

# Preventing Falls in your Older Patients

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Sciences Centre



# Case

- 80 year old female
- Falls 1-2x/yr, now 1-2x in 3 months
- “trips”, occasionally lightheaded
- Denies LOC / CP / palpitations / SOB
- PMHx – HTN, hyperlipidemia, CAD, OA, insomnia
- Meds: atorvastatin, ramipril, HCTZ, Tyl #3, lorazepam, amitriptyline, alendronate

# Case cont'd

- 130/80 supine, 110/70 sitting
- Bifocals
- Kyphosis
- SEM 3/6, carotid ?decreased volume
- OA changes
- Hip flexor and abductors 4-/5
- Decreased vibration to knees
- uses hands to rise from chair
- Gait: WNL



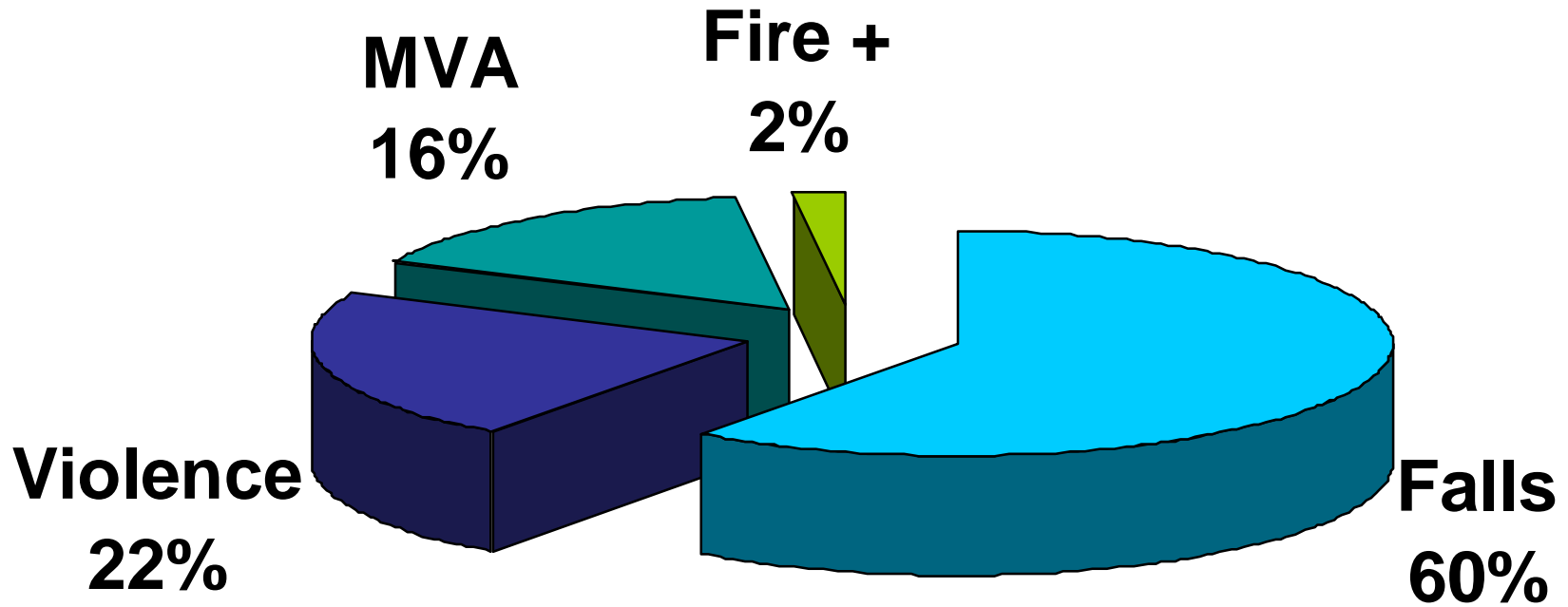
# Emergency Regional Trauma Unit

MAXIMUM CLEARANCE 9' 0"

