

ETIOLOGY OF CHRONIC PAIN

Dr. John Heil

Chronicity as Critical Factor

**Pain as BioPsychoSocial
Process**

Clinical Heuristics

Biological Mechanisms

**Progressive Influence of
Overlapping
Biological Systems**

Nociceptive System

- **Injury status: Acute**
- **Predominates initially**
- **Decreasing relative influence over time**

Biochemical Prototype:

**Endorphins
&
Enkephalins**

Psychological meaning:

“Emergency”

(Literal;

Metaphorical)

Resolution:

Healing

Autonomic System

- **Injury status: Sub-acute**
- **Efferent outflow from nociception**
- **Increasing role over time**

Biochemical Prototype:

Norepinephrine

Psychological meaning:

“Interruption”

Resolution:

Homeostasis

Neurovegetative System

- **Injury Status: Chronic**
- **Increasing role over time**
- **Becomes predominate system**

Biochemical Prototype:

Serotonin

Psychological meaning:

“Loss”

(Lifestyle change)

Resolution:

Acceptance

Psychological Dynamics

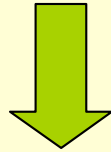
**From Appropriate
Response to Pathology**

Threat

- **Link to danger (reinjury, vulnerability)**
- **ANS symptoms, vigilance, motor inhibition/tension**

End point:

ANS dysregulation



Anxiety disorder

Loss

- **Link to loss (function & roles)**
- **Grief, sadness, helplessness/
hopelessness**

End point:

**Neurovegetative dysregulation →
Depression**

Social Contest

Resilience

As function of history;

As predictor of

chronicity

Problems Chronically

- **Hi risk**
- **Resource poor (Personal, Social)**
- **“Accident waiting to happen”**

Problems Historically

- **Moderate risk**
- **State dependent
experience as
trigger**

Problems Currently

- **Varying risk**
- **Correlation of risk
and stress**

Personal

- **Concurrent crises**
- **Psychological Trauma (w/Injury)**

Medical

- **Iatrogenic**
- **Mismedication**

Case Management

- **Controversy**
- **W/Work; Carrier;
Law**

“Triple Trauma”

**Personal + Medical +
Controversy**