How to Use Assistive Devices Correctly

Bennett Zazzera, PT, DPT, OCS
Board Certified Orthopedic Specialist
PTA Program Director
Kapiolani Community College
Doctor of Physical Therapy: Holomua Physical Therapy
bzazzera@hawaii.edu

Bennett Zazzera, PT, DPT, OCS
Board Certified Orthopedic Specialist
PTA Program Director
Kapiolani Community College
Doctor of Physical Therapy: Holomua Physical Therapy
bzazzera@hawaii.edu

Assistive Devices

- How do you know if you need one?

Fall Prevention!

- Hip fractures in North America are associated with a mortality rate ranging from 14% to 36% within 1 year of surgery.

BERG Balance Test

- A functional test used by physical therapists to predict fall risk and determine if a patient is in need of an assistive device.
- The scale consists of 14 functional tasks commonly performed in everyday life.

Interpretation:

41-56 = independent

21-40 = walking with assistance

0 –20 = wheelchair bound

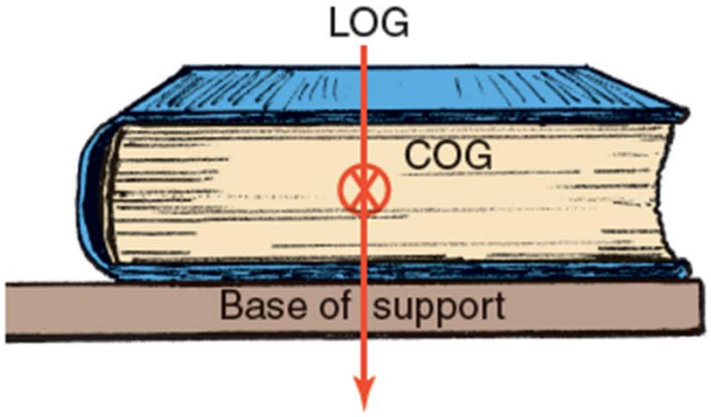
Category	Component	Score
Sitting balance	Sitting unsupported	0-4
Standing balance	Standing unsupported	0-4
	Standing with eyes closed	0-4
	Standing with feet together	0-4
	Standing on one foot	0-4
	Turning to look behind	0-4
	Retrieving object from floor	0-4
	Tandem standing	0-4
	Reaching forward with an outstretched arm	0-4
Dynamic balance	Sitting to standing	0-4
	Standing to sitting	0-4
	Transfer	0-4
	Turning 360 degrees	0-4
	Stool stepping	0-4
Total		0-56

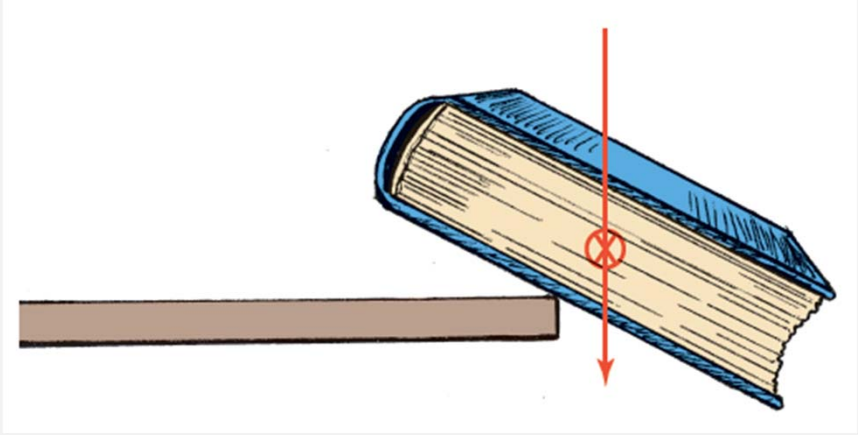
Base of Support

- The area beneath an object or person that includes every point of contact that the object or person makes with the **supporting** surface. These points of contact may be body parts e.g. feet or hands, or they may include things like crutches or the chair a person is sitting in.

Center of Gravity

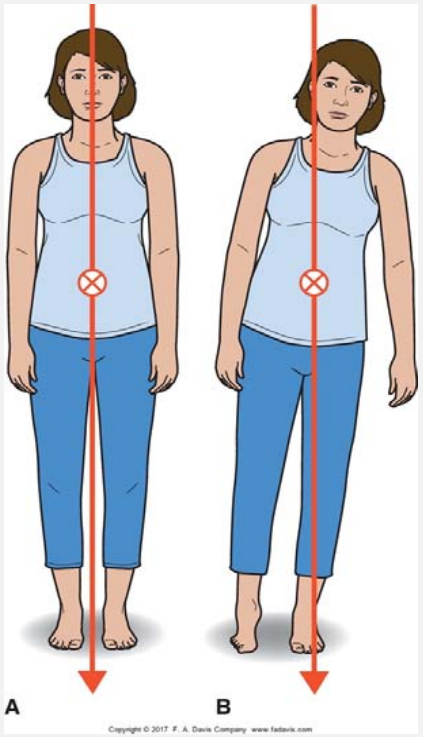
- Center of gravity (COG) is the balance point of an object at which torque on all sides is equal.
- An object will be stable if the COG is over the base of support.
- An object will be unstable if the COG if outside of the base of support.