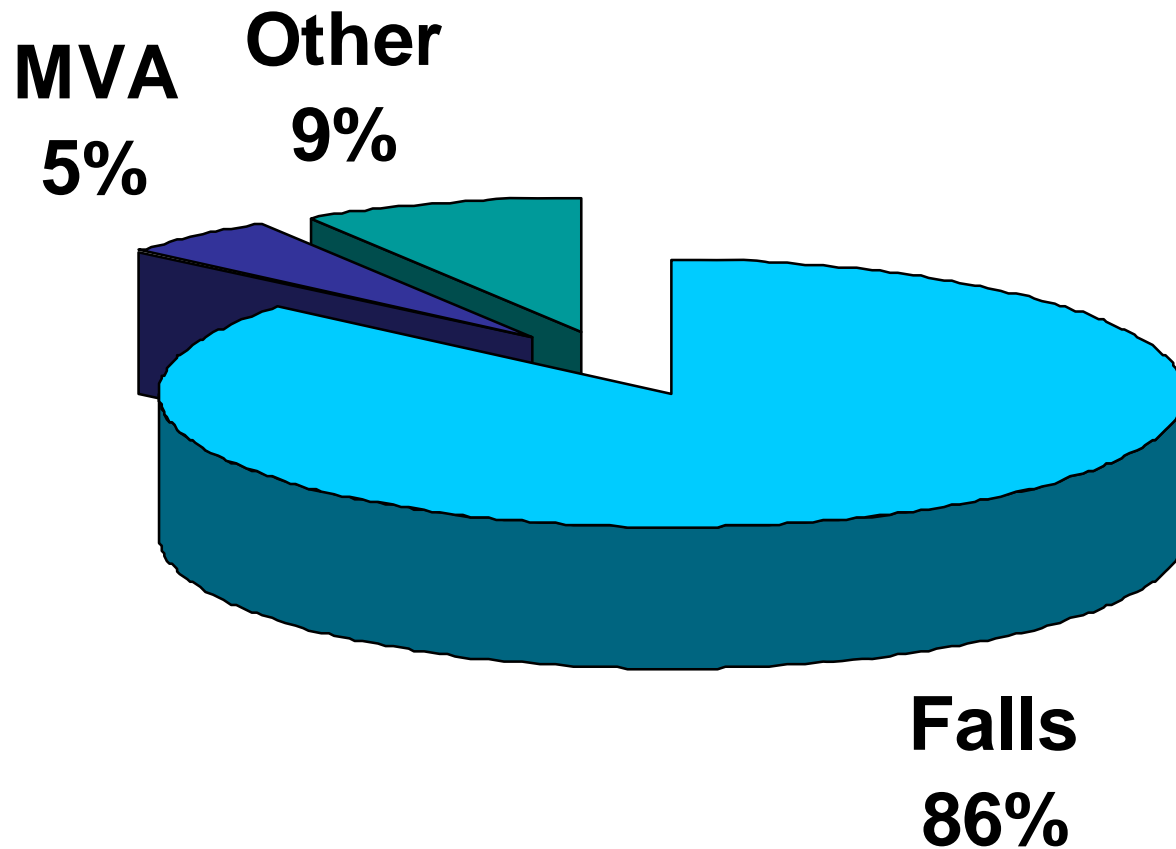


# Trauma Admissions Ontario 1998/99

n=68,222



# Trauma Admissions Ontario 1998/99 over 65 years n=27,650



# Risk factors for falls (AOR)

■ <b>Muscle Weakness</b>	<b>4.4</b>
■ <b>History of Falls</b>	<b>3.0</b>
■ <b>Gait/balance abnormality</b>	<b>3.0</b>
■ <b>visual deficit</b>	<b>2.5</b>
■ <b>Impaired ADL</b>	<b>2.3</b>
■ <b>Cognitive impairment</b>	<b>2 - 5</b>
■ <b>psychotropic drugs</b>	<b>2 - 5</b>

■ Rubenstein Clin Geriatr Med 2002



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# Approach to the patient with a fall

