



“Elderly Balance Assessment”

「長者平衡能力評估」

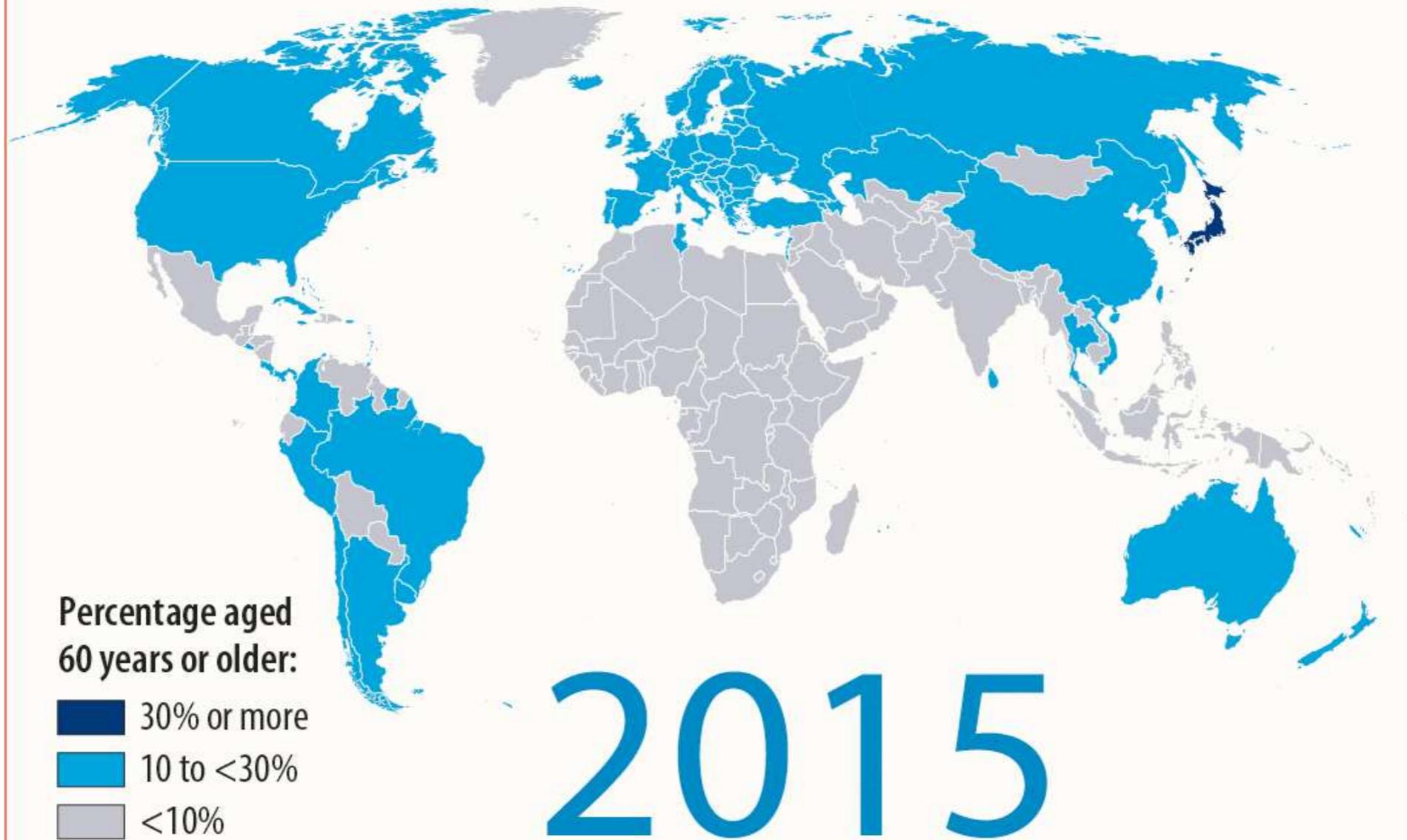
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The Hong Kong Society for the Blind
香港盲人輔導會

