



Long term risk factors for the development of constipation in older community dwelling women

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BACKGROUND: Constipation

- Defined as persistent difficulty, infrequent or seemingly incomplete defecation.
 - Past studies estimate up to 20% of the general population have constipation type symptoms.
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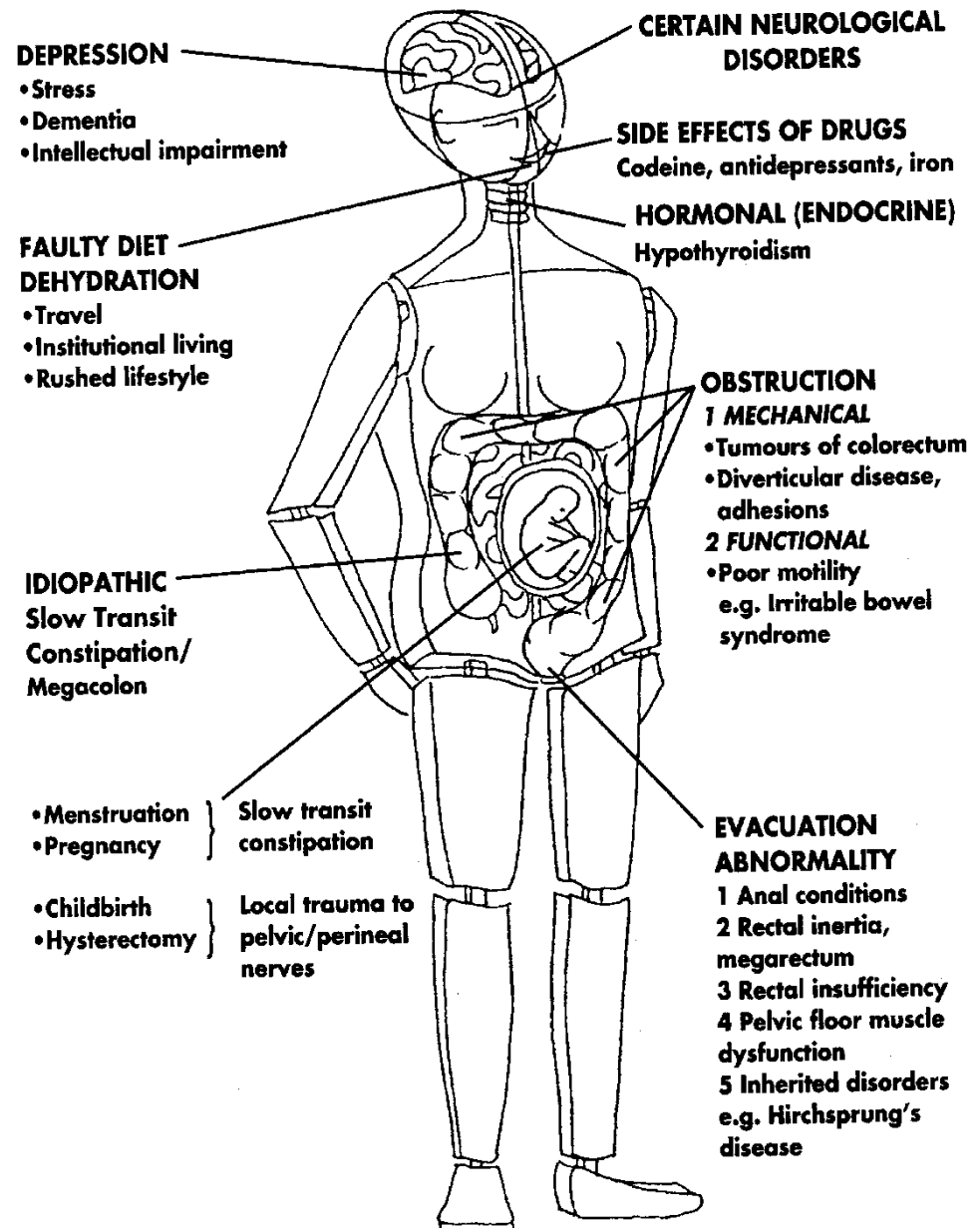
Pathogenesis remains relatively obscure but known to be associated with:

