

Cognitive Behavioural and Graded Exercise Therapies for CFS/ME

Professor Rona Moss-Morris

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Outline

- Understanding illness from a cognitive behavioural (CB) perspective
- The CB model of CFS/ME
- Evidence for the model
- Therapeutic components of CBT and GET
- Review of evidence base for CBT and GET
- Current UK based RCTs

The Biomedical Model

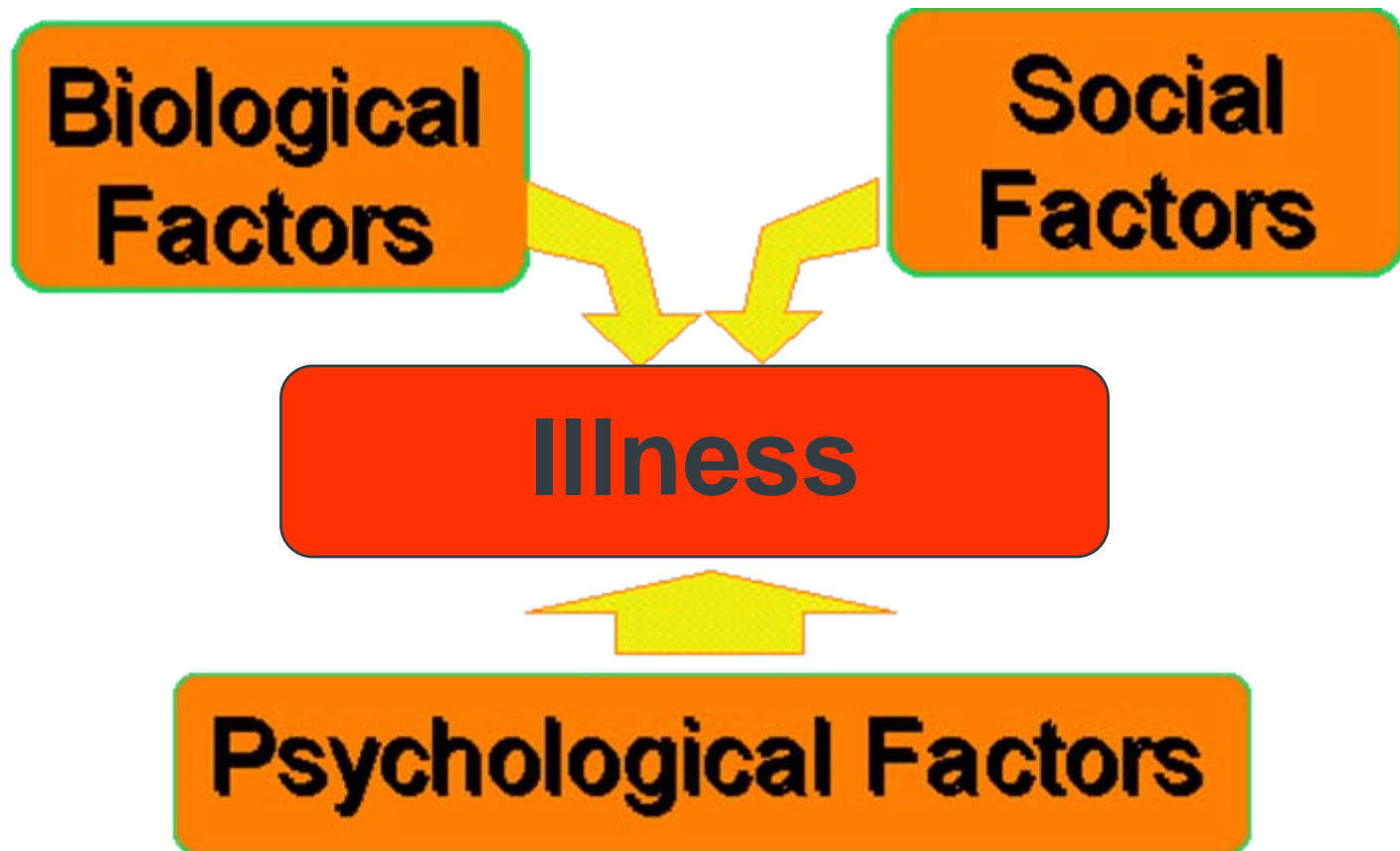
Biological Factors

