
RISK FACTORS AND TREATMENT FOR MAJOR DEPRESSION

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The Situation

- The assumption of healthy normality and abnormality as a disease
 - About half the population (46.4 – 50.8%) will suffer from a diagnosable mental health disorder in their lifetime (Kessler et al., 2005).
 - The pervasiveness of human suffering – depression, addiction, anger, suicide, anxiety, avoidance of intimacy, dissatisfaction, stress, divorce, etc.
 - Most humans are hurting
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Outline

- Background
 - Definition
 - Risk factors
- Mechanisms
 - Psychological (cognitive)
 - Brain correlates
- Psychological treatments



Major Depressive Episode – Dante's definition

In the middle of the road of my life,
I awoke in a dark wood,
where the true path was wholly lost to me

- Dante Alighieri, Divine Comedy, "Inferno"

Major Depressive Episode – DSM's definition

Min. 2 weeks of:

- Depressed mood or
- Anhedonia

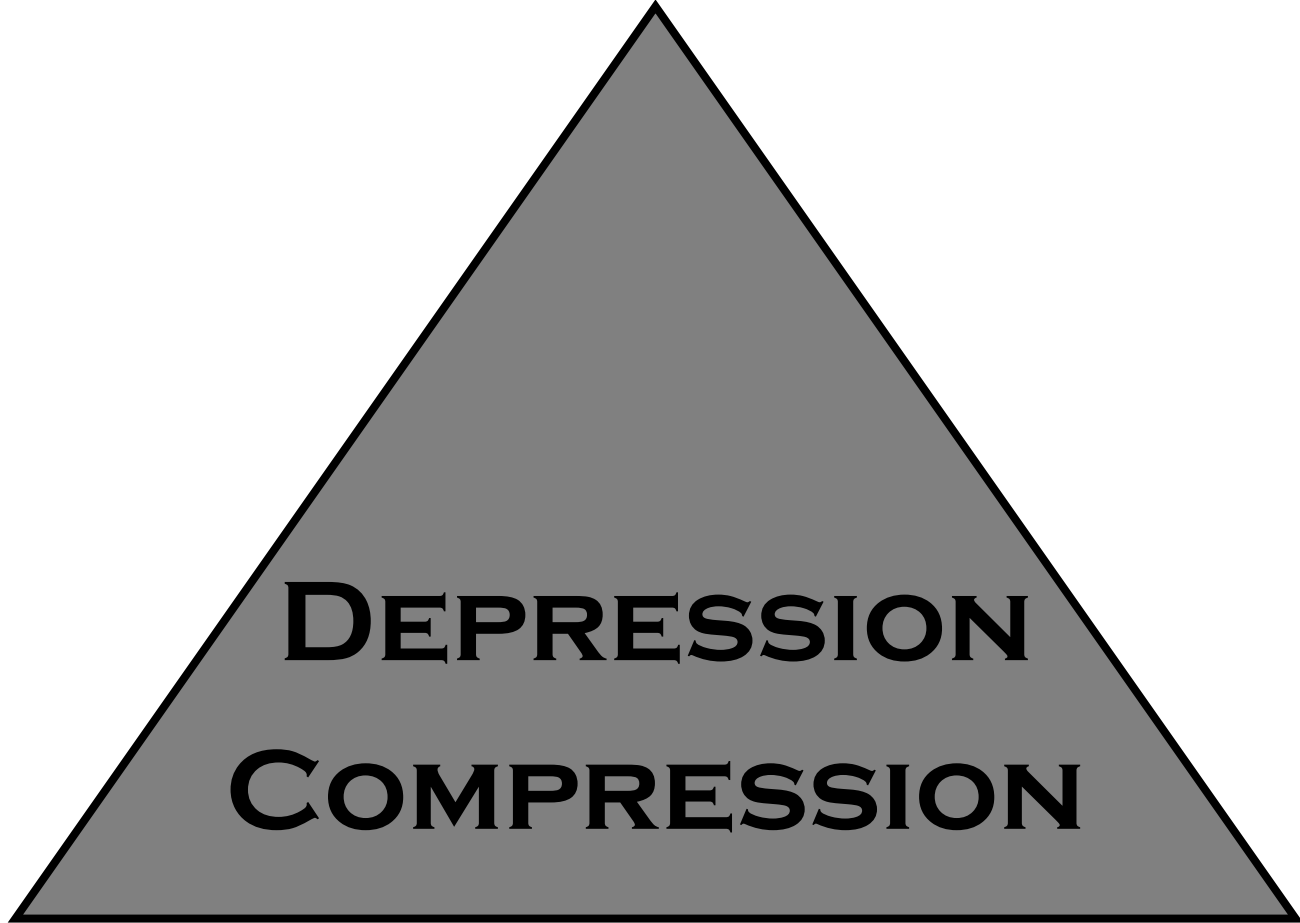
3-4 or more of the following:

- Sleep problems
- Weight or appetite changes
- Psychomotor retardation or agitation
- Decreased energy
- Indecisiveness or concentration difficulties
- Worthlessness or extreme/inappropriate guilt
- Suicidal ideation

Significant functional impairment

Disconnection

Isolation - Avoidance



DEPRESSION

COMPRESSION

Sadness

Numbness

Confusion

Loss of vital pursuits

Major Depressive Disorder

■ Prevalent

- Nearly 1 out of every 6 adults (16.6%) is affected once in their lives, with twice as many females (10-25%) as males (5-12%)

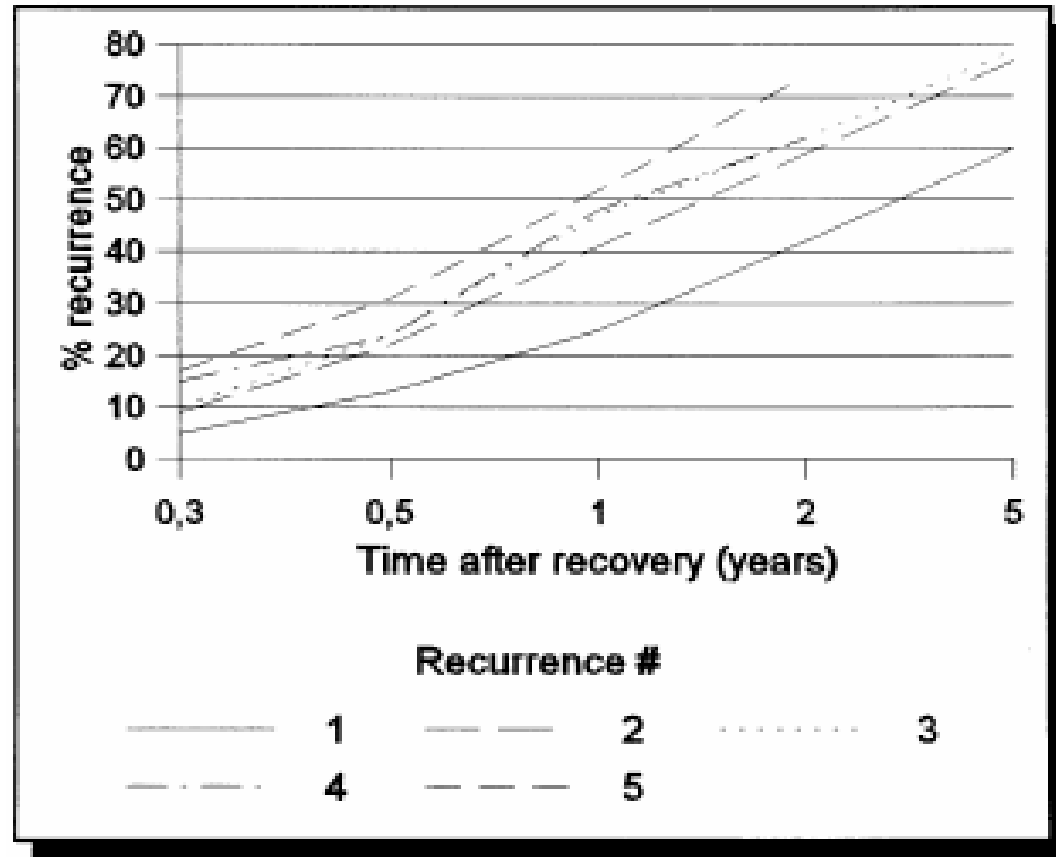
■ Disabling

- 4th highest source of worldwide disability among all mental & physical disorders

■ Recurrent

- 1 Major Depressive Episode → 50% relapse
 - 2+ Major Depressive Episodes → 70-80% relapse
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Probability of Relapse after Recovery from a Major Depressive Episode



MD Risk Factors

What makes someone more vulnerable to developing or relapsing into major depression?