Populations are getting older



World Health Organization



Fall Risk Factors

■ Intrinsic Factors



■ Extrinsic Factors



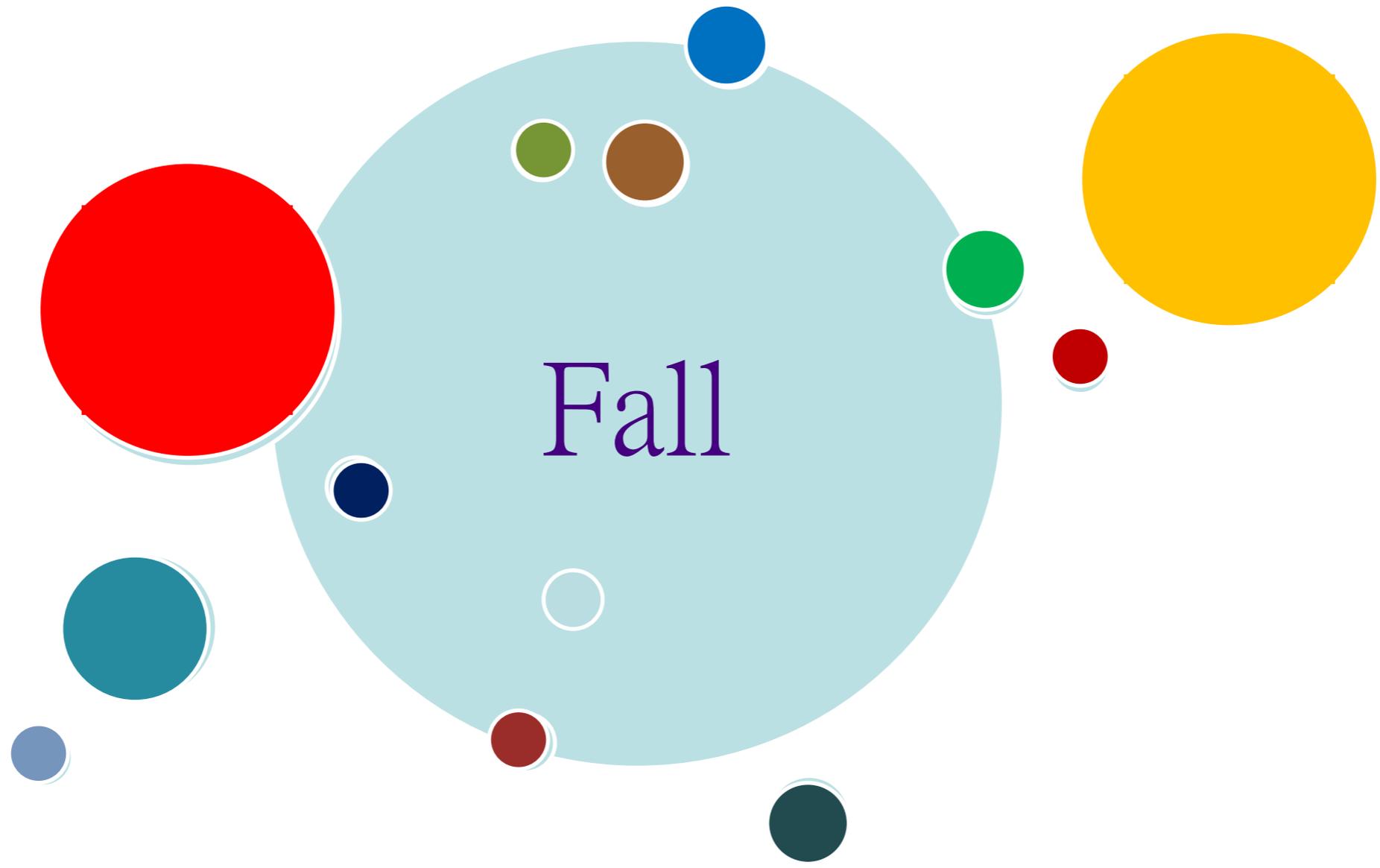
Fall Prevention



BRUSKIE



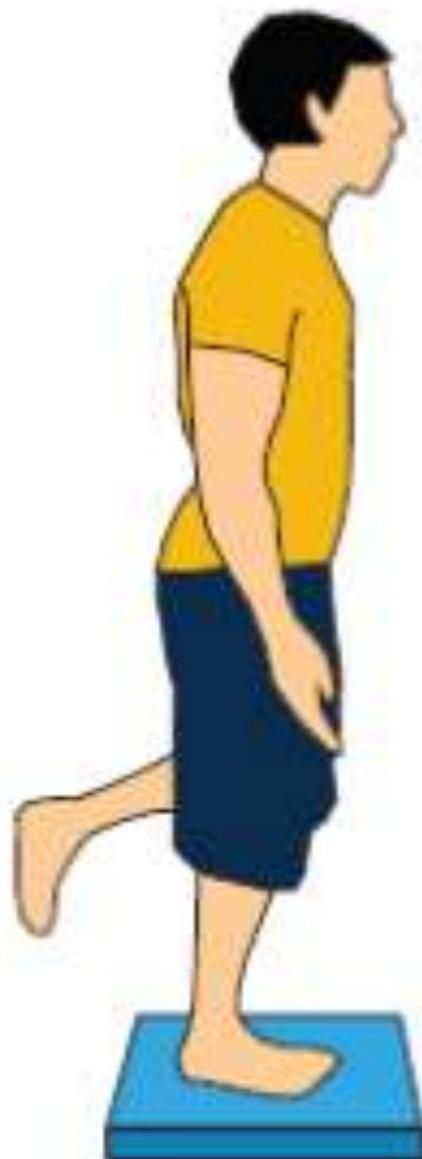
Fall Risk Assessment



BUSKHE



Balance Assessment



BUSKIE