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graph TD; A[Biological Factors] --> B[Illness]
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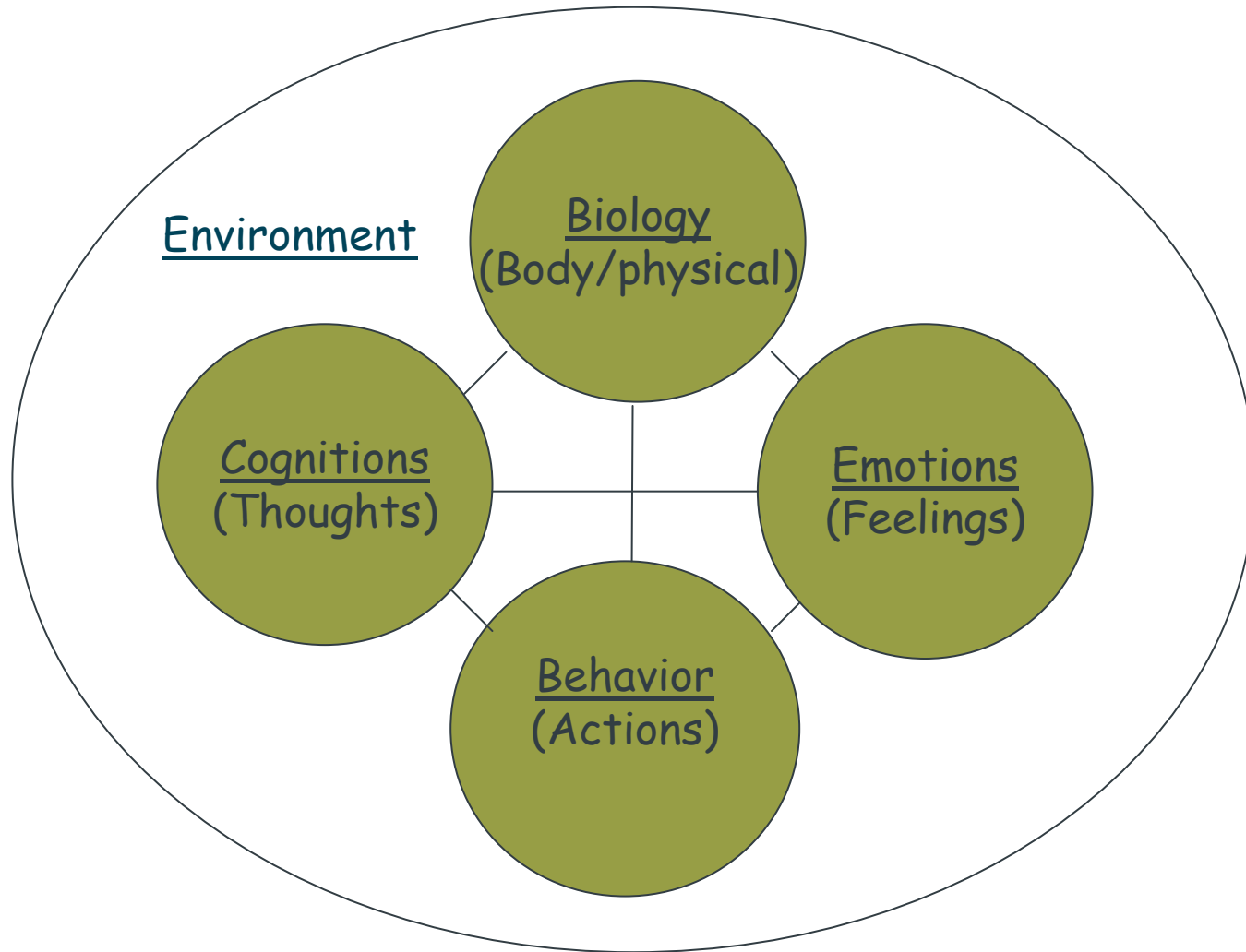
The diagram illustrates the Biomedical Model as a vertical flow. At the top is an orange rounded rectangle containing the text 'Biological Factors'. A yellow arrow points downwards from this box to a red rounded rectangle at the bottom containing the text 'Illness'.