- Genes
 - Epidemiological studies
 - Cognitive factors
 - Brain imaging biomarkers
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Genetic Factors

- Major Depression twin studies:

Dizygotic twins	10%
Monozygotic twins	40%
 - Bipolar twin studies:

DZ twins	12%
MZ twin	62%
 - Variance accounted for due to genetic influence:
 - Major Depression: 37%
 - Bipolar Disorder: 80%
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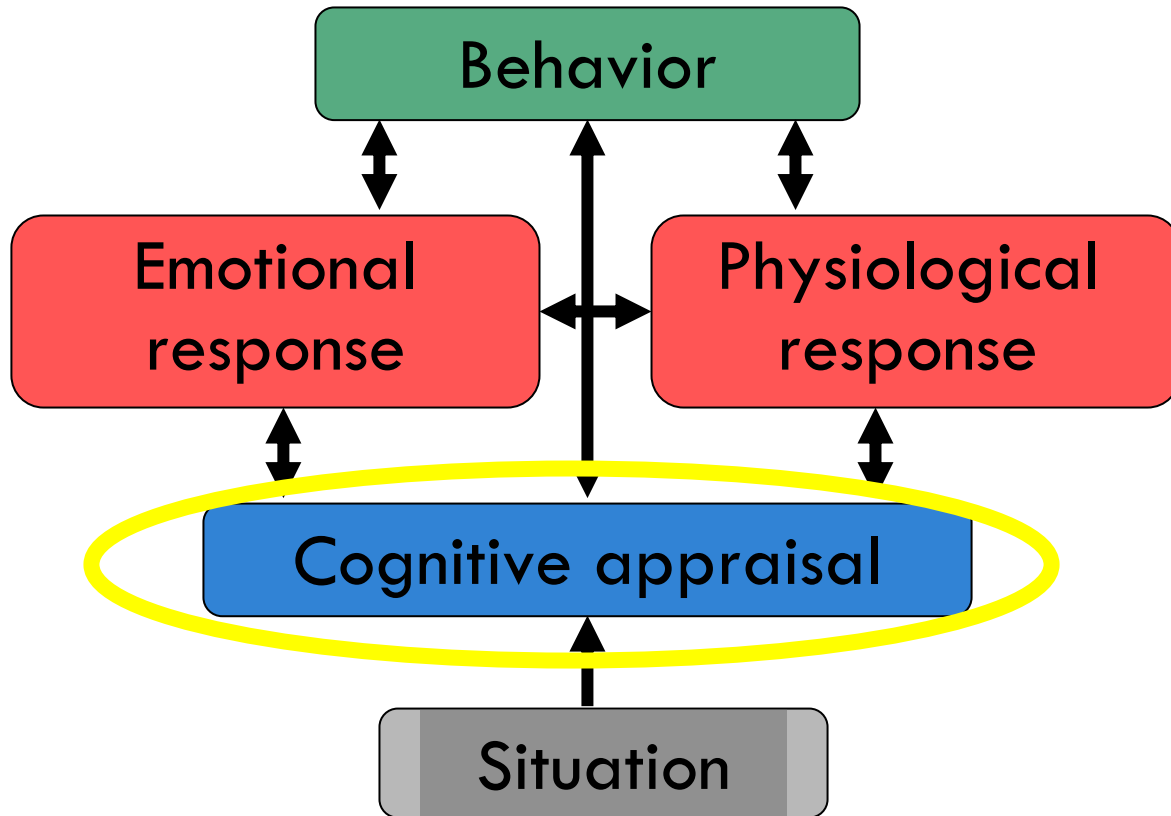
Psychiatric & Epidemiological Risk Factors

- Multiple prior MD episodes
- Double depression (MD + dysthymia)
- Long duration of individual MD episodes
- Residual symptoms from a MD episode
- Family history of mood disorder
- Early family adversity or abuse
- Comorbid anxiety or substance abuse
- Female gender
- Homemakers
- Never married or divorced
- Unemployment or disability
- Poverty

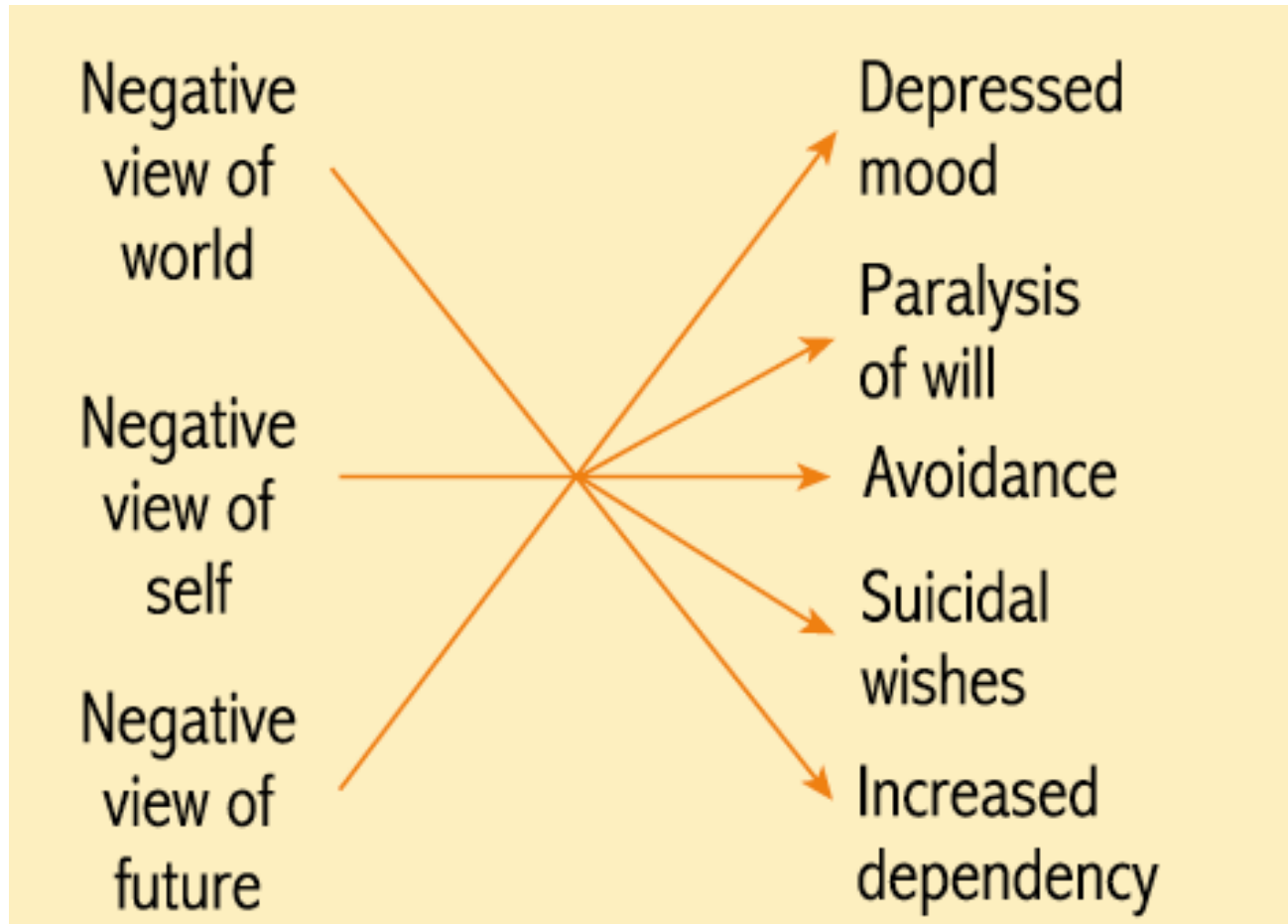
Protective Factors

- Male gender
 - Retirement
 - Non-Hispanic African American
 - Marriage or intimate relationship
 - Strong social support networks
 - Work outside the home
 - Serious religious commitment
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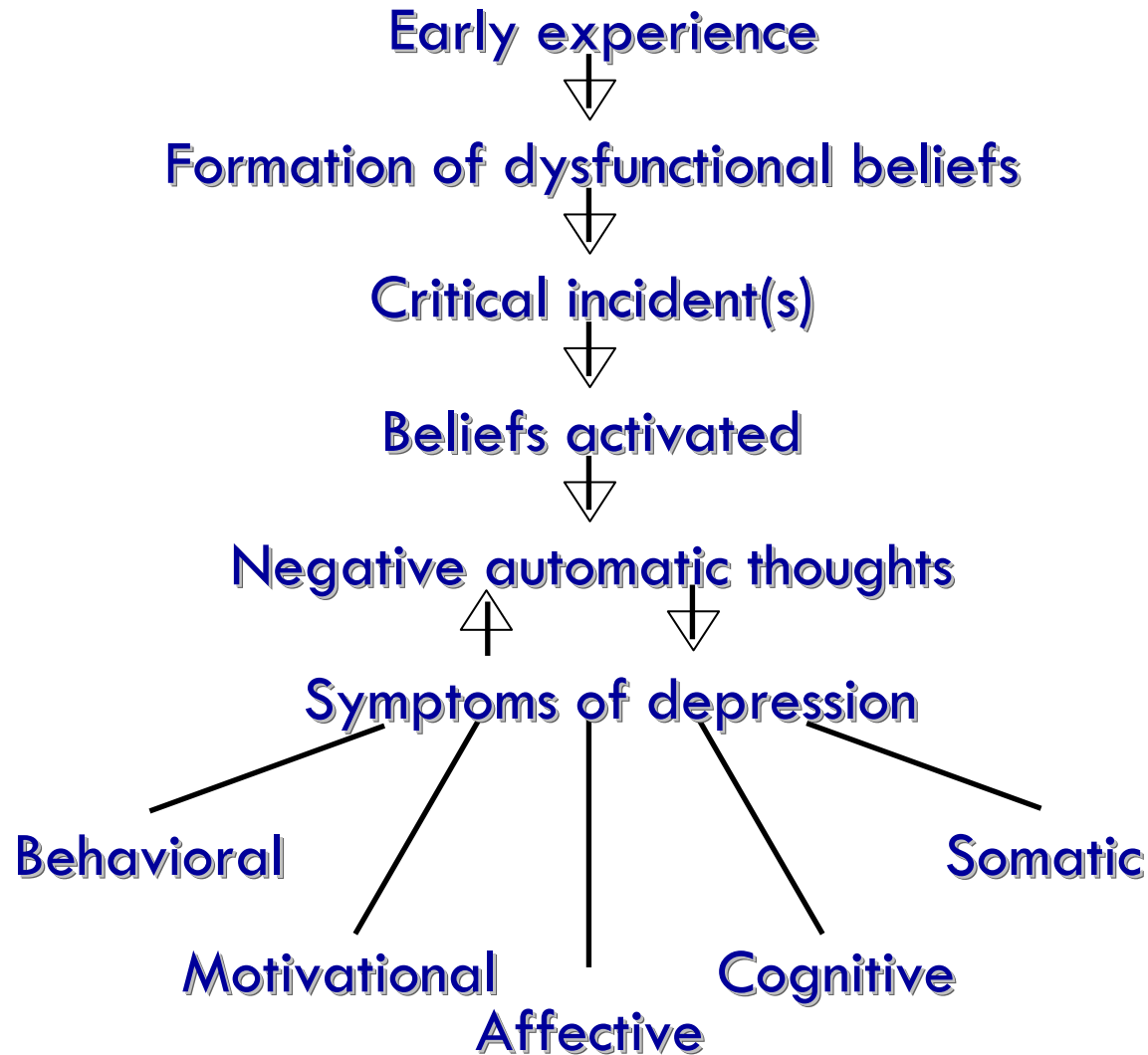
Cognitive Model of Behavior