# History

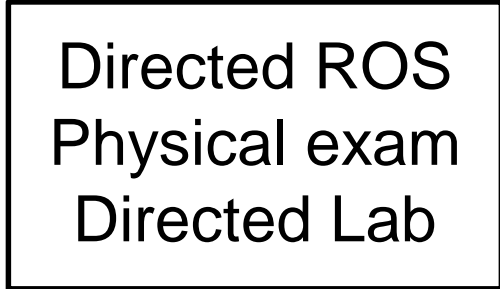
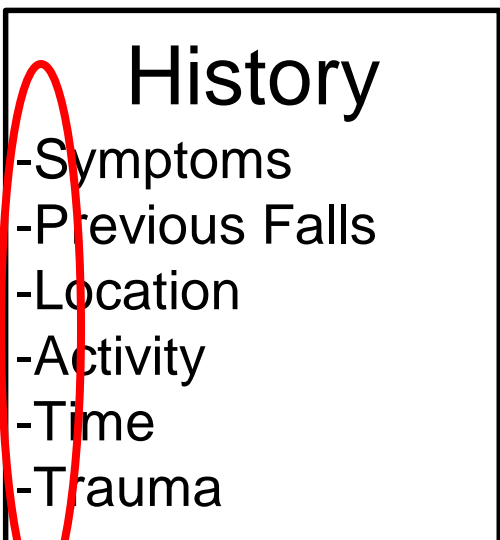
- Symptoms
- Previous Falls
- Location
- Activity
- Time
- Trauma