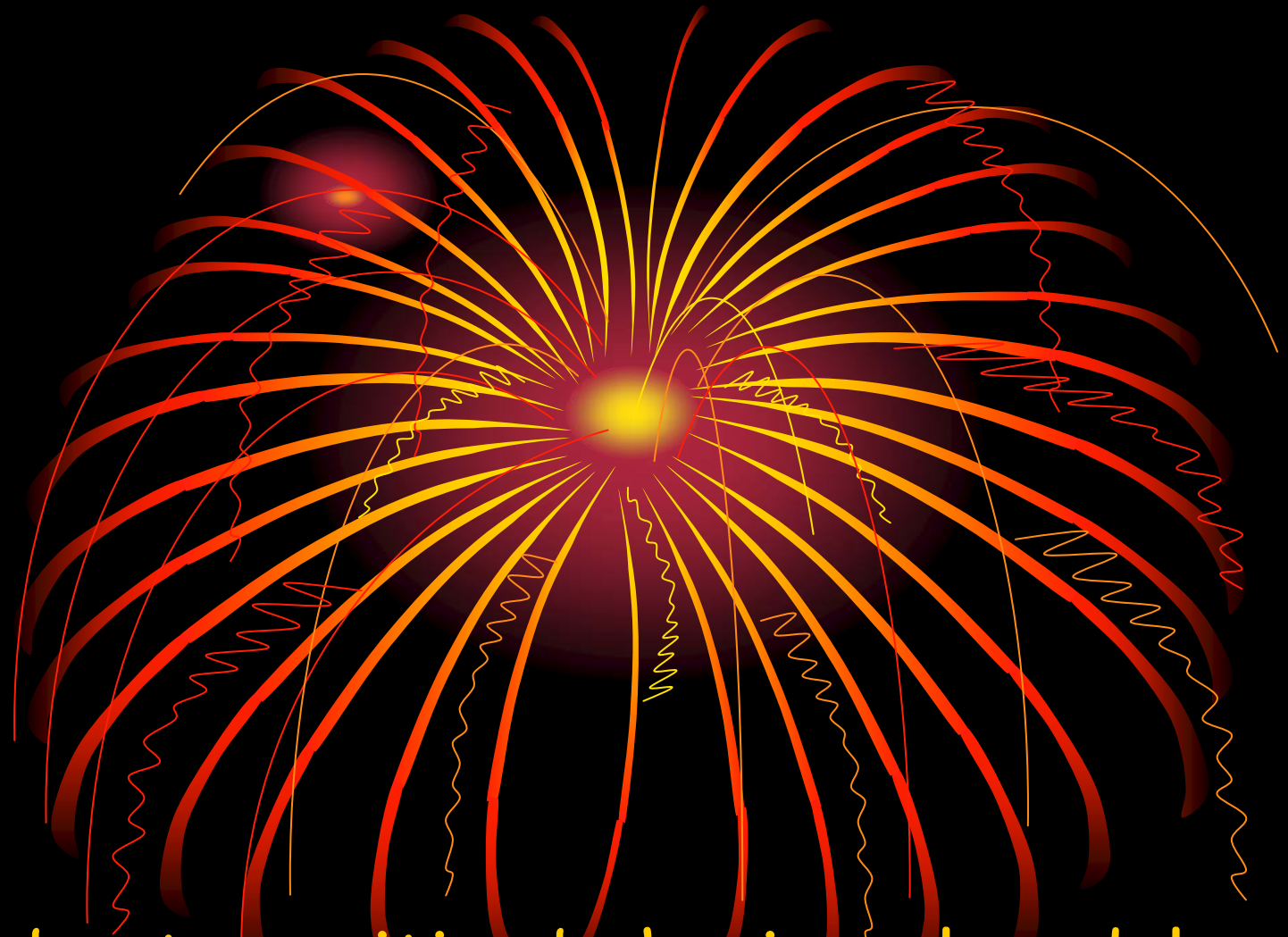
Illness

The Biopsychosocial Model



THE FIVE PART COGNITIVE BEHAVIOURAL MODEL

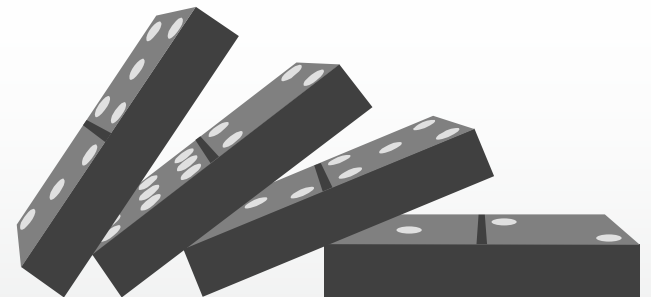




Talking about cognitive behavioural models and therapy does NOT mean an illness is psychological or all in the mind!

Cognitive Behavioural Explanatory Models

- Predisposing factors
- Precipitating factors
- Perpetuating factors



Genetics, Distress and/or Perfectionism



Prolonged bed rest or
Cycle of extreme activity and rest
Symptoms attributed to ongoing
virus



Formation of a negative illness representation
Inactive or accommodate to the illness

What is the evidence for the model from prospective studies of people who develop CFS/ME?



