

Population Health Improvement Learning Collaborative



Depression & Anxiety: A New Paradigm

Susan Benson, APRN, DNP, CCP
*Psychiatric Assessment &
Integrated Care Clinician*
Billings Clinic



Population Health Improvement Learning Collaborative

- A learning and networking community for all professionals serving people at risk of, or affected, by chronic conditions.
- Supporting health coaching and chronic care improvement practices that deliver best value to patients and purchasers.
- Offering free, noncommercial skill-building webinars through the not-for-profit **PartnersinImprovement** alliance.
- Facilitated by HealthSciences Institute and sustained by individual members and partner organizations.

Population Health Improvement Learning Collaborative

Agenda

- 10:30 to 11:30 (CT) Learning Presentation & Discussion
- 11:30 to 11:45 (CT) Learning Collaborative Community Call

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Depression & Anxiety: A New Paradigm

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Learning Objectives

- Explore why recent findings in genetics and neurobiology are causing experts to “rethink” mental illness
- Recognize mood disorder (depression, anxiety and bipolar illness) symptoms and evidence-based treatments
- Summarize the human and financial costs of mood disorders
- Transform your practice to support better care and self-care

1. Rethinking Mental Illness



Rethinking Mental Illness

“It is time to rethink mental disorder, recognizing that these are **disorders of brain circuits likely caused by neuro-developmental process** shaped by a complex interplay of **genetics and experience.**”

- Insel and Wang

Rethinking Mental Illness

- “The behavioral and cognitive manifestations that signify these as ‘mental’ illnesses may be **late stages of processes that start early in development.**”
- Need early detection years before symptoms...go further up stream
- Best treatments are **NOT** the ones that take place after symptom onset