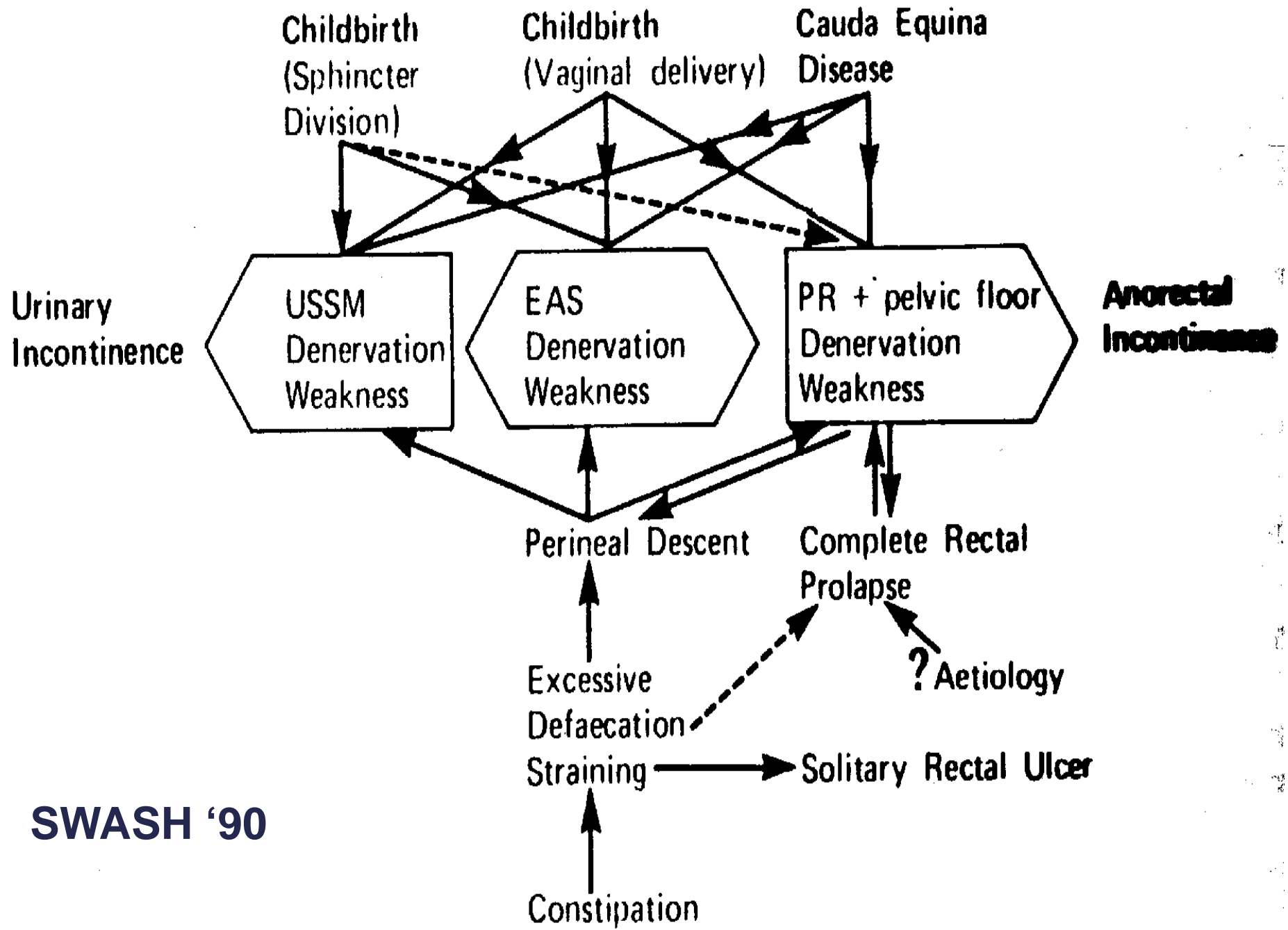
- concurrent diseases
- medications
- lifestyle factors :
 - alcohol
 - diet
 - immobility

(Talley et al '96)

