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Chronic Lower Back Pain: A Maladaptive Perceptions Model

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Benedict M Wand - Invited speaker.

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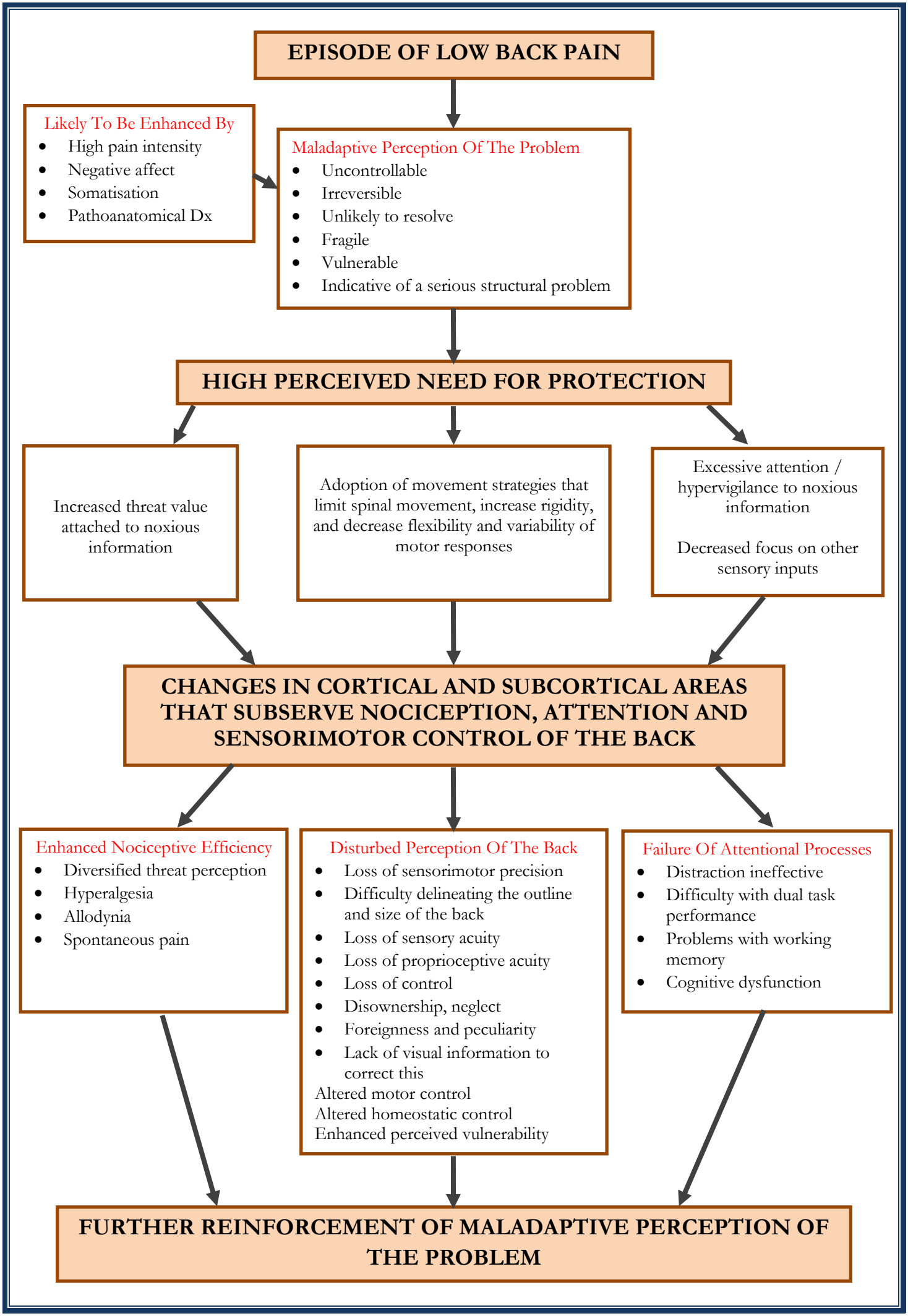
High quality evidence suggests that current approaches to the management of CLBP show only limited effectiveness; one explanation of this finding is that current models of management are misdirected or incomplete. This talk proposes a model of CLBP underpinned by data on the psychological contributors to the LBP experience and recent evidence of neuroplastic changes in the brains of people with CLBP (see below). The model suggests that maladaptive cognitive perception about the nature of the back problem and future consequences drive behaviours that might bring about maladaptive neuroplastic changes. These central nervous system changes may enhance sensitivity, influence normal attentional processing and potentially create a state of maladaptive self perception of the back, in terms of how the back feels to the individual, the control they feel they have over their back and the meaning of sensory information from the back. Maladaptive cognitive perception and maladaptive self perception are potentially mutually reinforcing and contribute to the maintenance of the CLBP experience. Identification of these issues in the clinical setting and the implications of this model to the rehabilitation of people with CLBP will also be discussed.


EPISODE OF LOW BACK PAIN
Likely To Be Enhanced By
High pain intensity
Negative affect
Somatisation
Pathoanatomical Dx
Maladaptive Perception Of The Problem
Uncontrollable
Irreversible
Unlikely to resolve
Fragile
Vulnerable
Indicative of a serious structural problem
HIGH PERCEIVED NEED FOR PROTECTION
Increased threat value attached to noxious information
Adoption of movement strategies that limit spinal movement, increase rigidity, and decrease flexibility and variability of motor responses
Excessive attention / hypervigilance to noxious information
Decreased focus on other sensory inputs
CHANGES IN CORTICAL AND SUBCORTICAL AREAS THAT SUBSERVE NOCICEPTION, ATTENTION AND SENSORIMOTOR CONTROL OF THE BACK
Enhanced Nociceptive Efficiency
Diversified threat perception
Hyperalgesia
Allodynia
Spontaneous pain
Disturbed Perception Of The Back
Loss of sensorimotor precision
Difficulty delineating the outline and size of the back
Loss of sensory acuity
Loss of proprioceptive acuity
Loss of control
Disownership, neglect
Foreignness and peculiarity
Lack of visual information to correct this
Altered motor control
Altered homeostatic control
Enhanced perceived vulnerability
Failure Of Attentional Processes
Distraction ineffective
Difficulty with dual task performance
Problems with working memory
Cognitive dysfunction
FURTHER REINFORCEMENT OF MALADAPTIVE PERCEPTION OF THE PROBLEM