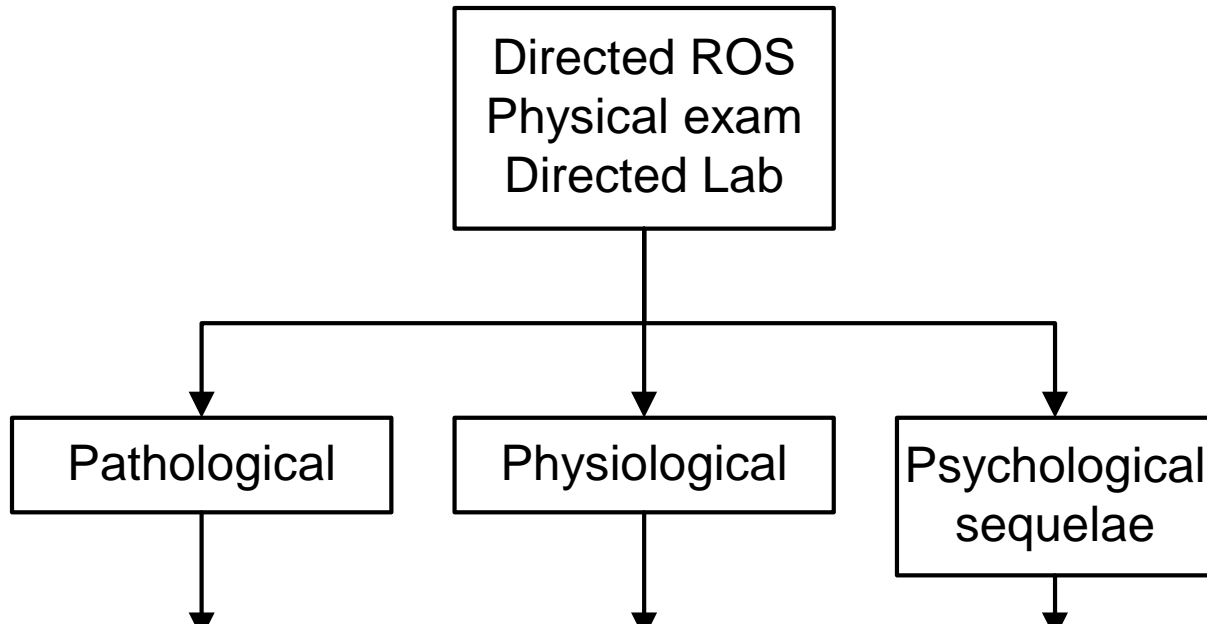
Intrinsic  
Factors

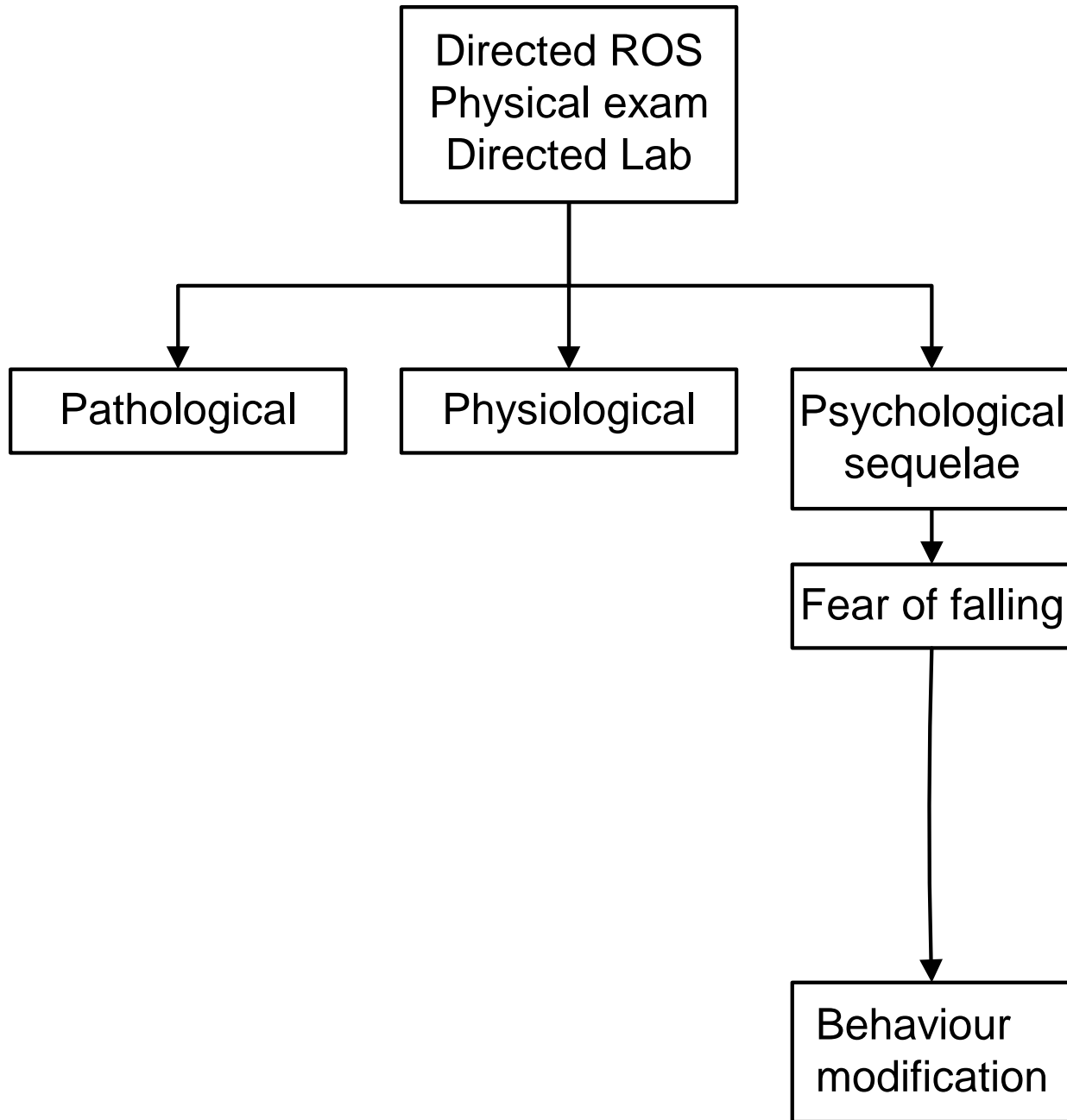
Directed ROS  
Physical exam  
Directed Lab

