

Why dining chairs **FAIL** seniors, caregivers, and persons with reduced mobility



The journey of life robs many from living healthy, independent lives. Mobility challenges associated with aging, ongoing health issues, injuries, or medical diagnosis prevent many from doing even the simple things in life, such as scooting up to a table to enjoy a meal with family or friends.

Simply stated...

Dining chairs fail seniors because

- they are not designed to MOVE
- they do not reduce the physical demands put on the care staff

As a result, care staff (the person behind the chair) experience fatigue and risk personal injury each time they provide mealtime assistance.

Therefore...

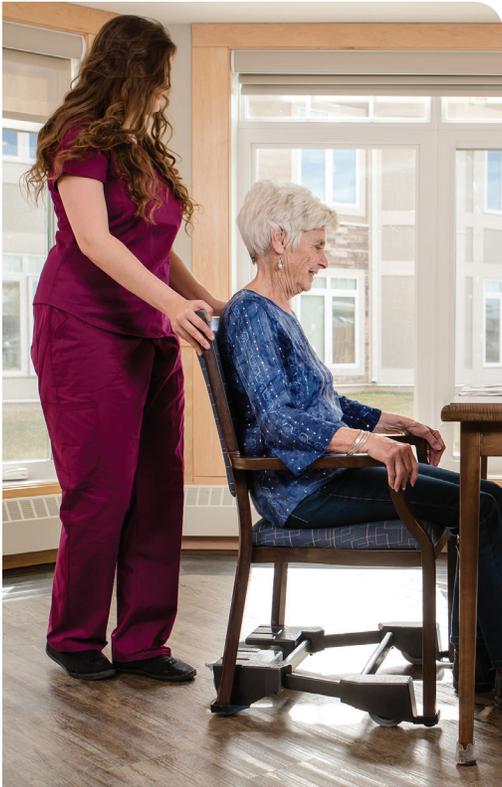
Chairs designed for persons living with reduced mobility and care staff should include features that enable chairs to **Swivel...Turn...Roll...and Brake for safety!**

These features eliminate the need for care staff to **push / pull / shove / twist** when providing mealtime assistance.

Consider the following...

1. **Traditional chairs are not designed to move.** Traditional, four-legged dining chairs rely on friction between the legs of the chair and the floor to remain upright and immobile. Any force applied to move a chair (push/pull/shove/twist) with a seated person damages a chair's structural integrity.
2. **Cushioned flooring further increases resistance when attempting to move a seated person.** While cushioned flooring is credited with minimizing serious injury should a fall occur, indentations formed under each chair leg make it almost impossible for a care staff to move a chair with someone sitting in it.
3. **In many care communities, the person providing assistance is also a senior.** Increasingly, many early retirees are returning to work as care staff. As seniors themselves, they too are at risk of incurring injury due to diminished physical strength and muscle coordination.
4. **Safety guidelines indicate a person can safely push no more than 40 lbs.** Any attempt to move a seated person of any size is unsafe and increases the risk of injuring oneself.

Daily activity challenges experienced by care staff include:



- Assisting persons with limited mobility get seated and moved up-to and away-from the table
- Assisting larger persons (300+ lbs.) get seated and moved up-to and away-from the table
- Assisting persons transferring from walker / rollator into a dining chair and moved up-to and away-from the table
- Providing dignity to persons requiring feeding assistance while they are seated in different styles of geri-chairs
- Providing assistance to persons who are no longer capable of understanding verbal instructions (Alzheimer's, Dementia) get seated and moved up-to and away-from the table
- Providing assistance to persons with impaired motor skills (Parkinson's) get seated and moved up-to and away-from the table

...and finally, providing care without incurring a personal injury.

While it is expected of care staff to assist a seated person up-to and away-from the table, the reality is this task is almost impossible as care staff lack the physical strength required to provide assistance. Communities would be well served to identify a mechanical means that enables care staff to perform these tasks with grace and ease.