Causes of constipation

CAUSES OF CONSTIPATION





SWASH '90

DeLancey '93

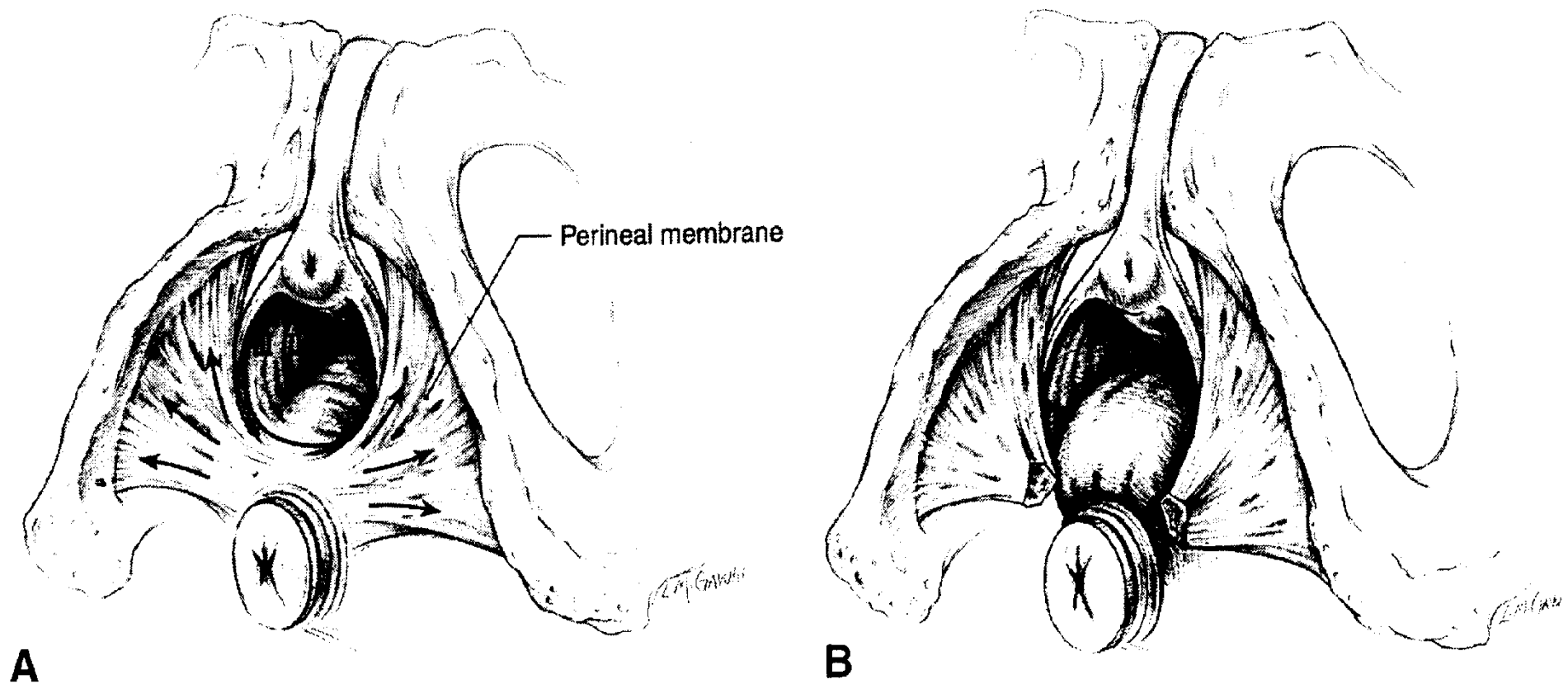


Fig 1. A, Peripheral attachments of perineal membrane to ischiopubic rami and direction of tension on fibers uniting through perineal body (*arrows*). **B,** These fibers have been transected, exposing unsupported distal rectum. Note level II fibers are not shown. U-shaped contour of posterior vaginal wall in level III and W-shaped contour in level II are shown.

