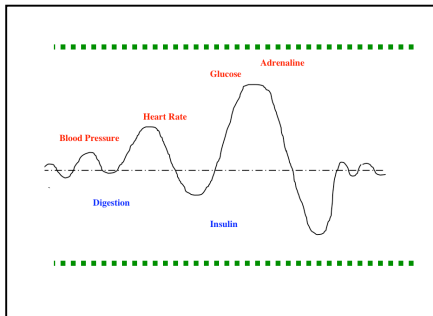


# Mind-Brain-Body Interactions & Origins of Chronic Illness such as CFS/FMS

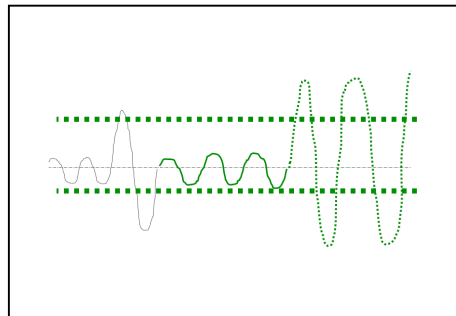
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## The Role of Gene-Environment Interactions in Risk

### I. Nervous System function is shaped by its environment

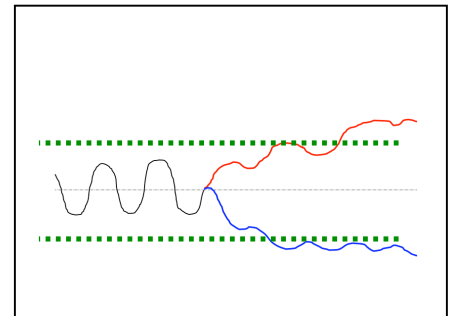


*Normal range of cycling*



*Exaggerated Cycling*

Symptoms ie: irritable bowel

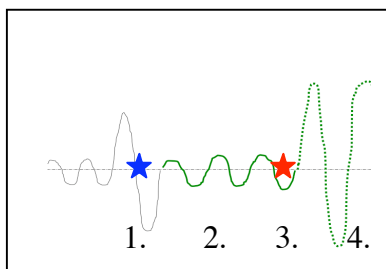


*Reduced cycling*

Symptoms ie: fatigue

**II. Hypothesis:** Trauma & Attachment Interactions, among other factors, can affect risk by altering the ability of the nervous system to self-regulate effectively. Exaggerated cycling occurs outside the bounds of normal physiology (.....: outside the window of tolerance of) and/or loss of flexibility occurs and reduces the ability of the organism to cope with change.

### III. Theory regarding origins of Chronic Illness



- ★ 1. Predisposition to a symptom
  - occurs in early life
  - may be influenced by trauma during pregnancy, birth, or in the first years of life when the nervous system is developing
2. A pattern of response of nervous system cycling
  - develops during the latency period of the disease
  - is increased by events that stress the system, such as trauma and other environmental factors (pollution, infections, etc...)
- ★ 3. A stressful event unmasks the patterned (conditioned) response
  - loss and grief, an accident, surgery, marriage
4. Onset of symptoms / illness begins days, months, etc afterwards
  - expresses a change in nervous system functioning
  - represents an intelligent attempt to survive or a form of defense

### IV. Treatment Goals

1. Foster new skills for coping & adjusting
2. Facilitate greater capacity of the nervous system for effective self-regulation
3. A stressful event unmasks the patterned (conditioned) response
  - loss and grief, an accident, surgery, marriage
4. Onset of symptoms / illness begins days, months, etc afterwards
  - expresses a change in nervous system functioning
  - represents an intelligent attempt to survive or a form of defense