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# The challenge of incontinence in dementia

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# Challenge

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A call to engage in a contest, fight, or competition.

A demand for explanation or justification; a calling into question.

A test of one's abilities in a demanding but stimulating undertaking.

# Dementia

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## A. Multiple cognitive deficits

1. Memory impairment

2. One or more of:

(a) aphasia

(b) apraxia

(c) agnosia

(d) disturbance in executive functioning

B. Impairment in social or occupational functioning, decline from a previous level of functioning.

C. Gradual onset, progressive decline.

D. Not due to specified other conditions...

E. ... or delirium.

# Dementia subtypes

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- Alzheimer's disease
- Vascular
- Mixed
- Lewy body
- Fronto-temporal
- Rarities

... but don't forget Normal Pressure Hydrocephalus, subdural bleeds or brain tumours

# CHALLENGE NUMBER 1

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There is a lot of it about: we need to understand why

# Incontinence in dementia

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'11-90%'

22% community dwelling

>80% of care home residents with dementia

67% of people with dementia in general hospitals

# Incontinence in dementia

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85 year old Swedes

With dementia: male 50%, female 60%

Without dementia: male 18%, female 36%

# Incontinence in dementia

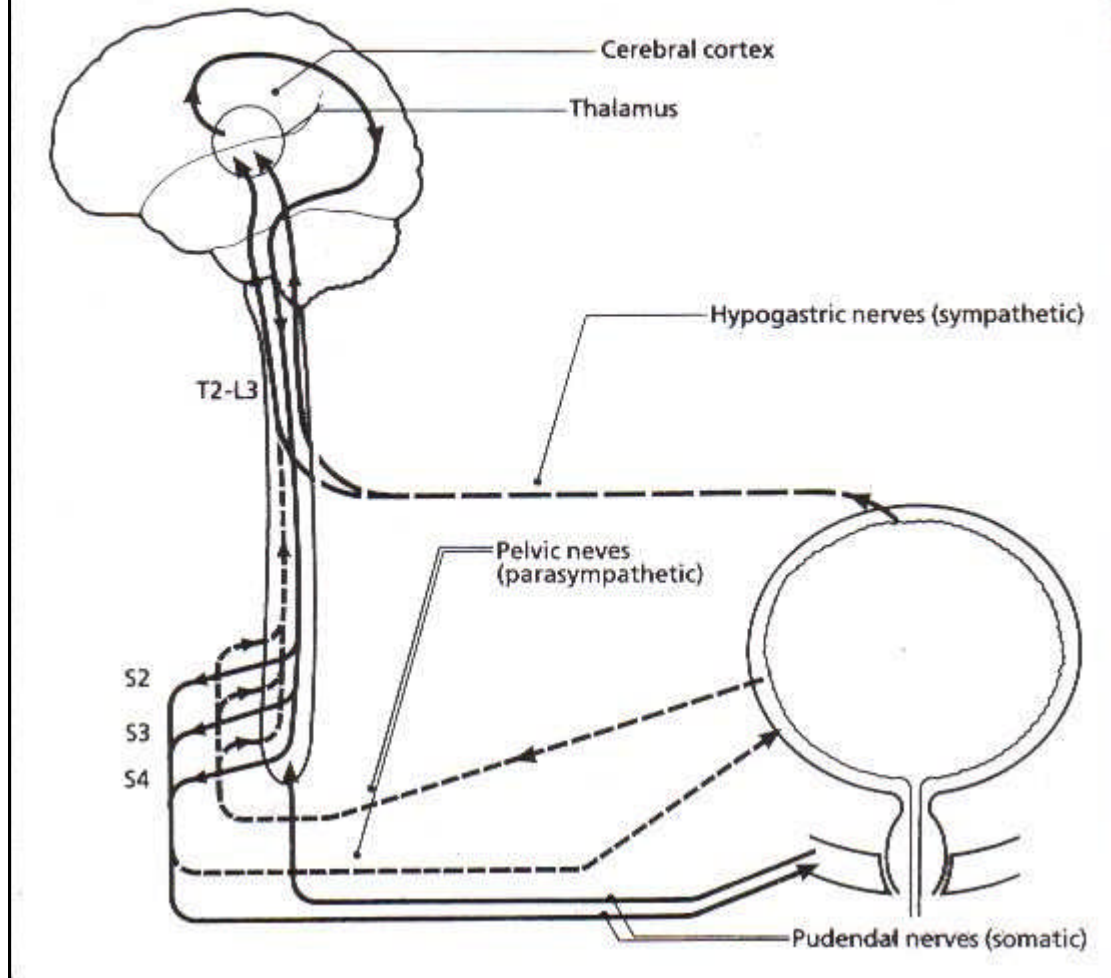
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In the beginning, there was detrusor hyperreflexia



# Nerve pathways between the bladder, spine and micturition control centre

Note: nerves supplying the urethra have been omitted for clarity



# Urodynamics

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## Memory clinic

- 44% detrusor instability
- 27% bladder outlet obstruction
- 8% detrusor hyperactivity with impaired contractility
- 8% low compliance/low capacity
- 12% normal

## Long term care

- 40% detrusor instability
- 40% normal
- 15% stress
- 5% overflow

# Bladder overactivity is not the whole story

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- Predisposition and insult model
- Multifactorial
- Strongest predictors are
  - nocturia
  - immobility
  - severity of cognitive impairment

