the way. I would have liked more space to move around; as it was, I had to squeeze in somehow. There were some scrape wounds, nothing else.</p>	<p>Walking while carrying plate of food (d4301; d2200)</p> <p>Having insufficient strength to pull chair out far enough (b7301; d4450)</p> <p>Loss of body control when sitting down (b760; d410)</p> <p>Needing to pay attention to something that was being carried (b1400; d4301)</p> <p>Ground being obscured by carried object (not coded)</p>		
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ABC, Activities-Specific Balance Confidence scale; EDSS, Expanded Disability Status Score; ICF, International Classification of Functioning, Disability and Health.

Appendix. ICF Coding

Components	Domains	First-level categories	Second- and third-level categories	
Body functions	Mental functions	Global mental functions	b114 b130 b1300 b134	Orientation functions Energy and drive functions Energy level Sleep functions
		Specific mental functions	b140 b1400 b1401 b1404 b144 b1601 b164 b1645 b1646 b180	Attention functions Sustaining attention Shifting attention Dividing attention Memory functions Focusing attention on the environment Difficulties thinking Judgement Problem solving Experience of self and time functions
	Sensory functions and pain	Hearing and vestibular functions	b235 b240	Vestibular functions Sensations associated with hearing and vestibular function
		Additional sensory functions	b260 b270 b2700	Proprioceptive function Sensory functions related to temperature and other stimuli Sensitivity to temperature
		Pain	b2801	Pain in body part
	Neuromusculo-skeletal and movement-related functions	Functions of the joints and bones	b720	Mobility of bone functions
		Muscle functions	b730 b7300 b7301	Muscle power functions Power of isolated muscles and muscle groups Power of muscles of 1 limb

			b7302 b7401 b7402	Power of muscle groups of 1 side of the body Endurance of muscle groups Endurance of all muscles of the body
		Movement functions	b755 b760 b7603 b770 b780 b798	Involuntary movement reaction functions Control of voluntary movement functions Supportive functions of arm or leg Gait pattern functions Sensations related to muscles and movement functions Neuromusculoskeletal and movement-related functions
Activities and participation	Learning and applying knowledge	Purposeful sensory experiences	d110	Watching
	General tasks and demands		d240 d2401 d2200 d2303	Handling stress and other psychological demands Handling stress Carrying out multiple tasks Managing one's own activity level
	Communication	Conversation and use of communication devices and techniques	d350	Conversation
	Mobility	Changing and maintaining body position	d410 d4106 d415 d4154	Changing basic body position Shifting the body's center of gravity Maintaining a body position Maintaining a standing position
Carrying, moving, and handling objects		d430 d4301 d440 d4450 d4452	Lifting and carrying objects Carrying in the hands Fine hand use Pulling Reaching	

	Walking and moving	d450 d4501 d4502 d4503 d4551 d455 d460 d4600 d4602	Walking Walking long distances Walking on different surfaces Walking around obstacles Climbing Moving around Moving around in different locations Moving around in different locations at home Moving around outside the home and other buildings
	Moving around using transportation	d4750	Driving human-powered transportation
Self-care		d520 d540 d570	Caring for body parts Dressing Looking after one's health
Domestic life	Acquisition of necessities	d620 d6200	Acquisition of goods and services Shopping
	Household tasks	d640 d4600 d6402 d6405	Doing housework Dusting Cleaning living area Disposing of garbage
	Caring for household objects and assisting others	d650 d6505 d660	Caring for household objects Taking care of plants, indoors and outdoors Assisting others
Major life areas		d850 d8451	Remunerative employment Maintaining a job
Community, social and civic life		d910	Community life

Contextual factors: environmental	Products and technologies		e110 e115 e135 e150 e1550 e155	Products or substances for personal consumption Products and technology for personal use in daily living Products and technology for employment Design, construction and building products and technology of buildings for public use General products and technology for personal use in daily living Design, construction, and building products and technology of buildings for private use
	Natural environment and humanmade changes to environment		e210 e210 e2250 e240	Physical geography Landforms Temperature Light
	Support and relationships		e310 e345	Immediate family Strangers
Contextual factors: personal		å		Being irritated Reduced balance confidence Loosing self-confidence Pushing one's limits Fear of falling in specific situations Using coping strategies (eg, asking for help, using assistive device, adjusting speed, looking closely on the ground, planning activities based on fatigue) Abandoning coping strategies Not trusting the body's ability Kinesiophobia Avoiding activities Choosing social isolation Feelings of embarrassment when falling Feelings of being different than others Feelings of incapacity Difficulties of accepting limitations

				Going beyond one's capacity Adjusting activities
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Note: Data on age, gender and activities-specific balance confidence collected at baseline.