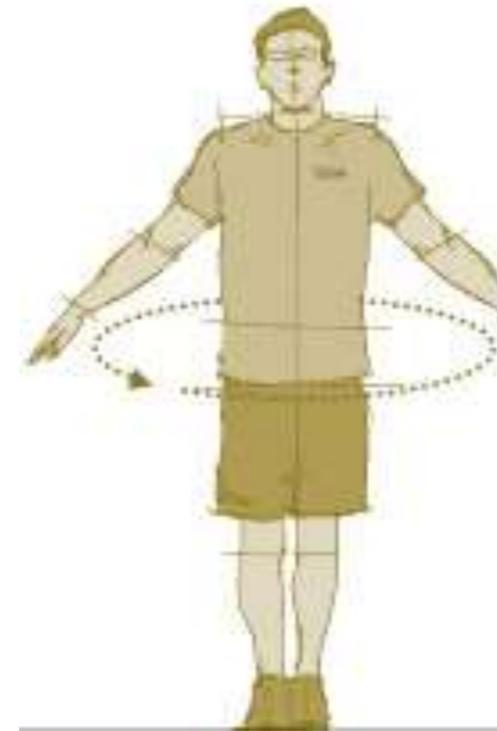
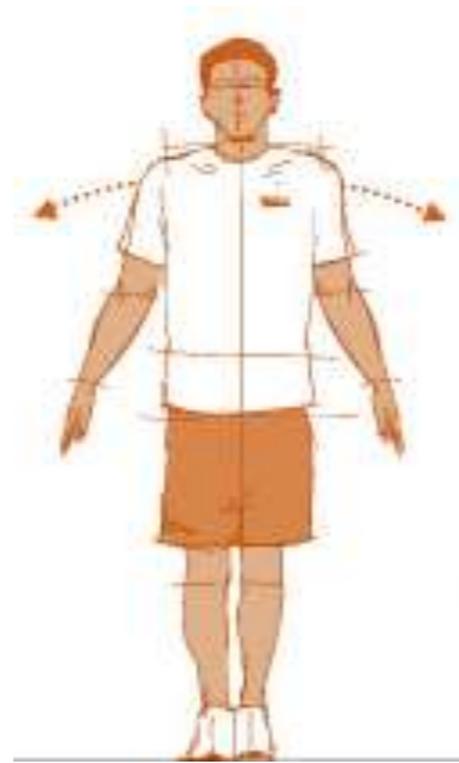
Common Elderly Balance Assessments

- **Berg Balance Scale (BBS)**
- **Timed Up and Go Test (TUG)**
- **Functional Reach Test (FRT)**
- **Tinetti Balance and Gait Assessment**
- **Balance Evaluation Systems Test (BESTest)**

■

Berg Balance Scale (1)

