A Model for the Role of Environmental Factors in Illness

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** (i.e., lupus, diabetes, chronic fatigue, bipolar,..)
   - affects risk by imprinting, conditioning & predisposing the nervous system to regulate in certain ways
   - appears to occur in early life such as during pregnancy, birth, and in childhood
   - is influenced by bonding and attachment relationships, through which nervous systems learn to regulate
   - is shaped by trauma, which reduces sense of safety and trains the nervous system to regulate defensively
   - 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 and shape patterns of regulation; early life events, which can affect stress responses for life, risk for type 1 diabetes, MS, Parkinson’s, and trauma, which may play a role in diabetes, Parkinson’s, & 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
   - 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
   - latency periods may last 7 yrs in lupus; 10 years + in type 1 diabetes; 30 years in Alzheimer’s; and may begin as early as adolescence in Parkinson’s or earlier

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

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
   - the more severe the symptom, the more intense the preceding and ongoing perceptions of threat may be, and the more severe the state of undischarged arousal (see trauma literature)
   - type of symptom or illness is influenced by the timing of initial predisposing events (critical period)

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

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3. Visit [www.veroniquemead.com](http://www.veroniquemead.com) for additional information on trauma and early life events (library), nervous system regulation (theory), upcoming talks in Boulder (events), etc.