Negative Triad



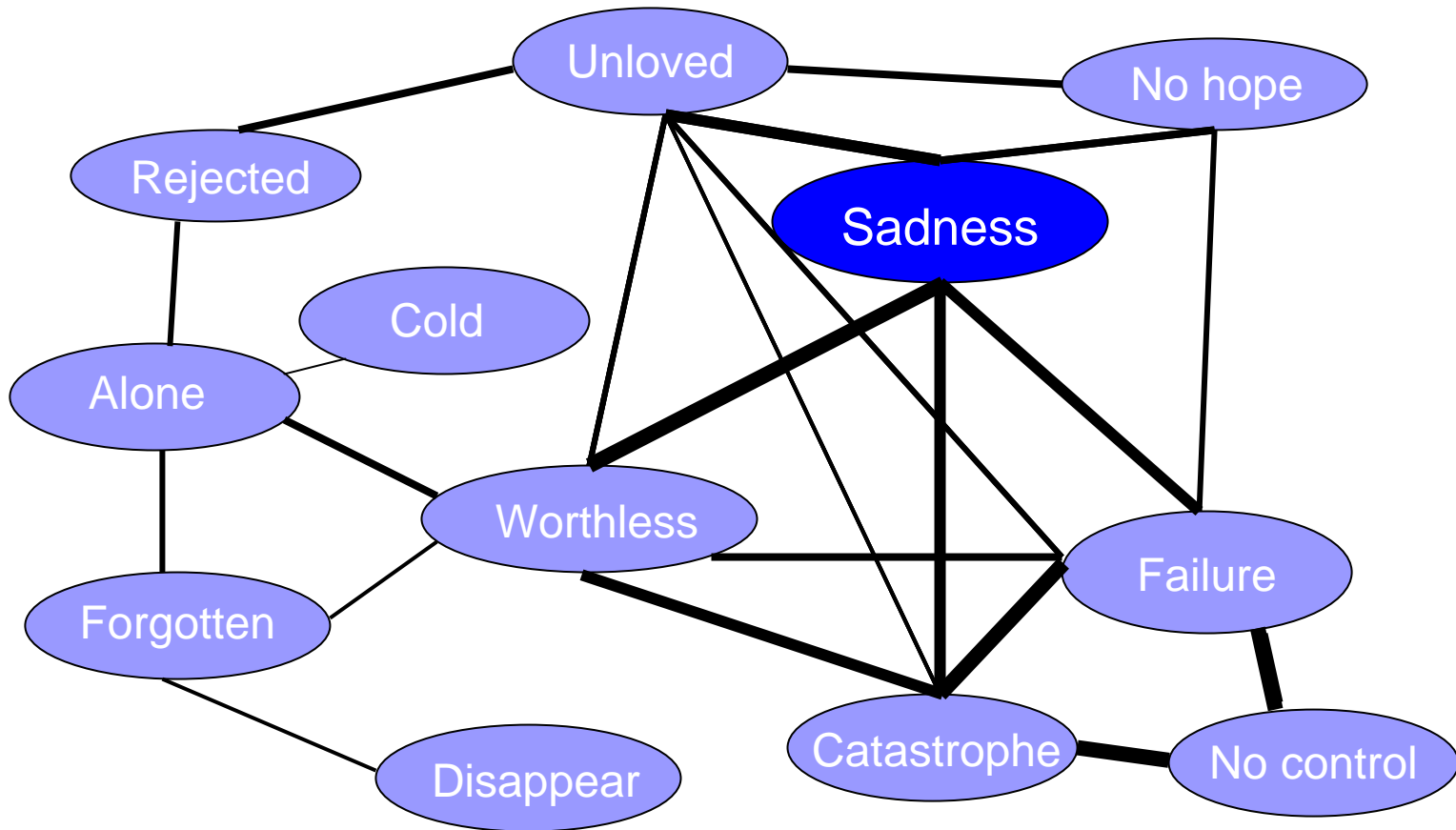
Beck's Cognitive Model of Depression



Examples of Dysfunctional Beliefs

- I am nothing if a person I love doesn't love me
 - If others dislike you, you cannot be happy
 - To be a worthwhile person, I have to be truly outstanding
 - If I do not do well all the time, people will not love me
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Network Model



Rumination

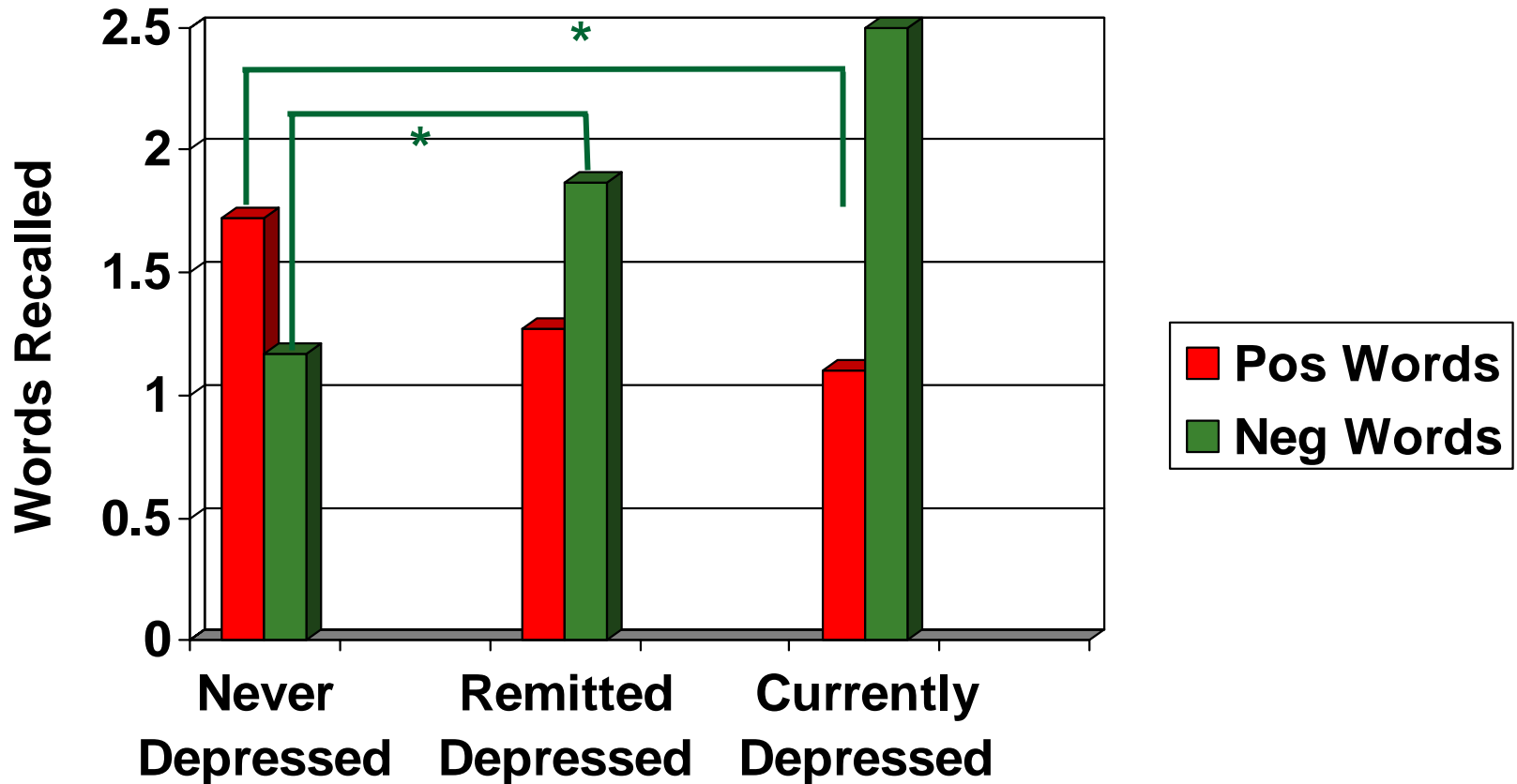
- Passively focusing one's attention on a negative mood state like depression, and repetitively thinking about the causes, meanings and consequences of that state.
- Common response style among women
- Perceived as problem-solving strategy, but rarely effective
- Implicated in both the onset and maintenance of depression

Rumination Examples

When I'm down, sad, or depressed, I tend to...

