

Higher levels of cognitive inflexibility relate to higher levels of symptom reporting at menopause

British Menopause Society

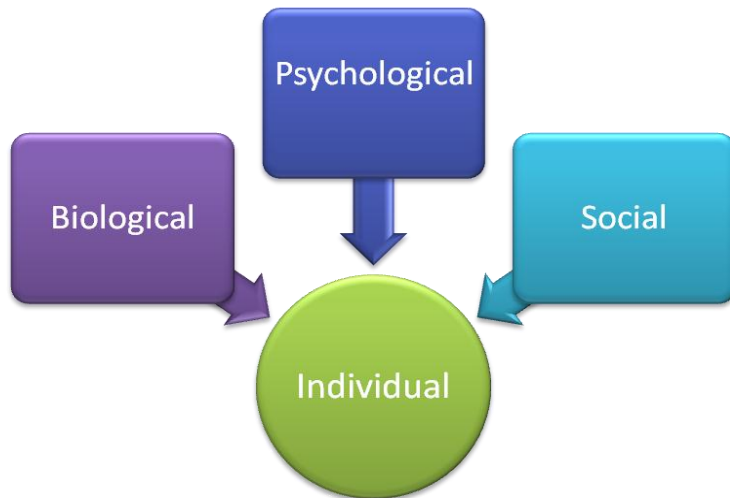
22nd Annual Conference

5th- 6th July 2012

Helena Rubinstein, University of Cambridge

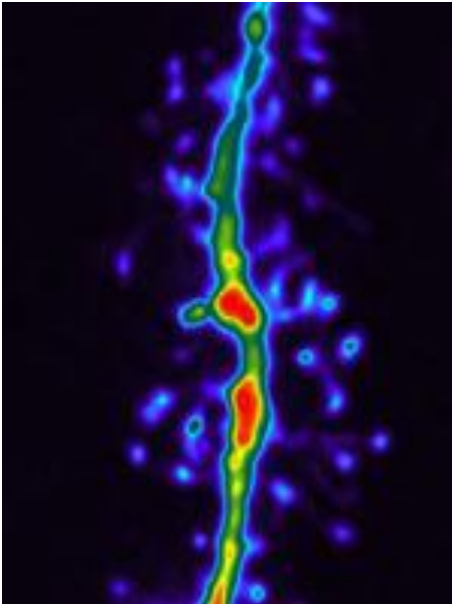


What's the brain got to do with it?



- * Experiences at menopause are not purely biological
- * Role of psychological and social factors (Ayers, Forshaw & Hunter 2010, Hunter & Rendall 2007, Lolak et al 2005)
- * Established association between negative attitudes and symptom reporting (Avis & McKinlay 1991; Kaufert et al 1998, Rendall, Simonds & Hunter 2008)
- * Problems of directionality

Why cognitive flexibility?