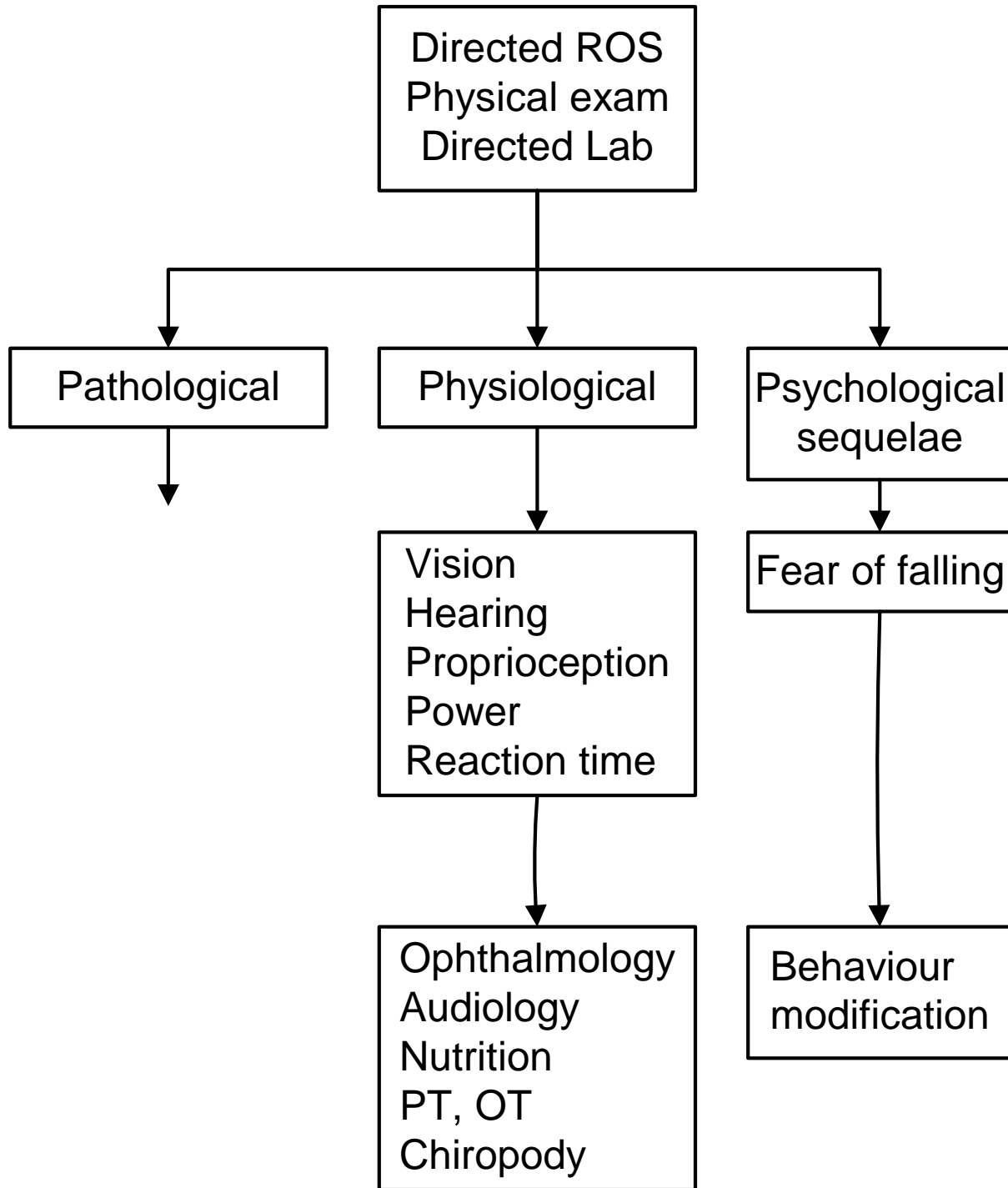
Extrinsic  
Factors

OT /  
Homesafety









Directed ROS  
Physical exam  
Directed Lab

Pathological

Physiological

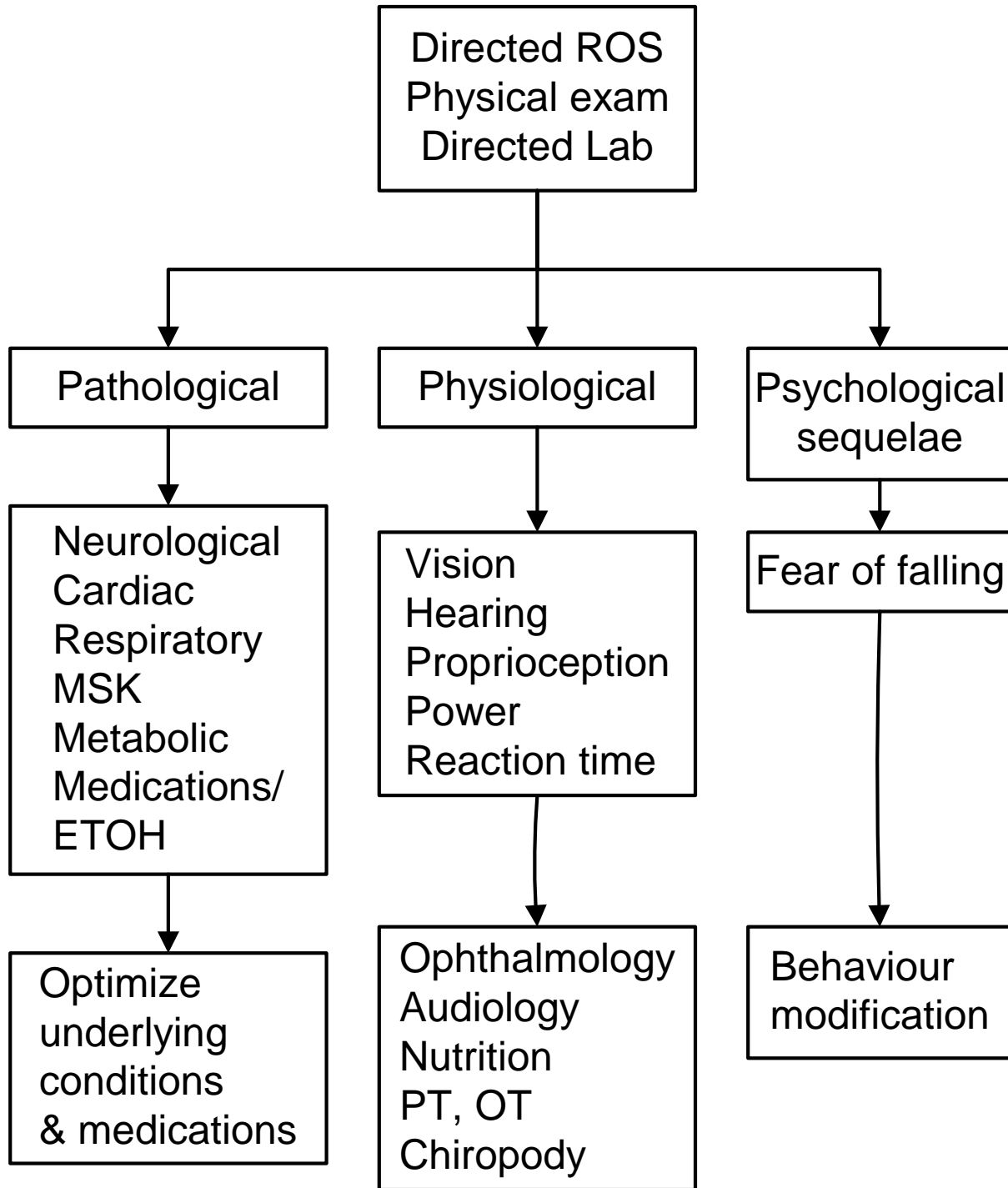
Psychological sequelae

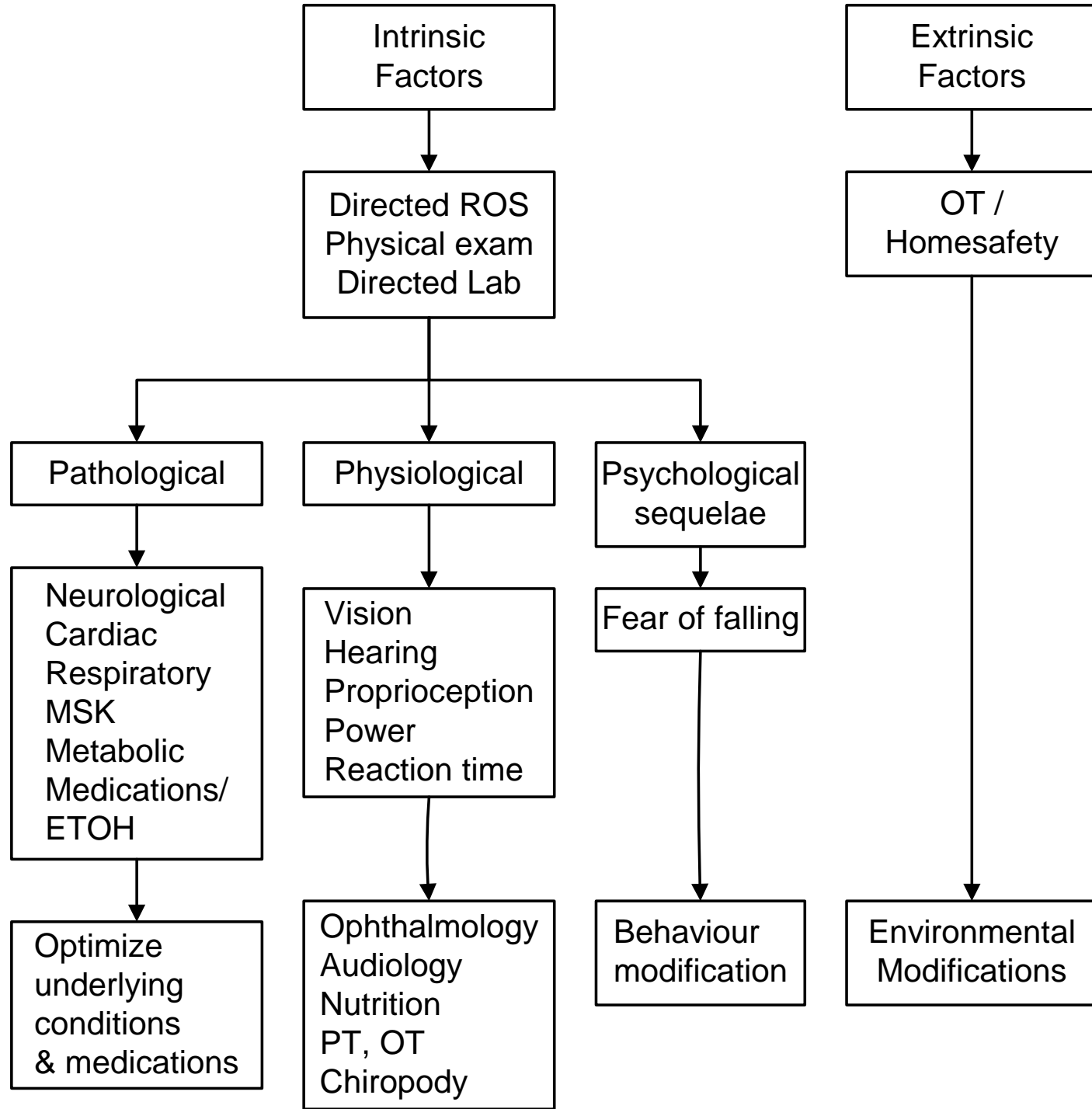
Vision  
Hearing  
Proprioception  
Power  
Reaction time

Fear of falling

Ophthalmology  
Audiology  
Nutrition  
PT, OT  
Chiropody

Behaviour modification





Intrinsic  
Factors

Extrinsic  
Factors

Directed ROS  
Physical exam  
Directed Lab

OT /  
Homesafety

# Multidisciplinary Falls Prevention

Optimize  
underlying  
conditions  
& medications

Ophthalmology  
Audiology  
Nutrition  
PT, OT  