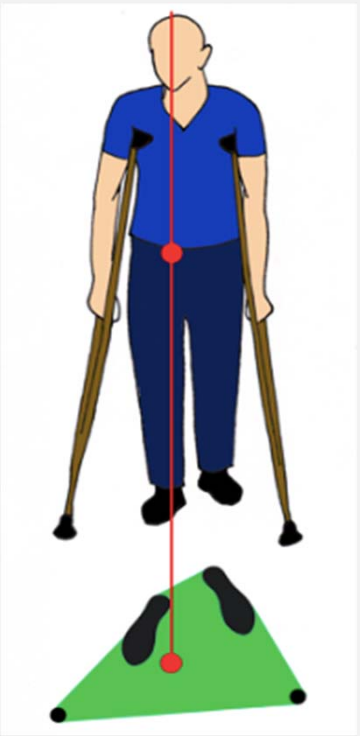




Balance

- In order to maintain balance, the center of gravity (COG) must remain over the base of support (BOS).





SIT TO STAND TRANSFER

- Scoot forward in the seat.
- Bring feet back.
- Lean body weight forward.
- Use arm rests as needed.

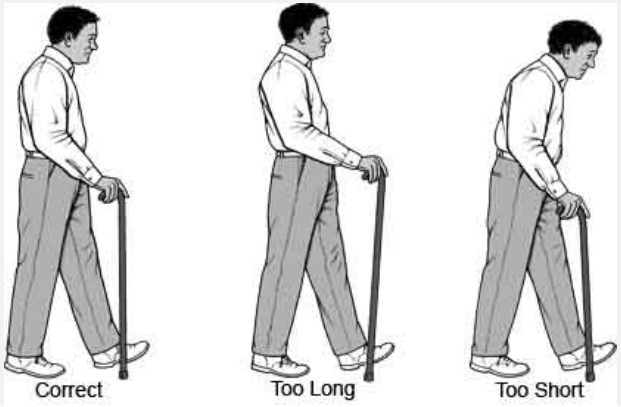
STAND TO SIT TRANSFER

- Feel the back of the legs against the seat.
- Reach for hand rests.
- Proceed to sit down in a slow and controlled manner.

SUPINE TO SIT

CANES

- Stand straight up with arms relaxed with normal bend at the elbows.
- Measure height from wrist joint to floor.
- Make sure you are wearing shoes!



CANES

- Cane should be held on the opposite side from the painful or weak lower extremity.

WALKER

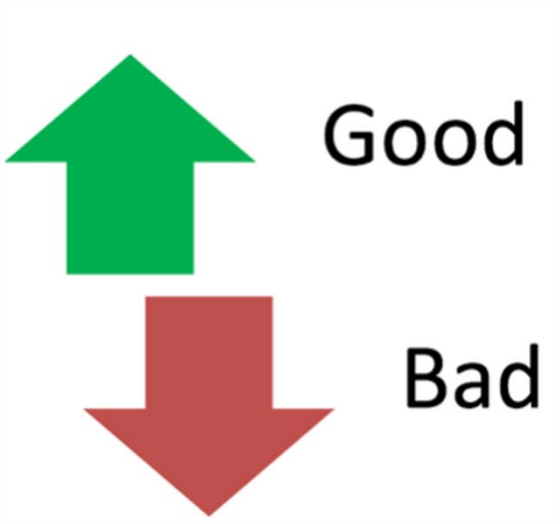
- Walker handles should be at the crease of the wrist when standing up straight.
- Elbows should be slightly bent.
- Patient should be instructed to stay inside the walker at all times (not too far forward, not too far back).

CRUTCHES

- Top of crutches should be between 1-2 inches below armpit.
- Hand grip should be at the top of the hip.
- Should be slight bend in the elbows when holding the hand grips.
- DO NOT SUPPORT BODY WEIGHT WITH ARMPITS!! Should squeeze crutches against sides and use hand grips to support weight.