- Balance assessment scale consists of 14 testing items with total score of 56



(Berg et al. 2009)



Berg Balance Scale (2)

- **“Gold Standard” with high reliability and specificity**

- **Quick administration**

- **Ceiling effect**



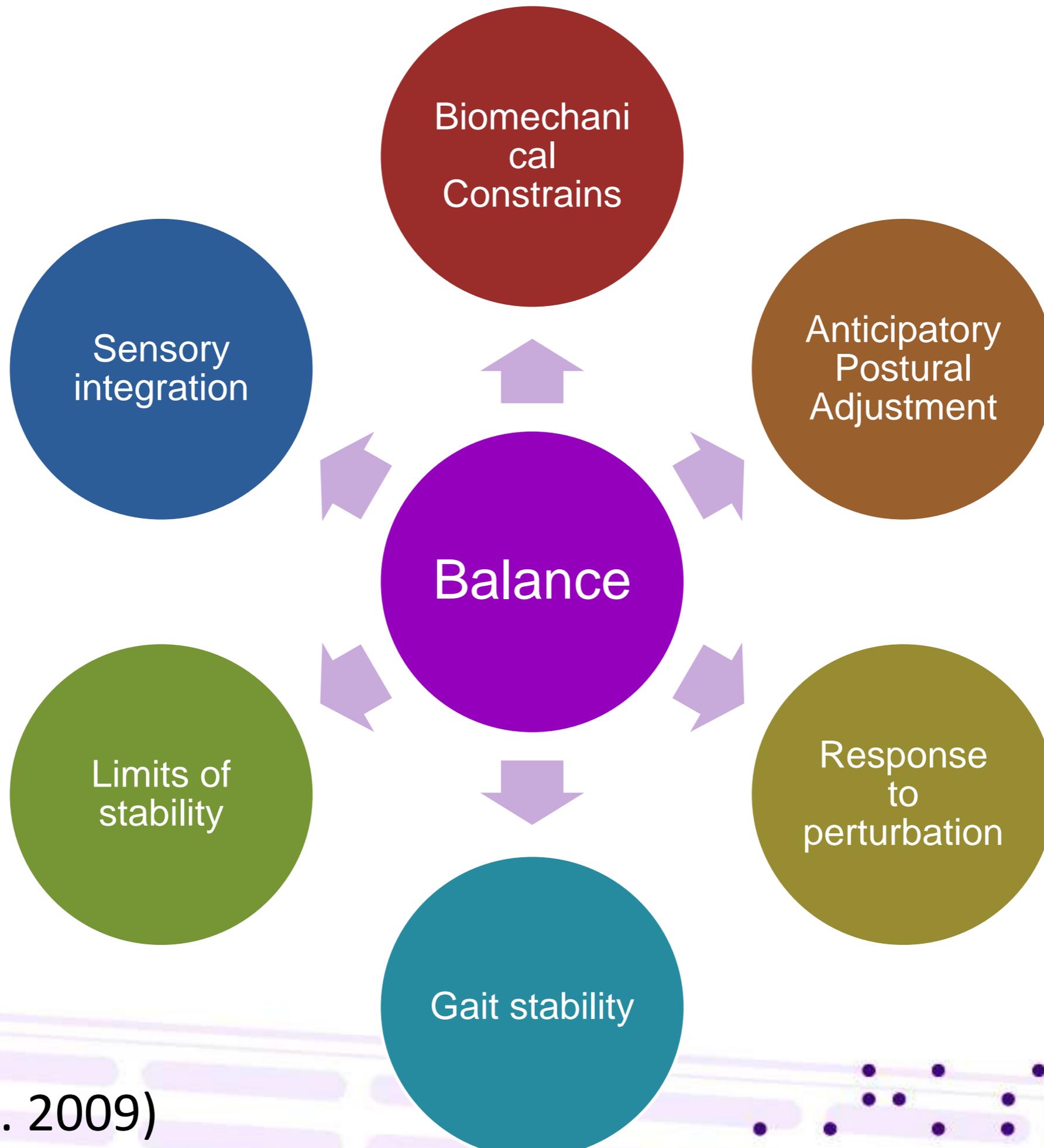
- **No identification of type of balance deficit**