- isolate and think about why I feel this way
- think “Why do I always react this way?”
- listen to sad music
- think “What am I doing to deserve this”?
- try to understand oneself by focusing on one's depressed feelings
- think about how passive and unmotivated I feel

Negative Recall Bias in Current and Remitted Depression after Self-Focus Manipulation



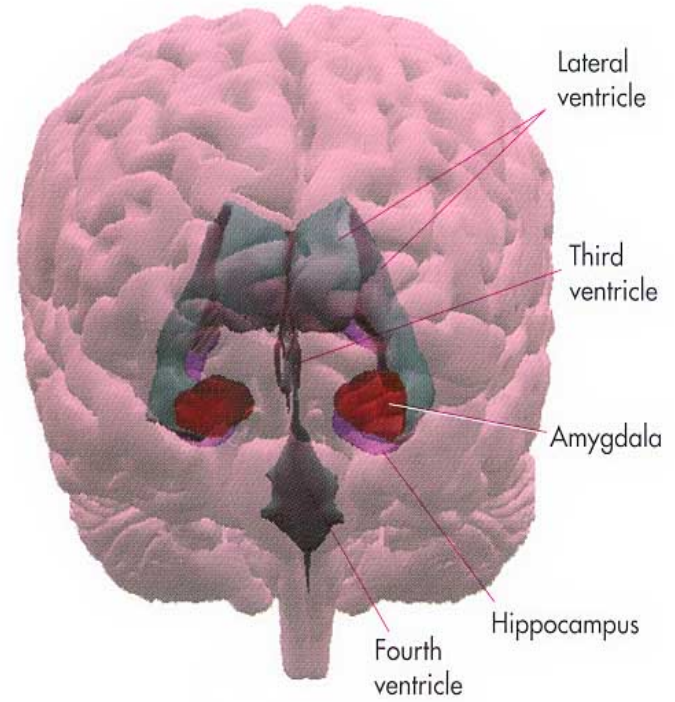
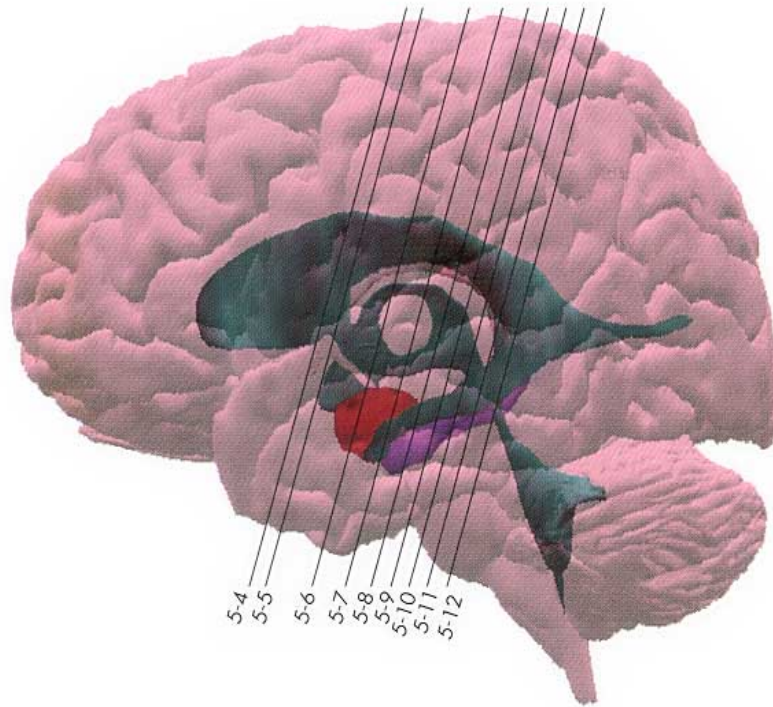
Neg wds: RD vs. ND: $F(1, 30)=3.31, p<0.05$

CD vs. ND: $F(1, 35)=8.24, p<0.004$

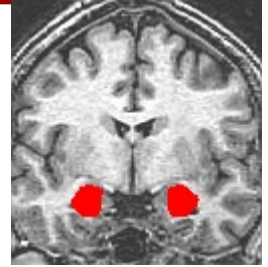
Pos wds: CD vs. ND: $F(1, 35)=4.60, p<0.02$

Hedlund & Rude, 1995

Amygdala



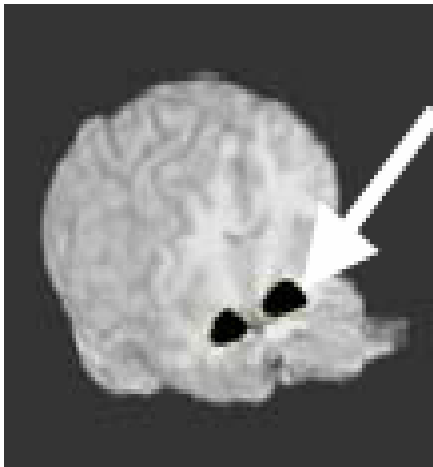
Amygdala



- 🧠 Rapid detection of emotionally salient information
- 🧠 Emotional memory: encoding of emotionally salient information into long-term memory
- 🧠 Hyperactive amygdala in depressed, remitted depressed, and anxious individuals

Attention and Amygdala in Major Depression

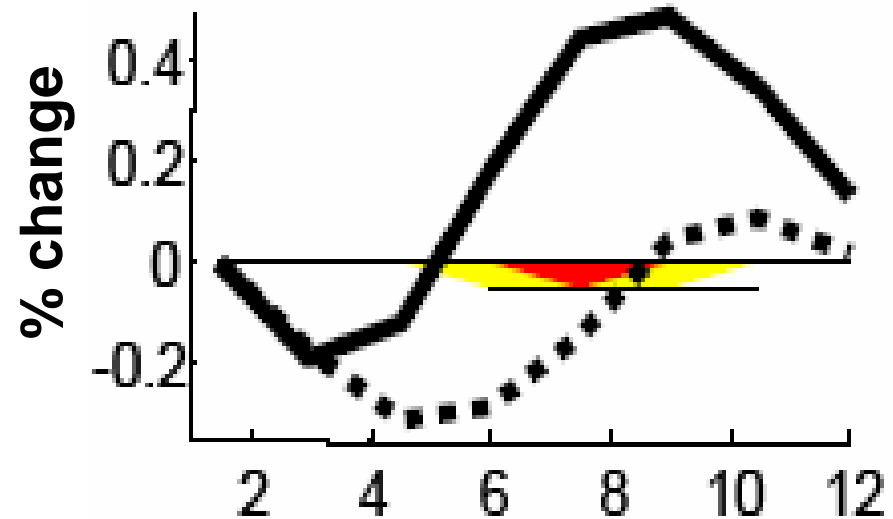
Left Amygdala



(n=25) ■■ Control

(n=27) ■■ Depressed

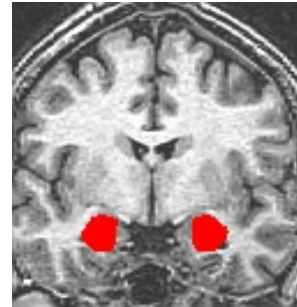
Negative words



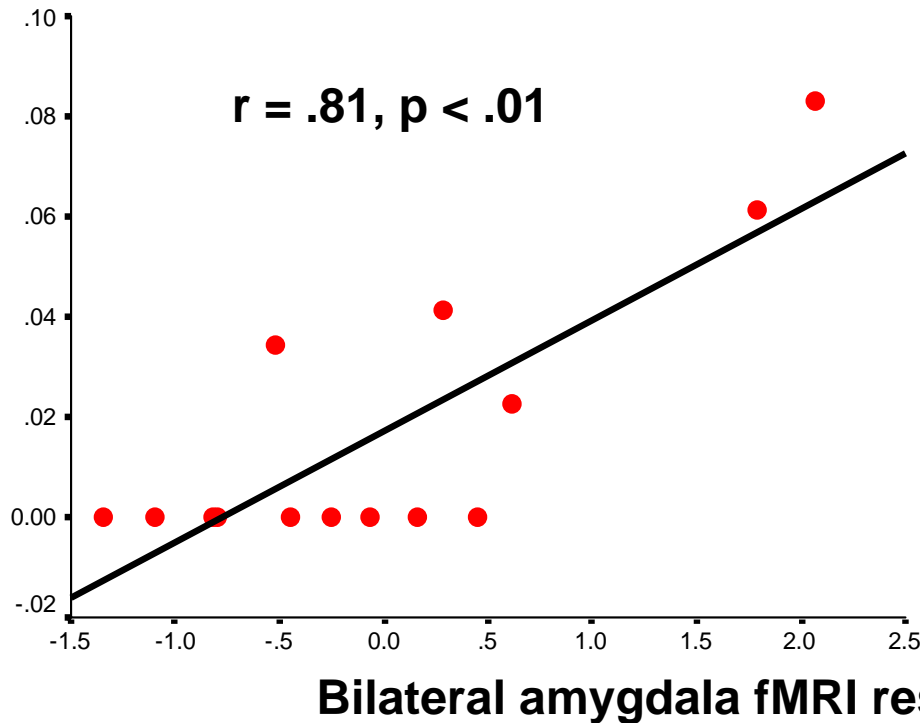
Fixation * 1s	Word 200ms	Mask XXXXXX 10.8s
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Amygdala & Mood-Congruent Memory

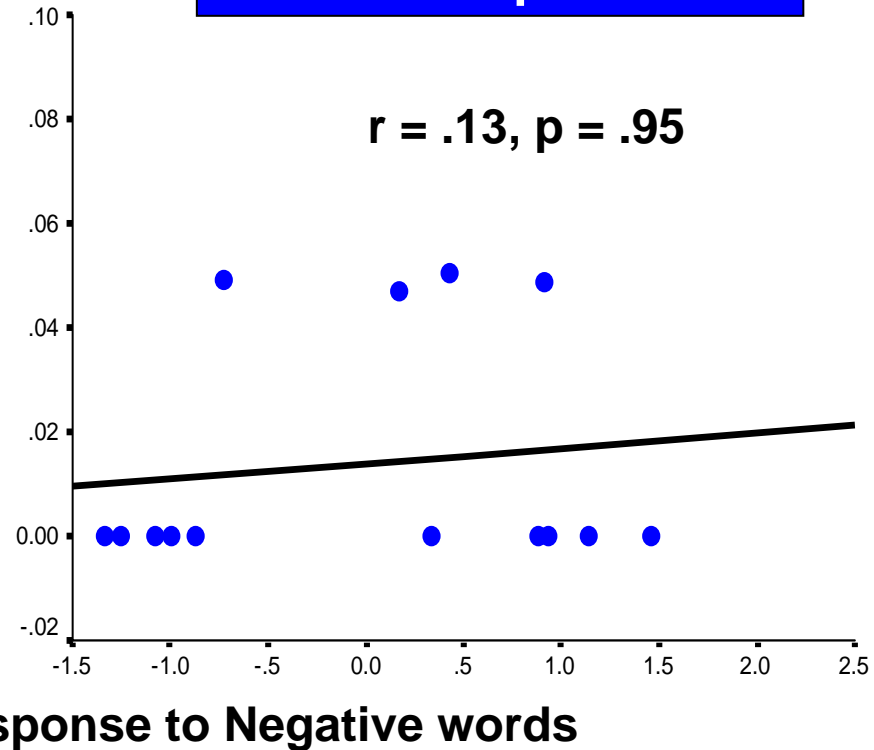
Recall of Negative Self-Referent Words Following a Sad Mood Induction in Individuals with and without a History of Depression



