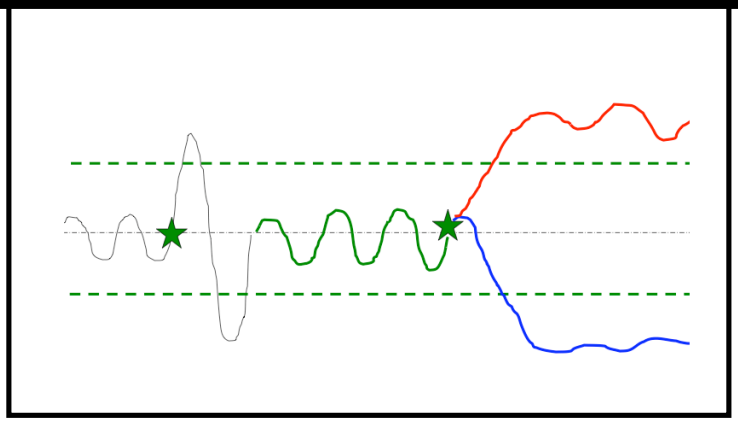
A Model for the Role of Environmental Factors in Illness [1-3]

Phases in the Origins of Chronic Symptoms and Chronic Illness



Time across the lifespan – from conception forward ⟶

1. **Predisposition to a symptom or chronic illness (ie: lupus, diabetes, chronic fatigue, bipolar,..)**
   - affects risk by imprinting, conditioning & predisposing the nervous system to regulate in certain ways[4]
   - appears to occur in early life such as during pregnancy, birth, and in childhood[5]
   - is influenced by bonding and attachment relationships, through which nervous systems learn to regulate[6] [7]
   - is shaped by ***trauma***[8], which reduces sense of safety and trains the nervous system to regulate defensively[9]
   - is influenced by timing: developing organs are shaped, and therefore most influenced, by environmental factors including life experiences such as ***parenting care***, which turn genes on /off[10] [11] and shape patterns of regulation; ***early life events***, which can affect stress responses for life [7] [12], risk for type 1 diabetes[13-15], MS[16], Parkinson's[17] [18], and ***trauma,*** which may play a role in diabetes[1] [12], Parkinson's[19-21], & other diseases

2. **Latency Period: A period predating diagnosis,** during which conditioned responses grow and strengthen
   - a classic example is posttraumatic stress, in which symptoms occur days, months or years after trauma[22]
   - conditioning is strengthened by events that stress the system, such as trauma, increasingly mild and seemingly unrelated events that are stressful, and other environmental factors (pollution, infections, etc...)[4]
   - a greater intensity or frequency of stressors favors certain patterns of "wiring" and shorter latency periods
   - supportive (resourcing) life experiences serve as buffers that may lengthen the latency period, delay the onset of illness, or protect the organism and prevent illness[4]
   - latency periods may last 7 yrs in lupus[23]; 10 years + in type 1 diabetes[24] [25]; 30 years in Alzheimer's[26]; and may begin as early as adolescence in Parkinson's[27] or earlier[18]

2. **Unmasking or 'Reinstatement" of the Conditioned Pattern: Diagnosis**
   - a final event (which may seem small) makes the conditioned response visible, dominant, & symptomatic[28]

4. **Symptom Onset: occurring days, months, years following the "final stressor"**
   - clinical symptoms are unmasked, representing changes in nervous system patterns
   - symptoms represent an intelligent, albeit magnified and prolonged "survival strategy" or defense response[4]
   - the more severe the symptom, the more intense the preceding and ongoing *perceptions* of threat may be[4], and the more severe the state of undischarged arousal (see trauma literature[1] [4] [8] [29])
   - type of symptom or illness is influenced by the timing of initial predisposing events (critical period)[7]

5. **Triggers**
   - symptoms vary according to influence of past experiences (buffers and stressors) unique to each person[4]
   - triggers can exacerbate symptoms; identifying triggers may help predict and reduce exacerbations

Veronique Mead, MD, MA **Somatic Psychotherapist – Facilitating Mind Body Dialogue in Chronic Illness Boulder, CO**
www.veroniquemead.com (303) 527-0551 info@veroniquemead.com 1/24/06

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3. visit www.veroniquemead.com. for additional information on trauma and early life events (library), nervous system regulation (theory), upcoming talks in Boulder (events), etc.
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