NEGOTIATING STAIRS

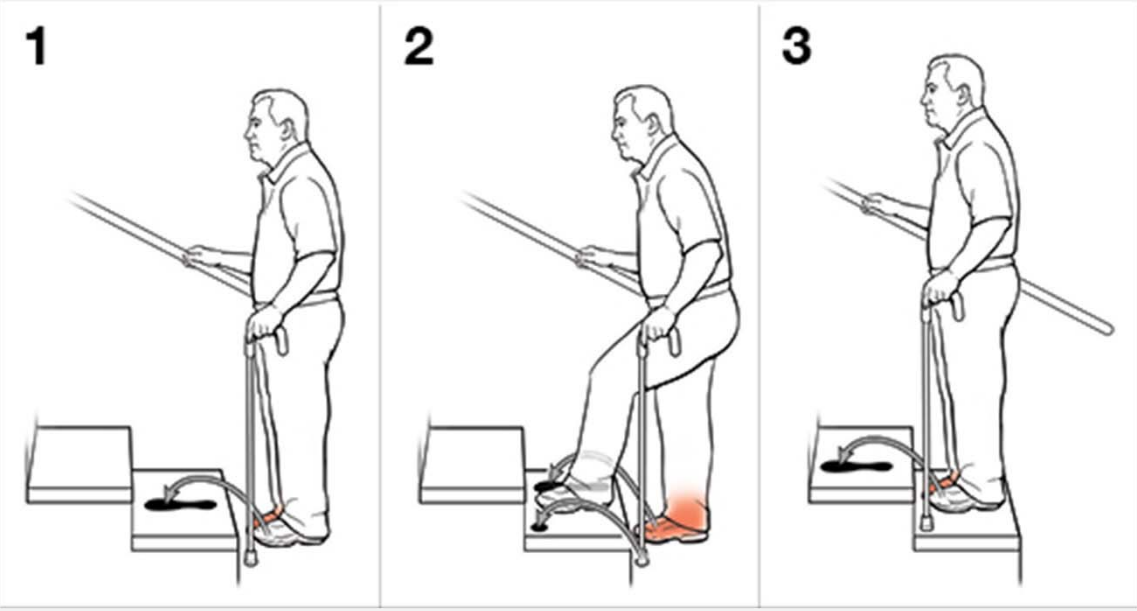
- Up with the good, down with the bad!



https://youtu.be/CbpYjhrAf5I

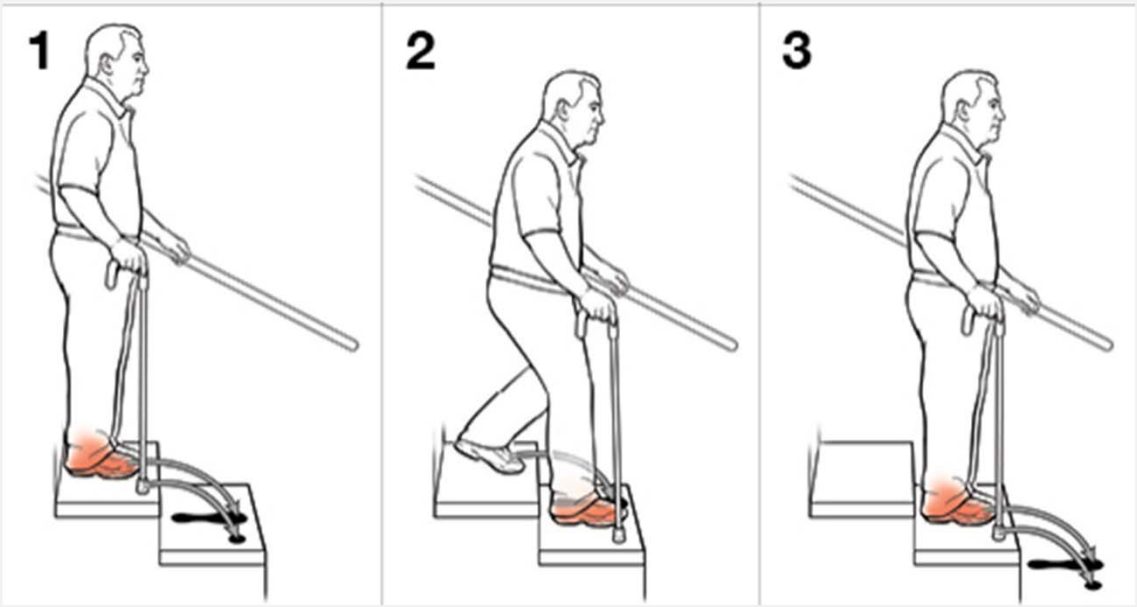
UP STAIRS WITH CANE

1. Lead with the strong leg.
2. Follow with the weak leg and cane simultaneously.



DOWN STAIRS WITH CANE

1. Step down with the weak leg and the cane simultaneously.
2. Follow with the strong leg.



Questions?