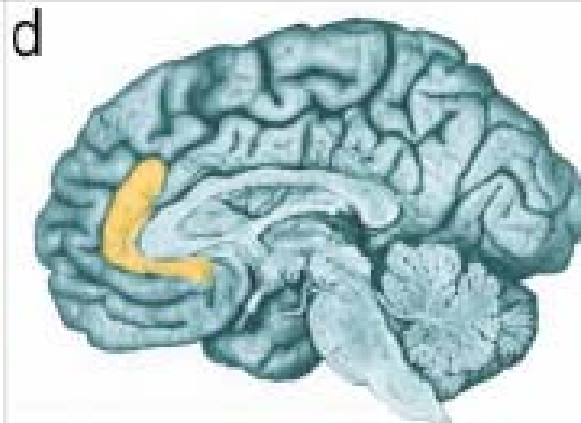
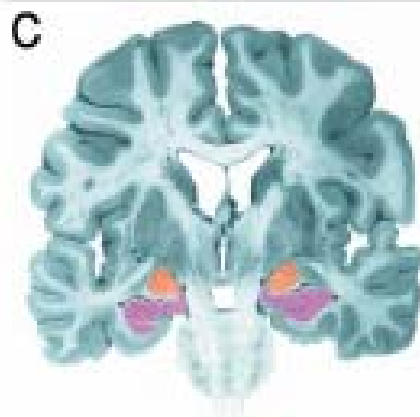
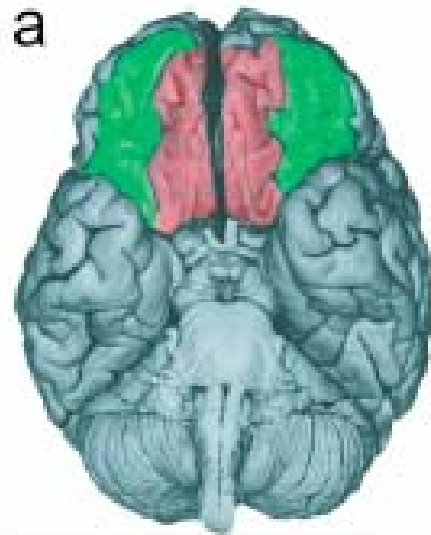
Remitted Depressed



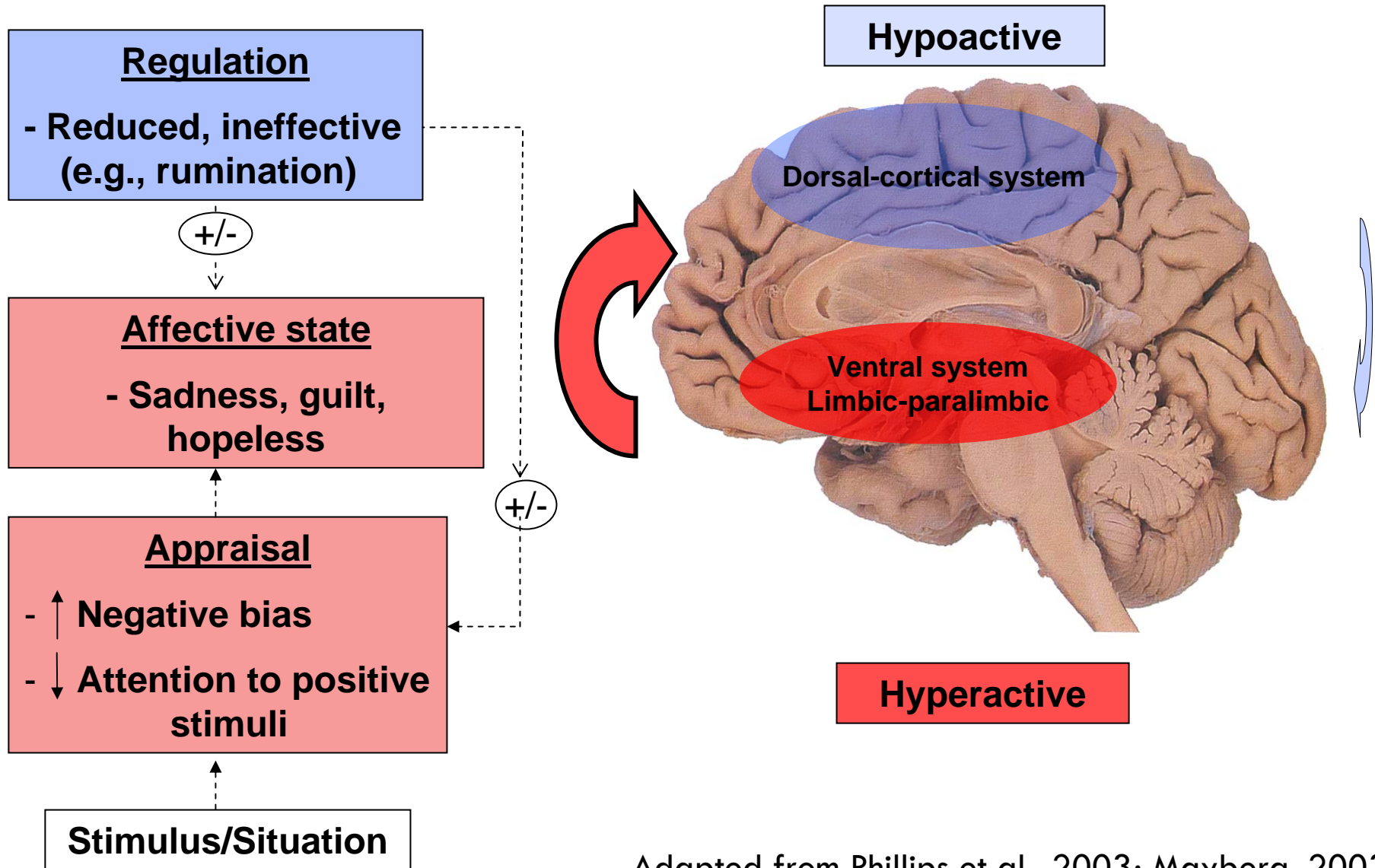
Never Depressed



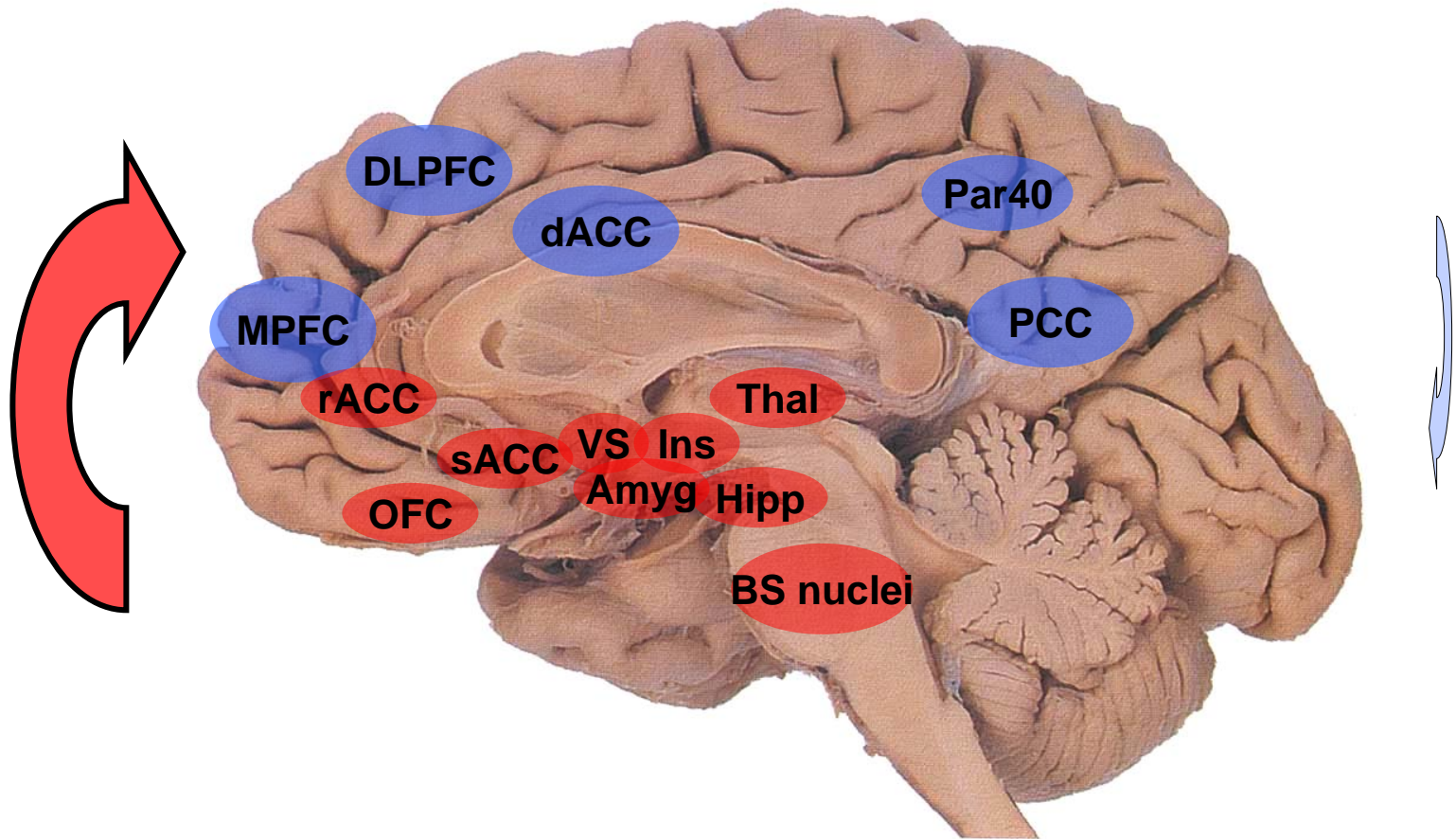
Key Brain Regions in Mood Disorders



Neuroanatomical Model of Depression



Neuroanatomical Model of Depression



Adapted from Phillips et al., 2003; Mayberg, 2003

Some depression themes

- Depression is not abnormal. It is quite common.
 - Factors that tend to maintain depression:
 - Learned maladaptive negative self views (dysfunctional beliefs)
 - Believing negative self views accurately reflect reality (fusion)
 - Spinning on negative beliefs as a way of trying to repair them (rumination)
 - Attention and memory bias for negative, self-referent information
 - Brain regions implicated with emotional reactivity, memory (e.g., amygdala) and emotion regulation (DLPFC) appear to be dysregulated in major depression.
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PSYCHOLOGICAL TREATMENTS