Infectious precipitants

- **Acute Hepatitis (Berelowitz et al., 1995)**
- **Glandular fever (White, 2001; Hickie et al., 2006; Moss-Morris & Spence, 2006)**
- **Meningitis (Hotopf et al., 1996)**
- **Q fever and Lyme disease (Lloyd, 2003)**

Other predisposing or precipitating risk factors

- **Distress** (*Wessely et al., 1996; Moss-Morris & Spence, 2006*)
- **Lower fitness and bed rest** (*White et al., 2001*)
- **Previous history of mood disorders, stressful life events and emotional personality** (*White et al., 2001*)
 - **Effects disappear if you control for co morbid mood disorder**

Prospective study of 246 glandular fever patients: Comparison of those who developed new onset CFS/ME and non-cases

	CFS/ME	Non-case	Sig
Anxiety	8.3 (0.9)	6.0 (0.3)	.02
Depression	6.7 (0.8)	4.6 (0.2)	.01
Perfectionism	29.6 (1.8)	25.7 (0.5)	.04
Perceived Stress	28.5 (1.5)	28.3 (0.4)	.93
Illness beliefs	3.3 (0.7)	1.2 (0.2)	.01
All-or-nothing	16.9 (1.2)	13.7 (0.3)	.01
Limiting	26.4 (1.4)	24.9 (0.4)	.33

(Moss-Morris & Spence)

Summary of Results

- Viruses, mood, cognitions and behaviour appear to be relevant factors
- High unrealistic personal expectations
 - If I fail people, I fear they will cease to respect or care for me
 - No matter how well I do, I never feel satisfied with my performance
- Distress rather than psychopathology
- A fluctuating all-or-nothing behaviour pattern rather than just limiting activity
- Negative illness beliefs

Basic Principles of CBT for CFS/ME

- **Collaborative approach**
 - Assess and explore areas of difficulties
 - Set targets for dealing with difficulties
- **Tackling all-or-nothing behaviour**
 - Don't overdo things on a good day
 - Work towards consistent, graded activity
 - Good sleep routine
- **Tackling unhelpful thoughts**
 - Perfectionism
 - Symptom beliefs

Randomised controlled trials of CBT for patients who meet diagnostic criteria for CFS

Authors	N	Outcomes	Effect	Quality
Deale 1997	60	PH, PS, QOL	+	good
Prins 2001	270	PH, PS, QOL	+	good
Sharpe 1996	60	PH, PS, QOL	+	good
Stulemeijer 2005	69	PH, QOL	+	good
Lloyd 1993	90	PH, PS, QOL	=	mod.
Whitehead 2002	65	PH, PS, QOL	=	poor

Principles of Graded Exercise Therapy (GET) for CFS/ME

- Collaborative approach using mutual goal setting
- Careful regime of consistent, graded exercise
- Begin at a level that patient can do even on a bad day
- Exercise between 3-5 sessions a week working up to 30 minutes sessions
- Start with low intensity and work up (40% – 70% VO₂ Max)

Randomised controlled trials of GET for patients who meet diagnostic criteria for CFS

Author	N	Outcomes	Effect	Quality
Wearden 1997	136	PH, PS, QOL	=	good
Fulcher 1997	66	PH, PS, QOL	+	good
Powell 2001	148	PH, PS, QOL	+	good
Wallman 2004	61	PH, PS	+	mod.
Moss-Morris 2005	49	PH	+	mod.

Conclusions

- Well designed CBT & GET trials show around 50% - 70% improvement in primary outcomes
- Improvements in fatigue are not due to improvements in mood
- 2 and 5 year follow-ups show that improvements are sustained
- CBT also appears to be cost effective (Severens, 2004)
 - Better outcome than support groups or standard care
 - Lower use of medical services

Systematic Review of Interventions for CFS/ME *(Chambers et al., 2006)*

- 70 studies reviewed
 - Behavioural (13 were CBT or GET)
 - Immunologic
 - Pharmacological
 - Complementary therapies
 - Nutritional supplements
- Consistent evidence for behavioural interventions
- Single good quality studies show effects for magnesium, essential fatty acids & immunoglobulin but effects not replicated

Current MRC funded UK trials

- PACE (White, Chalder, & Sharpe) N=600
 - CBT
 - Graded exercise therapy
 - Pacing
 - Standardised specialist medical care
- FINE (Wearden et al) N=240
 - Nurse-led self help treatment (pragmatic rehabilitation)
 - Supportive listening treatment
 - Treatment as usual by your GP