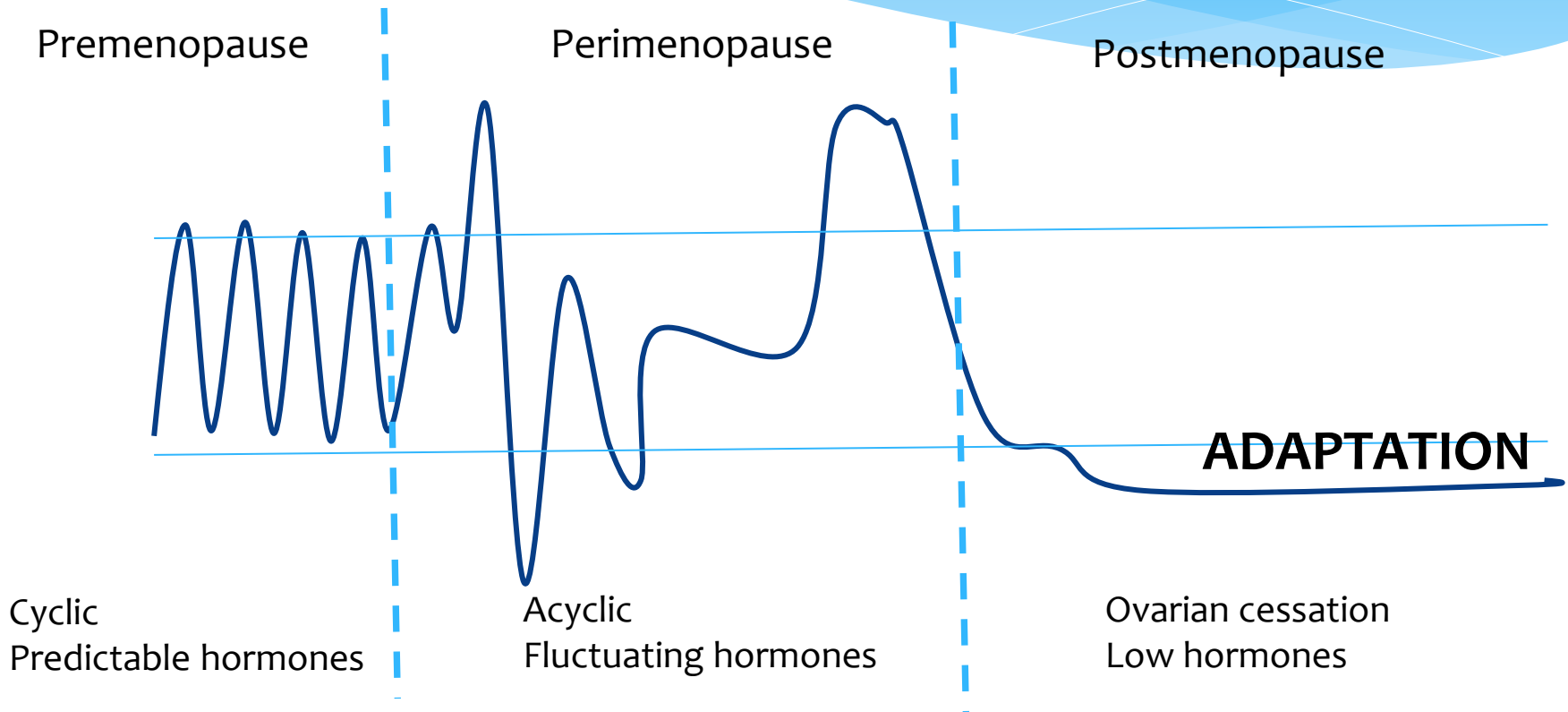


- * Female brain adapts to cyclical changes in estradiol throughout the lifespan
- * At menopause, hormonal changes are exaggerated and the female brain has to be even more flexible in response
- * During perimenopause estrogen declines, vasomotor symptoms can be severe but usually diminish over time (Kronenberg 1990)
- * But some experience symptoms for an extended period (Freeman et al 2011, Nelson 2008)

The brain adaptation hypothesis

- * The female brain must adapt to cyclical levels of ovarian hormones and establish a new baseline of homeostasis in order to maintain normal brain function (Birge 2003)
- * The brain has to reset and adapt to a new neurochemical level to restore temperature regulation (Deecher & Dorries 2007)

This may take time



Large individual differences

- * Most women adapt BUT
- * Inability to respond or establish a new baseline of neuronal function → increased vulnerability to
 - * Brain-related dysfunction
 - * Thermoregulatory dysfunction

Why these differences?

- * Hypothesis:
 - * Women who are less psychologically flexible may find the menopause transition more difficult
 - * Negative attitudes and fixed constructions may cause the reset process to take longer
 - * Lack of cognitive flexibility may contribute to higher symptom reporting

Current study is on-going

- * Mixed methods - comparing treatment seeking and non-treatment seeking women
- * Clinical and general population
 - * Participants recruited via GP practices (not attending for menopause), hospital menopause clinics and housing associations
- * Data collected includes
 - * Demographic, lifestyle, self-rated health, BMI
 - * Use of medical, therapies and supplements, WHQ
 - * Menopause status, HRT use, social constructions of menopause, symptoms and severity (MRS)
 - * Life satisfaction, social support, psychological flexibility, personality, coping strategies

- * Measure symptoms reporting using the Menopause Rating scale
 - * Somatic, urogenital and psychological sub-scales
- * Measure psychological flexibility using AAQ (Hayes, Strosahl et al., 2004)

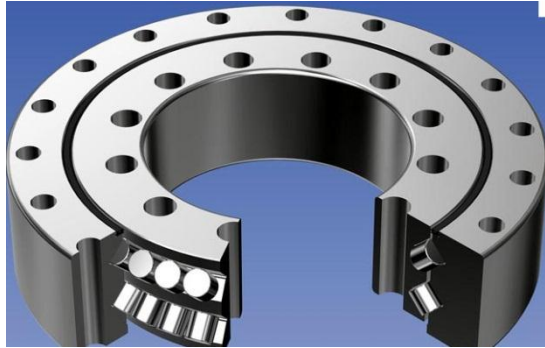
Profile of 242 participants aged 40-60: 70 clinical and 172 population