- **No dynamic balance during gait or sensory conditions**



Balance Evaluation Systems Test

- Focus on system assessment
- Determines causes of balance deficits
- Good reliability



(Horak et al. 2009)

Balance Evaluation Systems Test

- ❖ Long to perform (30 – 40 minutes)

➔ Short version (mini-BESTest)

- ❖ Psychometric properties not yet established for specific population

➔ Modified BESTest (BESTest-VI)

Modified BESTest (BESTest-VI) (1)

- **Visually impaired (VI) elderly population in HK**
- **VI is a well-recognized risk factor for falls**
- **More likely to fall than normal sighted elderly**

Modified BESTest (BESTest-VI) (2)

- Data collection

- By The Hong Kong Society for the Blind

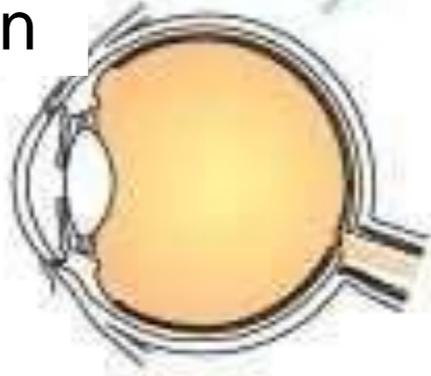


mCTSIB (1)

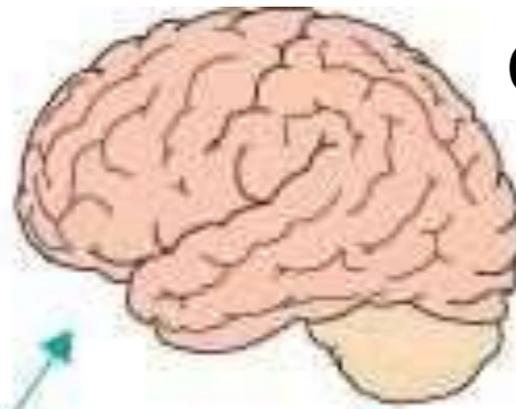
- **modified Clinical Test of Sensory Integration on Balance**
- **Static Posturography**



Vision



Proprioception



CNS



Vestibular



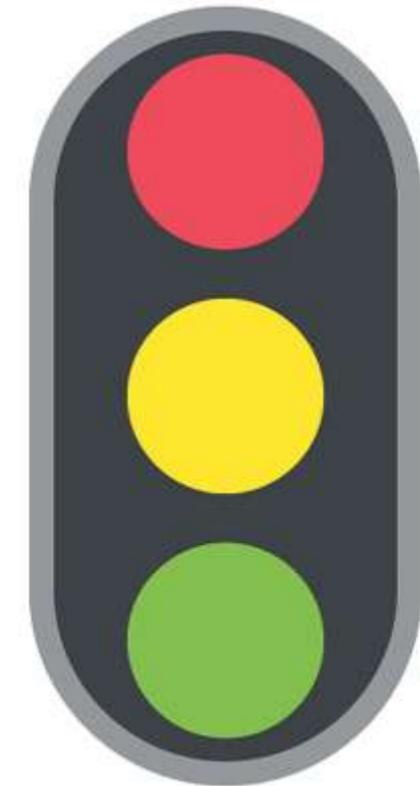
Musculoskeletal

BRUSKE



mCTSIB (2)