Treatment

- Major depression

- About 60% response rate to medication and empirically supported psychotherapy treatments
- Psychotherapy and meditation practice are effective in preventing recurrences

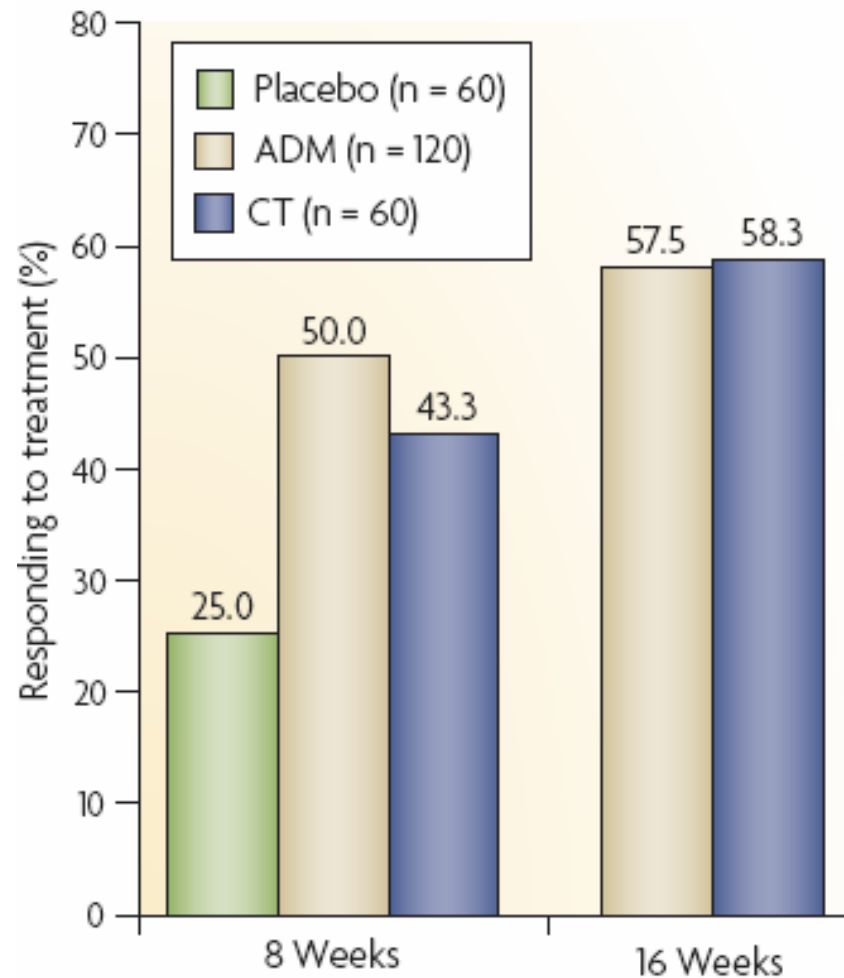
- Bipolar depression

- Higher response rate to medication
 - Increasing evidence for the efficacy of psychological treatments
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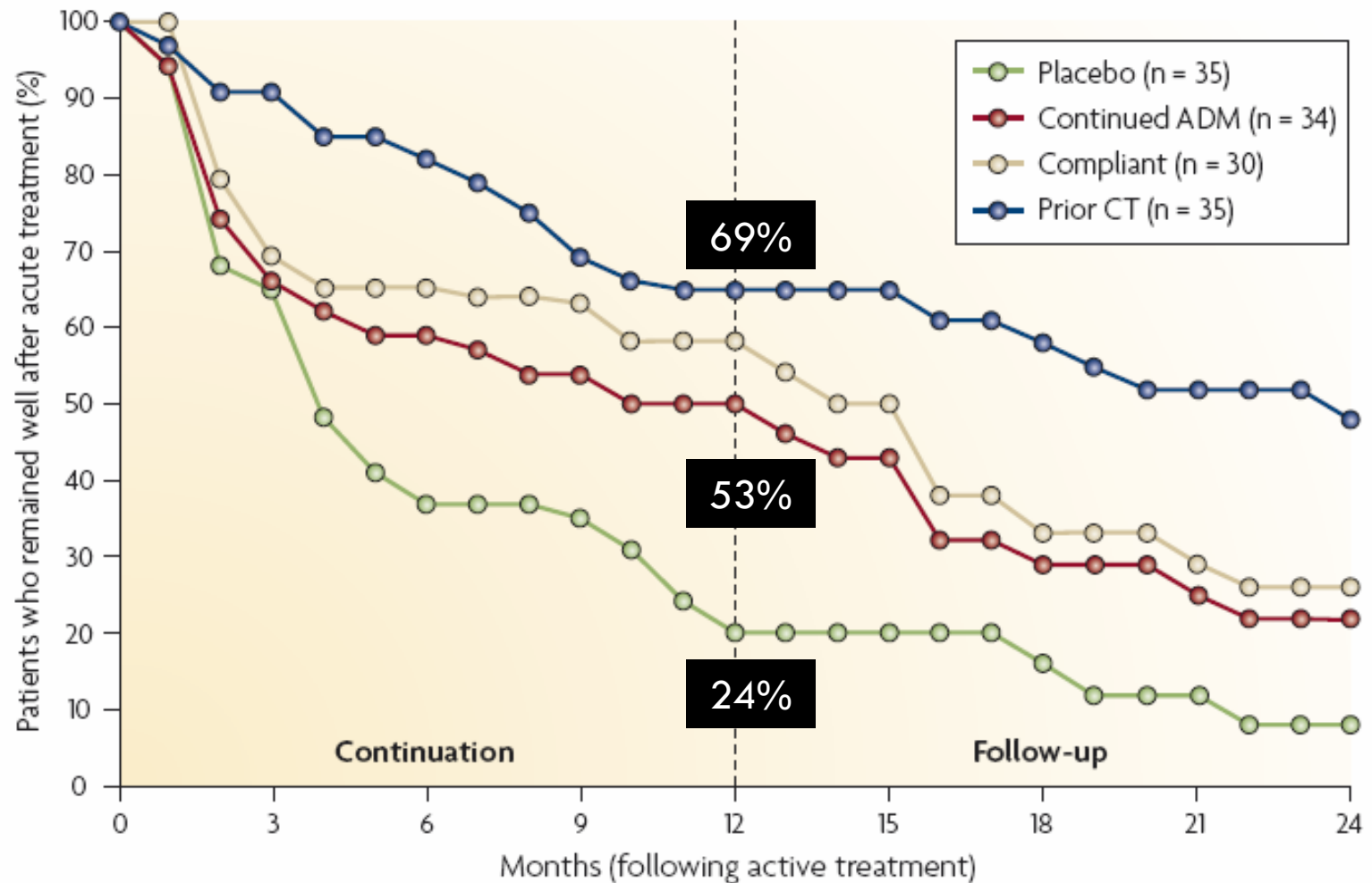
Empirically Supported Psychotherapy Treatments for Major Depression

- Cognitive Therapy (CT)
 - Cognitive Behavior Therapy (CBT)
 - Interpersonal Psychotherapy
 - Brief Dynamic Therapy
 - Behavioral Marital Therapy
 - Mindfulness Based Cognitive Therapy (relapse prevention)
 - Acceptance and Commitment Therapy (ACT)
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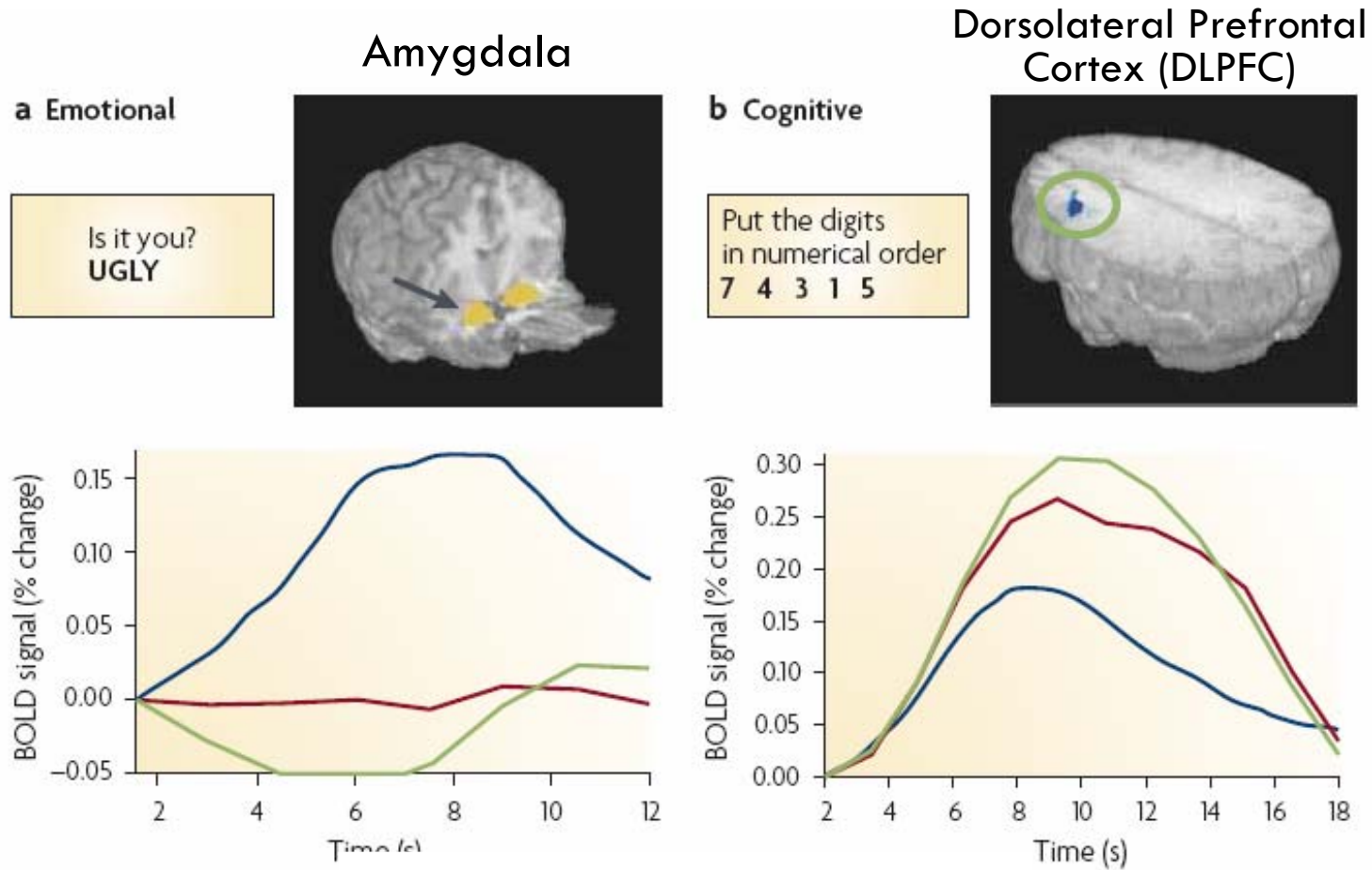
Cognitive Therapy (CT) vs. Medication (ADM) for Moderate to Severe Major Depression