	%		%
Working F/T or P/T	81	Perimenopause	29
Retired	4	Postmenopause	54
Not employed/student	15	Surgical	17
Single	9	HH income £0- £19,999	23
Married/cohabiting	67	HH income £20,000- £39,999	24
Divorced/separated	22	HH income £40,000- £59,999	23
Widowed	2	HH income £60,000 or more	29
No children	28	White	95
1-2 children	53	Black/Asian/Mixed	5
3-5 children	19	Mean age 52.64 (SD=4.86)	

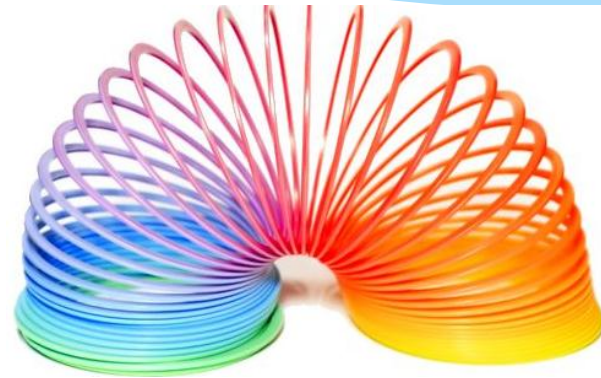
Measuring psychological inflexibility

- * Acceptance and Action Questionnaire (Hayes et al 1996)
 - * Not been used with women at menopause before
- * AAQ1 is a validated 9 item scale that measures experiential avoidance and acceptance
 - * 7-point scale from never to always true
- * Relates significantly to mental health, job satisfaction and QoL indices (Bond & Bunce 2003, Hayes et al 2004, 2006)
- * With average effect size of $r=.42$ (Hayes et al 2007)

What is it measuring?



- * Psychological inflexibility – rigid dominance of psychological reactions



- * Psychological flexibility – acceptance, able to take action based on current contingencies

Acceptance and experiential avoidance are examples of psychological flexibility

- * Experiential avoidance occurs when a person is unwilling to be in contact with private experiences (bodily sensations, emotions etc)
- * Excessively negative evaluations of personal experiences lead to thoughts and emotional suppression and an inability to take action
- * Items focus on different aspects of psychological flexibility

Diverse aspects

(In)ability to take
action

I am able to take action on a problem even if I am uncertain of what is the right thing to do

Compare with others

When I compare myself to other people, it seems that most of them are handling their lives better than I do

I often catch myself daydreaming about things I've done and what I would do differently next time

Attempts to control

If I could magically remove all the painful experiences I've had in my life I would do so

When I evaluate something negatively, I usually recognise that this is just a reaction, not an objective fact

Experiential
avoidance

Anxiety is bad

I'm not afraid of my feelings

Worry and
anxiety

I rarely worry about getting my anxieties, worries and feelings under control

When I feel depressed or anxious, I am unable to take care of my responsibilities

Higher scores = higher psychological inflexibility

- * Cronbach's Alpha = .722 (good construct validity)
- * Mean for the sample = 32.44 (SD = 8.3)
 - * Benchmark: Population sample 30 – 32; clinical sample 38-40 (Hayes 2000)
- * NB: very wide range = 12-61
- * No significant difference between clinical and population in this study

Significant positive association with MRS scale and sub-scales

	Total MRS	Somatic MRS	Urogenital MRS	Psychological MRS
Total AAQ	.456**	.291**	.187**	.567**
Total AAQ clinical	.420**	.359**	.106	.495**
Total AAQ population	.469**	.254**	.216**	.606**

**Sig at 0.01 level (2-tailed)

Effect sizes ± 0.1 = small, ± 0.3 = medium, ± 0.5 = large

No significant difference between clinical and population samples except on urogenital scale

Implications

- * Lack of difference between 2 groups may say more about lack of provision than about factors influencing decision to seek treatment
 - * Women in general population not getting support ?
- * Cross-sectional study but acceptance and experiential avoidance usually considered to be a process dependent on the situation
- * Suggests a role for CBT, mindfulness (Carmody et al 2011, Ayers et al 2012)
- * Expansion/teaching of coping strategies

With thanks and acknowledgment to
Mr Nick Panay, Dr Kate Maclaren, Imperial Health Care Trust
and
Dr Juliet Foster, University of Cambridge

THANK YOU

hr272@cam.ac.uk