Design Question: How does a person living with reduced mobility get moved up-to and away-from the table?

Design Challenge: Our challenge was NOT to design a chair that rolls easily. These chairs already exist in the form of a task chair or a 1970's dinette chair. These chairs are considered unsafe as they can move unexpectedly and prematurely.

Rather, the design challenge was to incorporate mobility features which balance the need to:

- a. move a seated person up-to the table with ease and grace,
- b. reduce the physical demands placed upon caregivers,
- c. provide the seated person with an increased sense of dignity and self-worth,
- d. **...and to do so, without compromising safety for either the seated person or the caregiver.**

To Learn More...For seniors living with reduced mobility, these features enable a care provider to offer assistance without risk of injury to themselves.



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HOW MUCH PHYSICAL EFFORT CAN CARE STAFF SAFELY EXERT?

(**LIFTING - PUSHING - PULLING**)

A person can safely **LIFT 35 lbs.** under normal conditions (no sudden moves or twisting)
A person can safely **PUSH up to 20%** of their body weight and **PULL up to 30%** of their body weight.

** Silverstone Group*

	LIFT ↑	PUSH →	PULL ←
140 lbs. CARE STAFF	35 lbs.	28 lbs.	42 lbs.
200 lbs. CARE STAFF	35 lbs.	40 lbs.	60 lbs.



ESSENTIALLY...

A CARE STAFF RISKS INCURRING A WORK-RELATED INJURY

EACH TIME ASSISTANCE IS PROVIDED.

HOW DOES A PERSON GET SEATED AT THE TABLE...

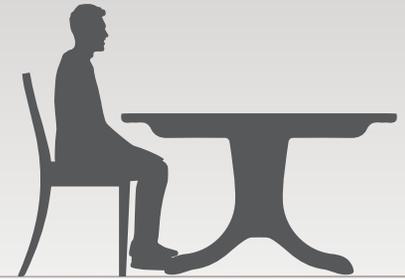


**POSITIONS
CHAIR**

**GETS
SEATED**

**LIFTS
CHAIR
SLIGHTLY**

**SCOOTs
FORWARD**



AN **ABLE-BODIED** PERSON...

...REQUIRES NO ASSISTANCE



CARE STAFF	CARE STAFF	CARE STAFF
POSITIONS CHAIR	ASSISTS IN GETTING SEATED	<u>PUSHES - SHOVS - TWISTS</u> TO MOVE SEATED PERSON FORWARD



A **MOBILITY-CHALLENGED** PERSON...

...REQUIRES CARE STAFF ASSISTANCE
TO GET SEATED AT THE TABLE

TO GET SEATED...

ONCE SEATED...THEN WHAT?



CARE STAFF ASSIST THE PERSON INTO CHAIR



NO
Mobility

With NO mobility features, a caregiver is required to **PUSH - PULL - SHOVE - TWIST** the seated person up-to and away-from the table.

Risk of injury / fall: **HIGH**



CARE STAFF ASSIST THE PERSON INTO CHAIR



Swivels...Locks...
Brakes

With mobility, the seat of the chair **SWIVELS...LOCKS**.

Care staff can easily position the seated person at the table.

Risk of injury / fall: **LOW**



CARE STAFF MOVE THE CHAIR TO PERSON



Turns...Rolls...
Brakes

With added mobility, the chair is **MOVED** to the person.

Once seated, care staff **ROLL** the seated person up-to the table with ease and grace.