## CHALLENGE NUMBER 2

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Treat co-morbidity without being put off by dementia

# 'Transient' causes

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- Infection, urinary and other
- Delirium
- Drugs
- Stroke
- Fracture, immobility
- Causes of polyuria
- Constipation/impaction

# Drugs

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- Diuretics
- Anti-cholinergic
- Opiate
- Sedatives, hypnotics
- Delirium-causing
- Oedema-causing
- Cholinesterase inhibitors
- Constipating

# Urinary tract pathophysiology

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- Primary detrusor instability
- Detrusor 'hyperreflexia' (ie neurogenic DI)
- Prostate
- Atrophic urethritis/trigonitis
- Stones and cancers
- Stress incontinence
- Incomplete emptying

# Assess, diagnose

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- Symptoms
- Prior function and changes
- Exam: cognition, focused neuro, PR,  $\pm$  PV
- PVRV
- Urinalysis/culture
- Frequency volume or continence chart



# CHALLENGE NUMBER 3

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Nocturia

# Nocturia

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- Overactive bladder (small functional capacity)
- Polyuria, or nocturnal polyuria
- Insomnia
- Incomplete bladder emptying

# Nocturnal polyuria

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- 'Medical causes'
  - diabetes mellitus, (diabetes insipidus)
  - heart failure, oedema
  - hypercalcaemia, hypokalaemia
  - sleep apnoea
  - insomnia
  - lithium
- Age-related nocturnal polyuria
- Alzheimer's-related vasopressin cycle reversal

# Desmopressin

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	Urine flow ml/min	8h equivalent/ ml
pre	1.6	768
100mcg	1.1	479
200mcg	0.9	432
400mcg	0.9	432

N=23 without dementia ; Asplund 1998

# Desmopressin

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	Baseline	Desmopressin 100mcg
Nocturia mean voids	5.2	2.2
Night volume/ml	956	528

N=30; Asplund 1999

# CHALLENGE NUMBER 4

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Learn how to use anti-muscarinic drugs appropriately

# Drugs

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- Anti-cholinergic drugs (M1-2) can worsen cognition
- ... or cause delirium
- Hydrophilic (trospium) and M3 specific (darifenacin)
- But their effect is small in any case

# Effectiveness of trospium 20mg bd

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	Placebo		Trospium	
	baseline	12 weeks	baseline	12 weeks
Means				
Voids/d	13	12	13	10
Incontinent episodes	4.3	2.2	3.9	1.6
Voided volume	157	170	155	205
Nocturia	2.0	1.7	2.1	1.6
Dry mouth		7%		22%

N= 523 without dementia ; Zinner et al 2004



# Habit training and timed voiding

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- Control incontinence by pre-empting ...
- ... rather than changing behaviour
- Severer cognitive and physical disabilities
- Relies on carers, client is passive

# Prompted voiding

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- Active participation of patient and carer
- Regular asking/checking
- Aims increase self initiated requests to use toilet
- Needs some mobility
- Several trials in NH, 32% reduction in incontinent episodes

# Trial of prompted voiding

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- 191 nursing home residents; able to state name
- Hourly prompted voiding for 7 days
- Assessed for response on days 5-7: 41% responders
- % wet checks reduced 27% to 6% at day 7
- ... and 10% at week 9
- Response predicted by mobility, self care ADL

# CHALLENGE NUMBER 5

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Distinguish toileting difficulties from incontinence

# Incontinence or toileting difficulties?

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- Recognise need
- Respond
- Get up or ask for help
- Find toilet
- Safely and in time
- Recognise it
- Manipulate clothes
- Use it
- Cleaning
- 'Malignant social psychology'

# Incontinence or toileting difficulties?

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- **Recognise need** – bladder sensation, awareness, apathy
- **Respond** - judgement, planning, foresight, memory
- **Get up or ask for help** – mobility, aphasia
- **Find toilet** – obstacles, memory, orientation
- **Safely and in time** – mobility, balance, urgency
- **Recognise it** - agnosia
- **Manipulate clothes** – apraxia, dexterity
- **Use it** – fear, cleanliness, privacy
- **Cleaning** – apraxia, dexterity
- **'Social psychology'** – uncooperativeness, avoidance, passivity, aggression, denial

# Incontinence or toileting difficulties?

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- **Recognise need** – prompting, communication
- **Respond** – prompting
- **Get up or ask for help** – no restraint, rehab, aids, help
- **Find toilet** – signage, door ajar
- **Safely and in time** – mobility, grab rails, raised seat, staff
- **Recognise it** – signage, colour contrast
- **Manipulate clothes** – adapted clothing, practice, help
- **Use it** – biography, habit, clean, mirrors
- **Cleaning** – adapted facility, help
- **'Social psychology'** – person centred care, identify needs

# Person-centred care

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- Understand 'non-co-operation'/stubbornness
- Effective communication
- Understanding non-verbal cues
- Achievable activity
- Privacy vs need for help
- Denigration, infantilisation, punishment vs reassurance



# Containment

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# CHALLENGE NUMBER 6

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Identify resources to deliver best practice care

# CHALLENGE NUMBER 7

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Where are the studies? Where is the evidence?

# CHALLENGES

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- There is a lot of it about - assess
- Treat co-morbidity properly
- Nocturia
- Learn if, and how, to use anti-muscarinic drugs
- Toileting difficulties or bladder dysfunction
- Identify resources to deliver best practice care
- Where is the research?