Relapse Prevention following CT and ADM Treatment for Major Depression



Brain Response to Cognitive Therapy



Mindfulness

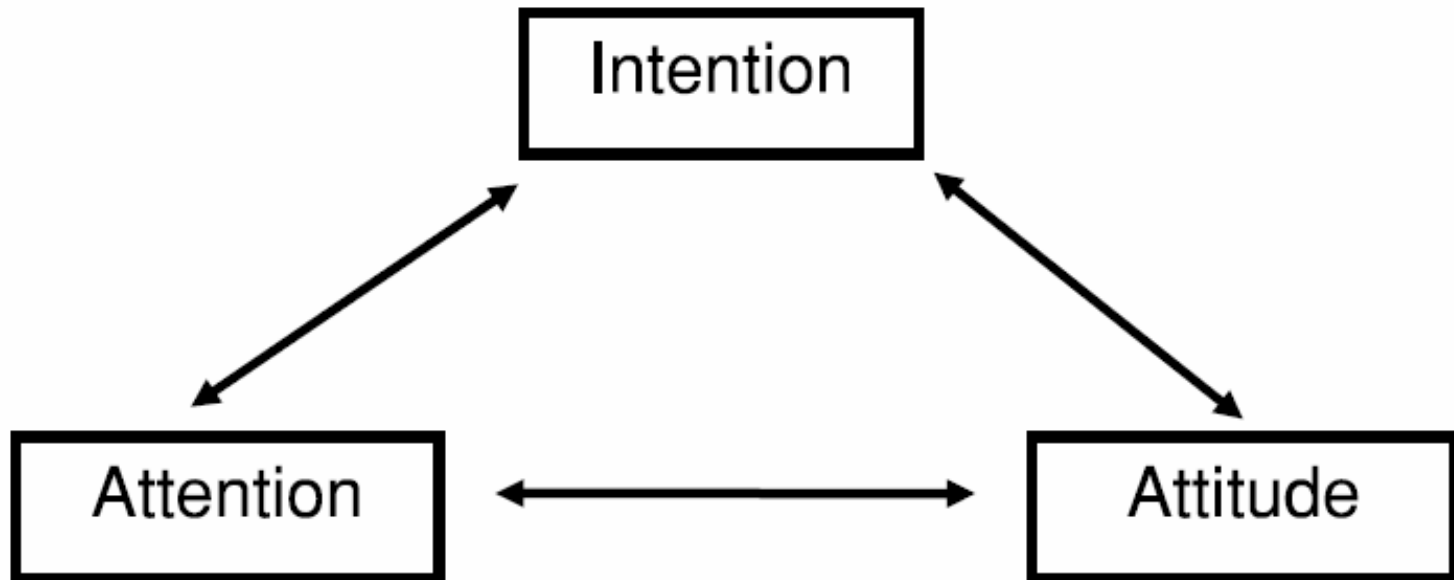
“Paying attention in a particular way: on purpose, in the present moment, and non-judgmentally”

Kabat-Zinn, 1994



1. “On purpose” or *intention*
 2. “Paying attention” or *attention*
 3. “In a particular way” or *attitude*
-

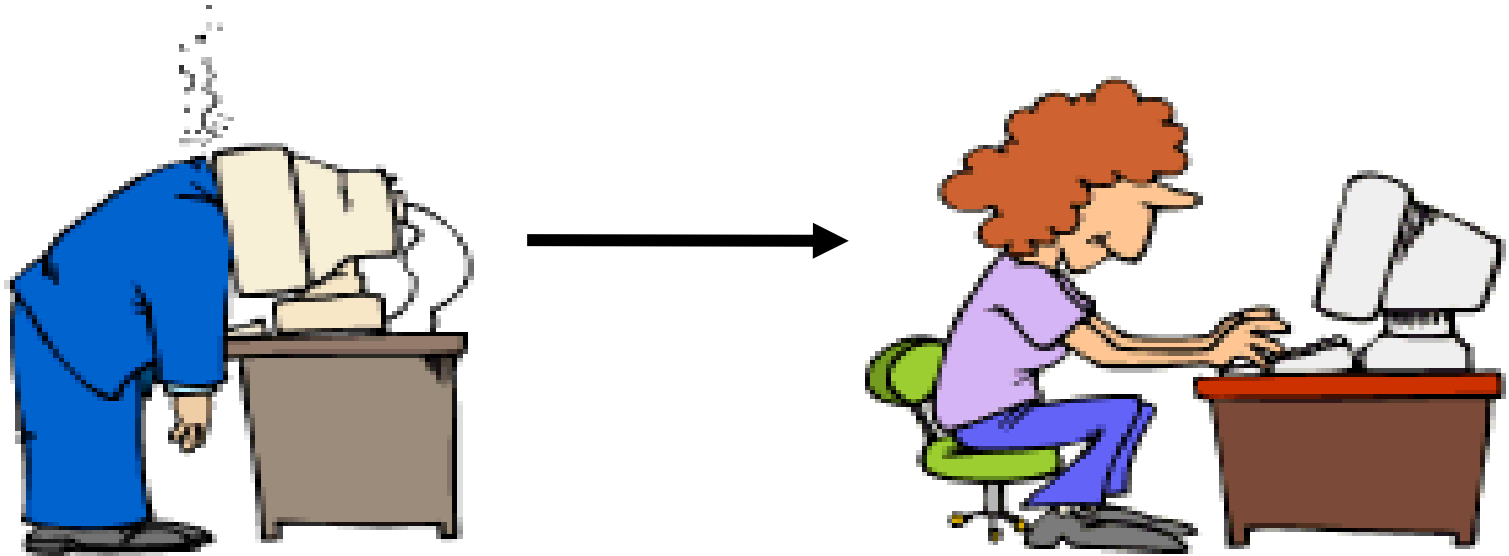
Mindfulness Axioms



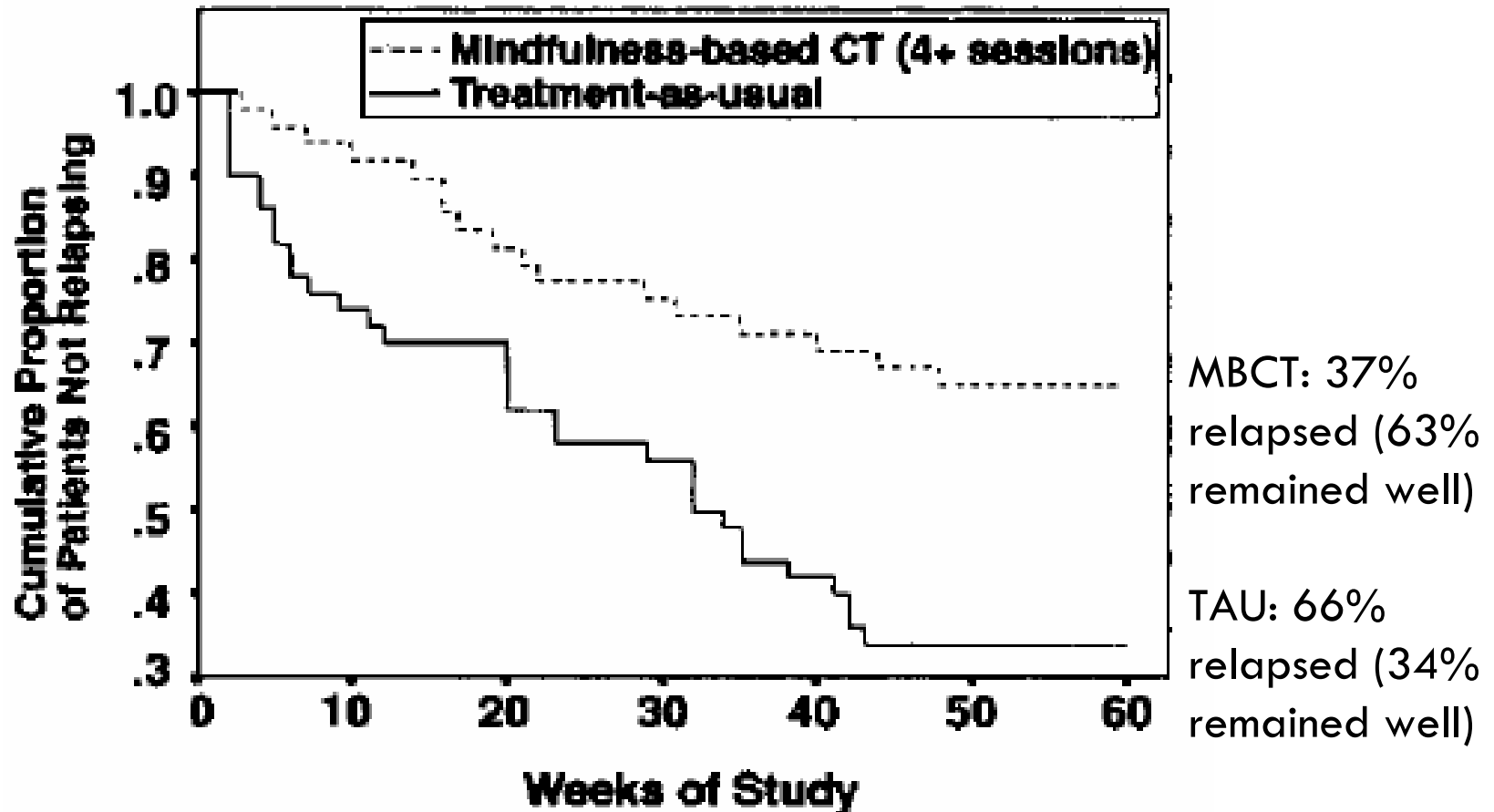
Mindfulness Based Cognitive Therapy (MBCT)