MULTIPLE BRAKE OPTIONS

Risk of injury / fall: **LOW**

HOW CHAIRS THAT SWIVEL...TURN...ROLL ELIMINATE TABLE INTERFERENCE



NO
Mobility



SEAT: Swivels
Locks - 90°

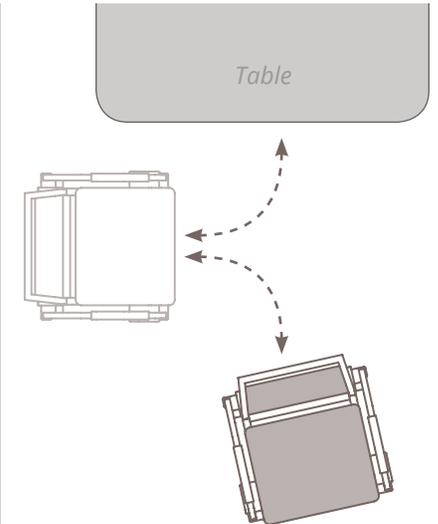
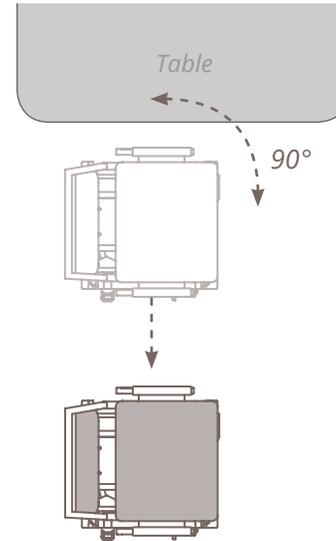
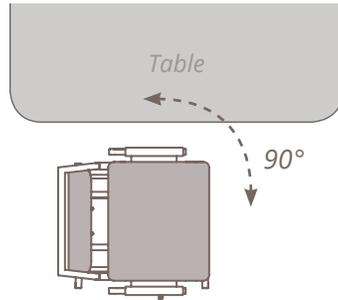
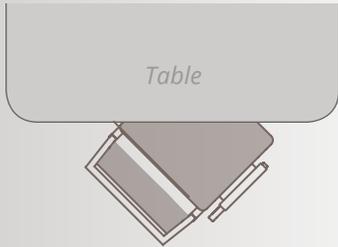


SEAT: Swivels
Locks - 90°

CHAIR: Rolls (Inline)
Brakes

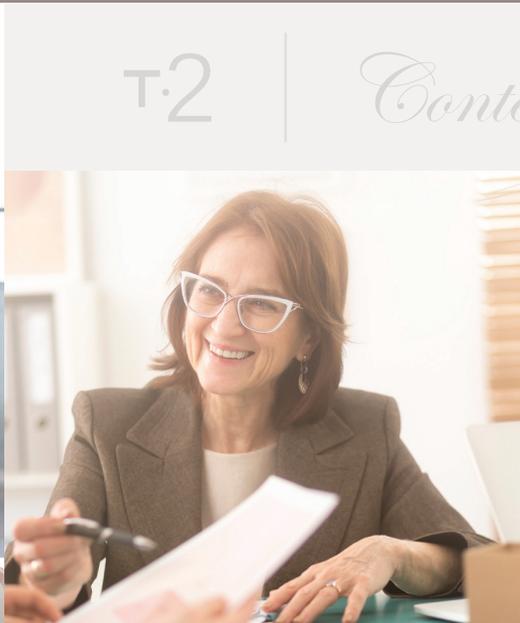


CHAIR: Turns (360°)
Rolls
Brakes



Who Benefits...

When chairs are designed to **SWIVEL...TURN...ROLL...**and **BRAKE** for safety.



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Contessa



...REDUCE

Workplace Injuries

WC Claims / Absenteeism / Overtime

Furniture Costs...as the premature replacement of chairs is no longer required

Flooring Costs...as damage caused as a result of constant skidding is eliminated



*Reducing Stress / Anxiety
for Both the
Seated Person and the Caregiver*

...CREATE

Safer Workplace

*A More Enjoyable
Mealtime Routine*

Healthier Work Environment

*Better Retention of
Care Staff*



...NURTURE

*Creating a More Enjoyable
Mealtime Routine*

*Families
Experience an Increased
Sense of
Dignity & Self-Worth*

*Enables Seniors to
Care of Each Other*



*Creating
a More Enjoyable
Mealtime Routine*