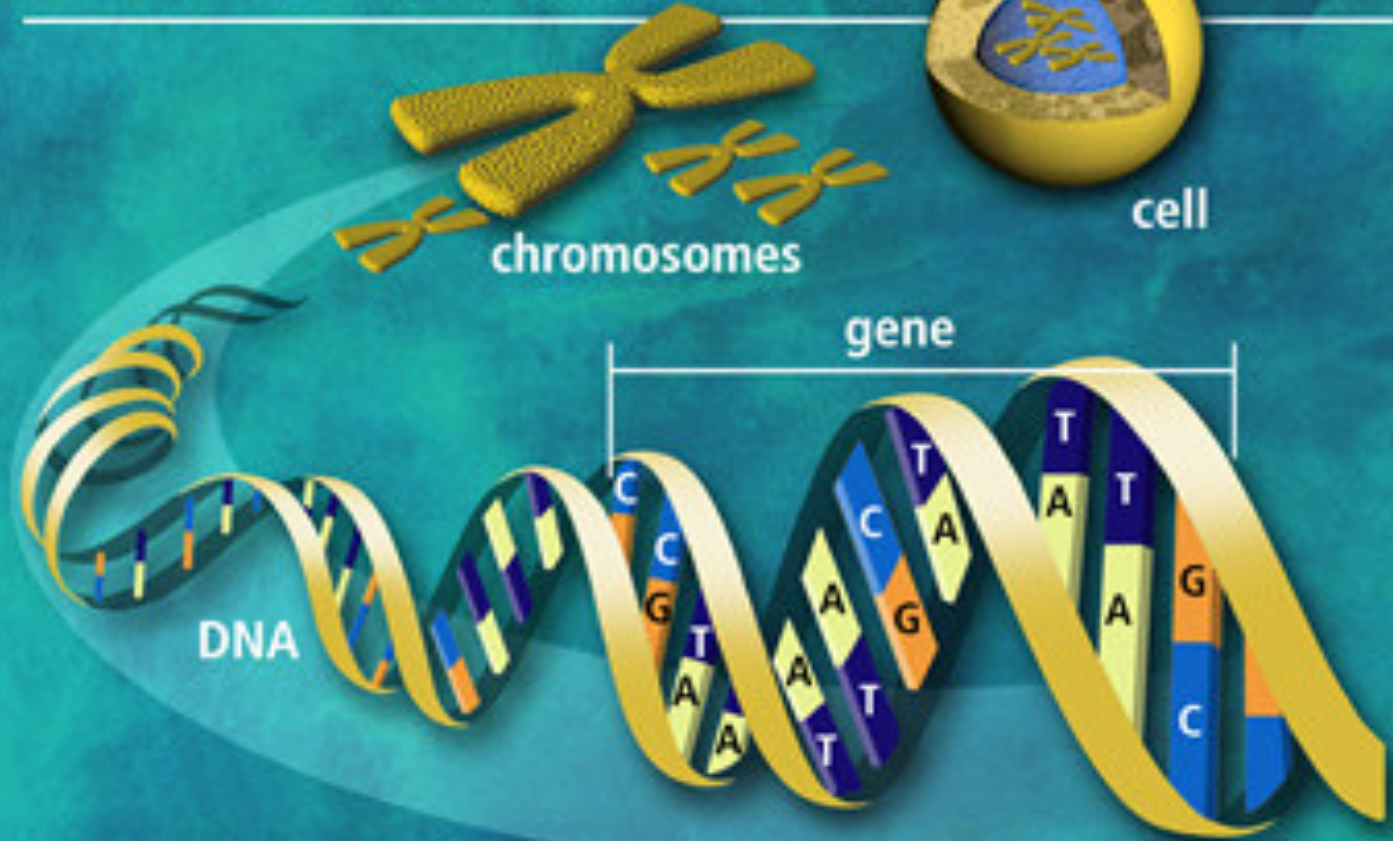
Rethinking Mental Illness

Insel and Wang

- Insights gained from **genetics and neuroscience** has transformed the understanding of psychiatric illnesses.
- Re-conceptualize disorders of the mind as **disorders of the brain**
- This also transforms the caregiver practice