BACKGROUND: Constipation

- Very little prospective data on the role of contributing factors in the development of constipation over time especially in older women living independently in the community.
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The Women's Health Australia Study

- Three age cohorts
 - 18-22 yrs (young)
 - 45-50 yrs (mid-aged)
 - 70-75 yrs (older)
 - 252, 285, 260 items respectively in baseline questionnaire
 - Oversampling of rural and remote women
 - Re- surveying every 5 years for 20 years
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Constipation in Australian Women

Age Group	N	%	C.I.
18-23	14659	14.1	13.5 – 14.7
45-50	13910	26.6	25.9 – 27.4
70-75	11918	27.7	26.9 – 28.5

Strength of the association between urinary incontinence and constipation

	Younger Women 18 - 22 yrs	Middle Women 45 - 49 yrs	Older Women 70 - 74 yrs
Sometimes	2.86 (2.4 - 3.4)	2.16 (1.9 - 2.4)	2.1 (2.4 - 3.0)
Often	2.66 (2.1 - 3.4)	2.31 (2.0 - 2.7)	2.21 (2.1 - 3.2)

Study Aims :

- To determine risk factors for new onset constipation in a large population based cohort of older Australian women over a 9 year period.
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Longitudinal Survey



Longitudinal Survey



Longitudinal Survey



n= available for analysis

Measures

Constipation (Survey 1 and 4):

“Have you had constipation in the past 12 months?”

Demographics (Survey 1):

Educational level, nationality, marital and socioeconomic status (SEIFA).

Measures

Lifestyle (Survey 1):

Alcohol consumption, smoking status, body mass index, number of live births, history of a prolapse.

Stressful life events (Survey 1):

Number of events in past 3 years

Measures

Quality of life (**Survey 1**): SF-36⁵ – eight subscales including bodily pain, general health, mental health, physical and social functioning, role emotional, role physical and vitality

Statistical Analysis

Logistic regression was carried out after the response variable was dichotomised, initially assessing each risk factor in a univariate model before conducting a multivariate model.

Incidence of constipation

Of the 3716 women who responded to the constipation question in survey 1 and survey 4, we found 1501 women (40.3%) developed constipation over the 9 year period.

Long term univariate risk factors for constipation

Risk Factor at Survey 1	Developed Constipation	Did not develop constipation	OR (CI 95%) P value
Australian Born	78.1	79.5	0.90 (0.74-1.08), p=0.24
Educational level			
-Less than High School	68.7	66.9	
-High School	13.3	14.0	0.86 (0.68-1.08) p=0.20
-More than High School	18.0	19.2	0.95 (0.77-1.16) p=0.59
Married/ Defacto	59.3	56.7	1.17 (1.0-1.37), p=0.04
Socioeconomic status (Mean)	987.1	994.0	1.0 (1.0-1.0) p=0.08

* % unless otherwise specified

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Prolapse repair	20.	18.1	1.14 (0.93-1.38), P=0.2
BMI (Mean)	25.4	25.2	1.01 (0.99-1.02), P=0.58
Given birth	92.8	90.3	1.07 (1.01-1.14), P=0.03

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Alcohol – Nil	60.0	61.0	
-Low	36.2	34.3	0.92 (0.78-1.08), P=0.32
-High	3.9	4.7	1.07 (0.72-1.58), P=0.74
Smoking – Never	62.6	65.7	
-Current	28.1	30.7	1.22 (1.03-1.46), P=0.02
-Past	6.2	6.7	0.92 (0.67-1.28), P=0.67