Chiropody

Behaviour  
modification

Environmental  
Modifications

# Cochrane Systematic Reviews 2005

## Interventions for preventing falls

(Gillespie, LD et al. )

- Community-dwelling
- Fallers and non fallers
- 62 trials
- 192 / 792 vs 251 / 761
  - RR=0.73 (0.63-0.86)

- Multifactorial intervention to reduce falls  
Tinetti et al. NEJM 1994;331 821-827
- PROFET: Prevention of falls in elderly  
Close et al. Lancet 1999;353:93
- Multifactorial Falls Prevention  
Day BMJ 2002;325:128

Falls program clips  
can be seen at [rgp.toronto.on.ca](http://rgp.toronto.on.ca)



WATCH  
FOR  
ICE



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- **Hip flexor and abductors 4-/5**
- **Decreased vibration to knees**
- **uses hands to rise from chair**
- **Gait: WNL**

# Summary

- Falls are a syndrome
  - Assessment
  - modify risk factors / Multidisciplinary intervention to prevent falls
  - Exercise and balance training – lateral balance and hip abduction
  - Prevent injury – osteoporosis treatment, hip protectors, vitamin D

- [www.rgp.toronto.on.ca](http://www.rgp.toronto.on.ca)
- Practicing Physician Education in Geriatrics – Toolkit  
[www.gericareonline.net](http://www.gericareonline.net)
- Health Canada - seniors and aging  
[www.hc-sc.gc.ca](http://www.hc-sc.gc.ca)

# NIA Exercise Guide

[www.nia.nih.gov](http://www.nia.nih.gov)