- Objective measurement
- Real-time result
- Recommended fall risk level

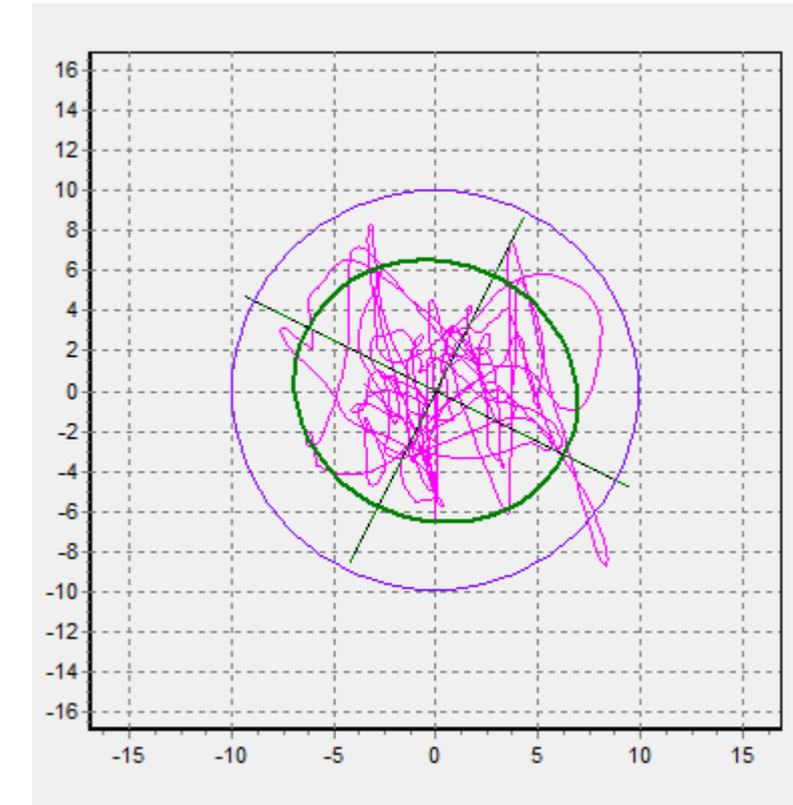


mCTSIB (3)



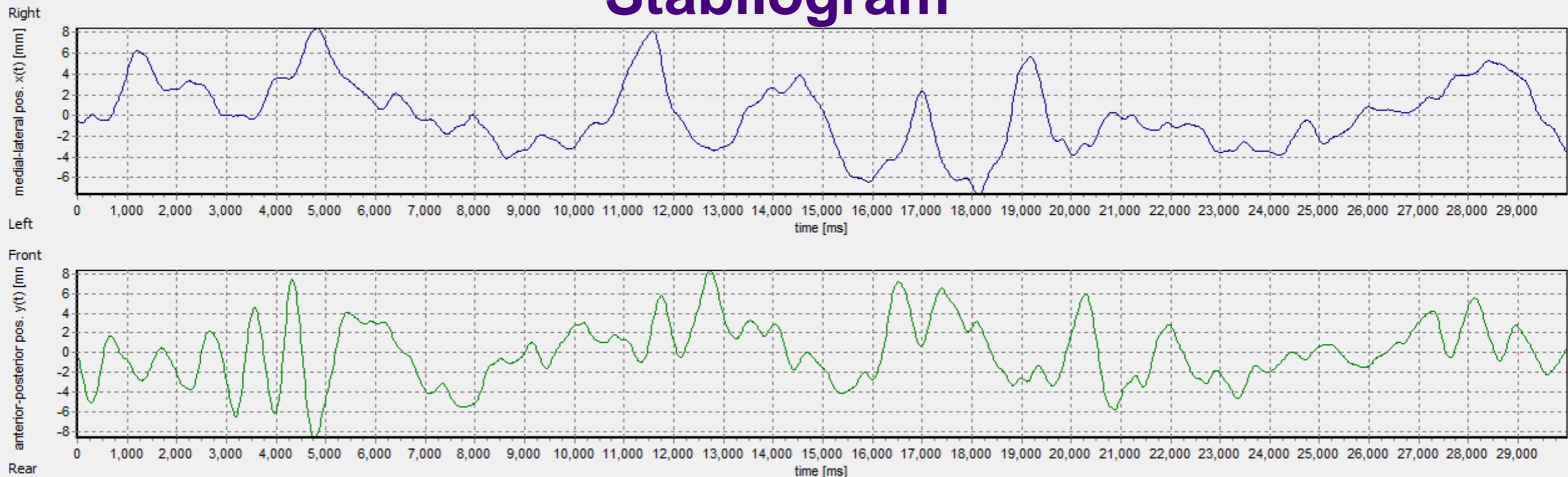
mCTSIB (4)

Condition	Eye	Surface
1	Open	Stable
2	Close	Stable
3	Open	Compliant (Foam)
4	Close	Compliant (Foam)



Posturogram

Stabilogram



Conclusion

**Identify and Response
to the TURE needs of
the elderly!**

SUPPORT

BBC



Reference

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