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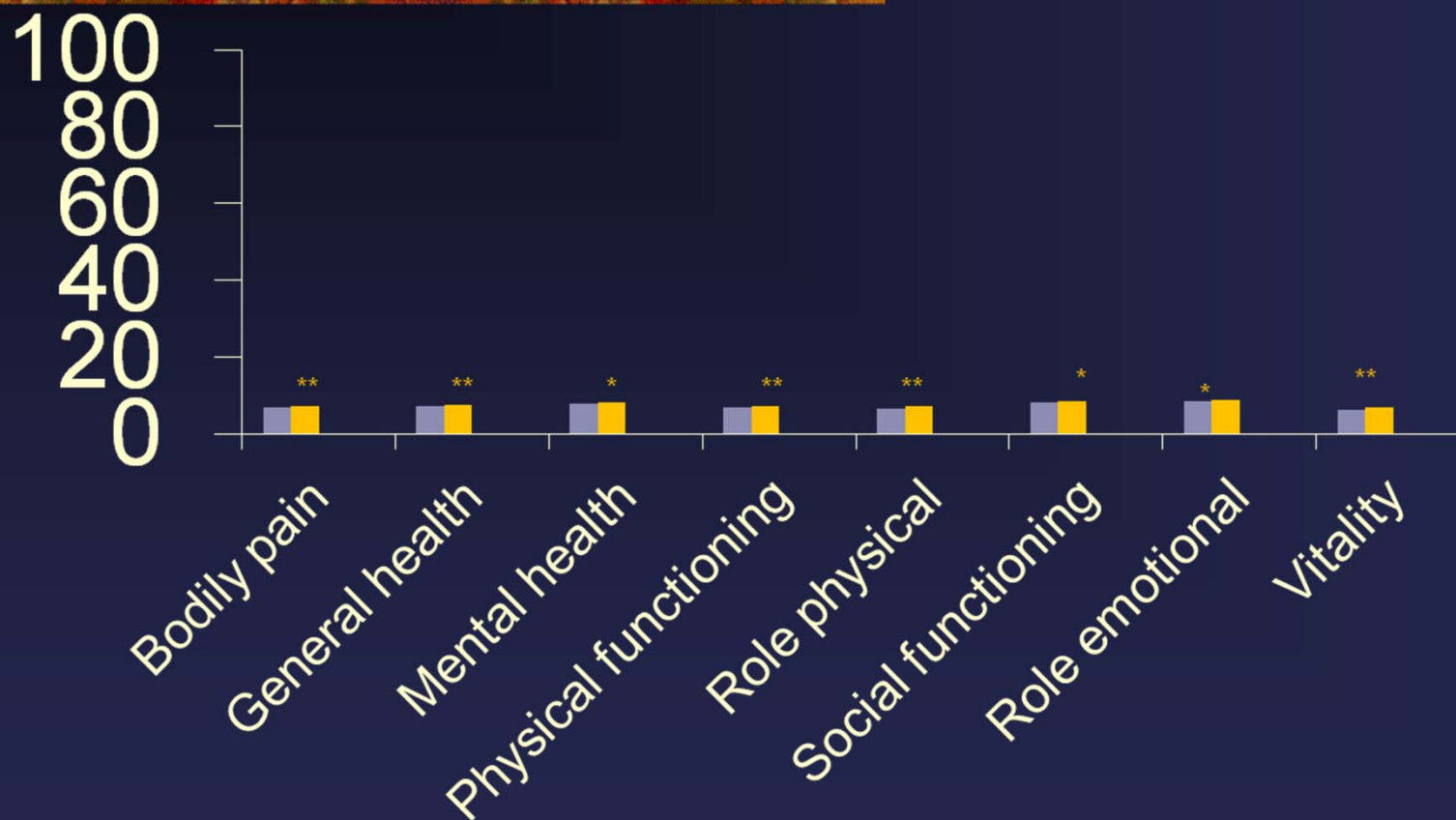
Long term univariate risk factors for constipation

Risk Factor at Survey 1	Developed Constipation (mean)	Did not develop Constipation (mean)	OR (CI 95%) P value
Psychological			
Number of Stressful life events (mean)	0.4	0.3	1.54 (1.26-1.89) P<0.000
Proportion (severity) of life events (mean)	0.07	0.01	23.81(1.34-10.84) P=0.01

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Baseline quality of life in older women who develop constipation versus those who do not.



** P<0.001, *P<0.05

Final multivariate model

- Being married

OR=1.18 (95%CI 1.01-1.39), P=0.04

- Given birth

OR=1.07 (95%CI 1.0-1.14), P=0.04

- Being a past smoker

OR=1.24 (95%CI 1.04-1.48), P=0.02

- Greater bodily pain score on the SF 36

OR=0.95 (95%CI 0.92-0.99), P=0.01

- Reduced general health score on the SF36

OR=0.91 (95%CI 0.87-0.95), P<0.000

Conclusion

- Constipation is an extremely common problem among older community dwelling women.
 - Prospective data suggests factors related to being married, childbirth, a history of smoking and generally being unwell as reflected by poor quality of life are risk factors for developing new onset constipation among older women.
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