- “Nipping in the bud:” Mindfulness training may initiate early detection of negative thinking, feelings, and body sensations.
- Mindful mode of processing may promote disengagement from the relatively automatic ruminative thought patterns that could otherwise escalate into a full-blown depressive episode.

Decentering

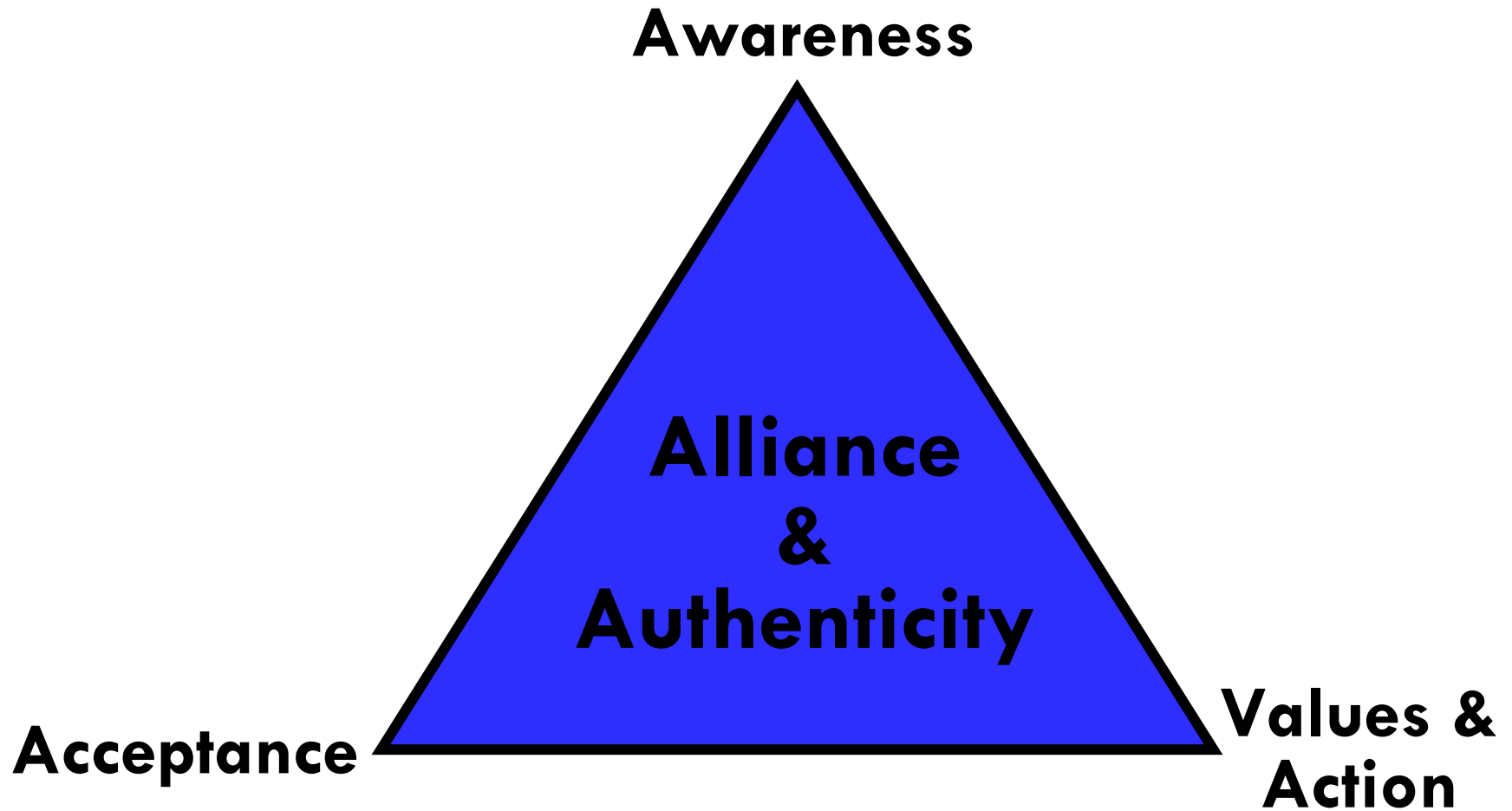


“Nipping in the bud” – Prophylactic Effects of MBCT for Individuals with 3 of more MDEs

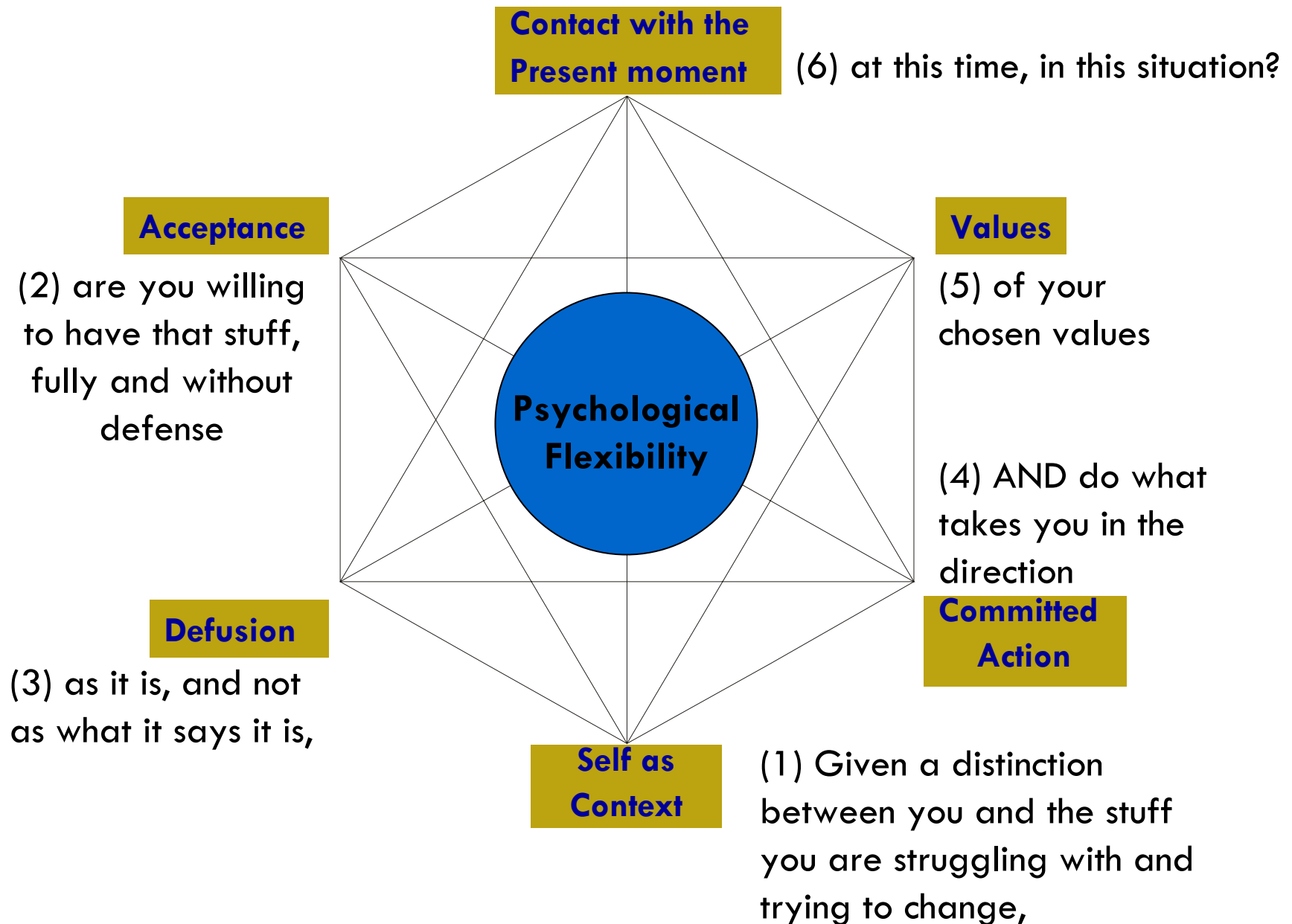


Teasdale, Segal, Williams et al., 2000;
replicated by Ma & Teasdale, 2004

Key Components of Psychotherapy



Acceptance & Commitment Therapy (ACT)



You nights of anguish. Why didn't I kneel
more deeply to accept you, inconsolable
sisters, and, surrendering, lose myself in your
loosened hair. How we squander our hours
of pain. How we gaze beyond them into the
bitter duration. To see if they have an
end. Though they are really seasons of us,
our winter . . .

Rainer Maria Rilke

Thank You for Your Attention!

For more information:

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