It Starts with Genetics

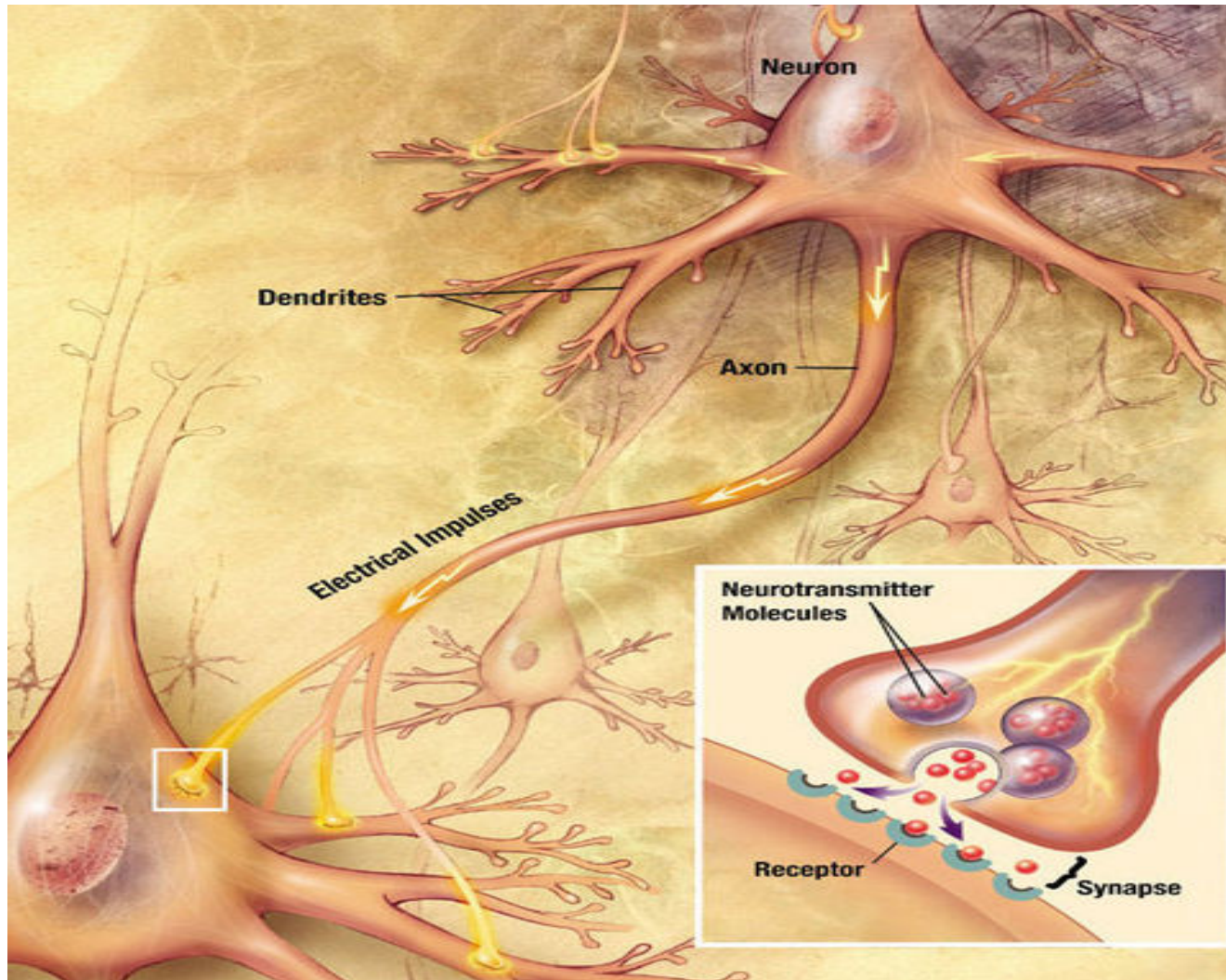
DNA the Molecule of Life



Genetics are the Recipe for Structure and Function of Nerve Cells

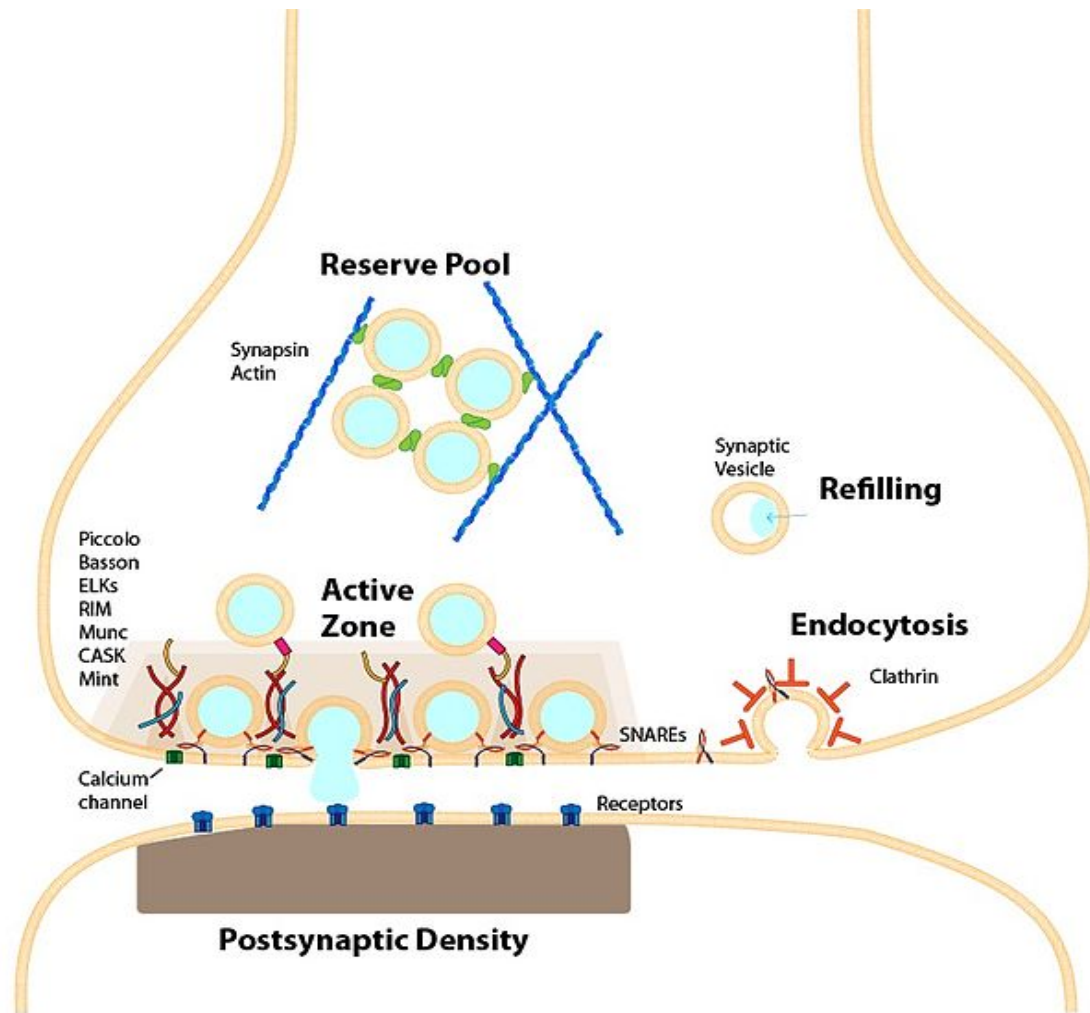


Cell to Cell Chemical Communication = Cognitions, Feelings, and Behaviors



http://en.wikipedia.org/wiki/File:Chemical_synapse_schema_cropped.jpg

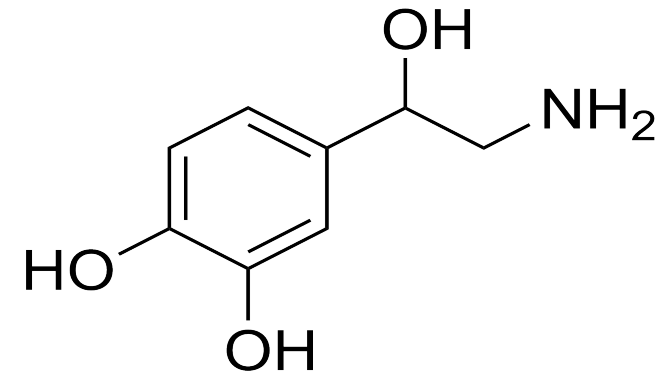
The Chemistry Is Complex



http://en.wikipedia.org/wiki/File:Active_zone3.JPG

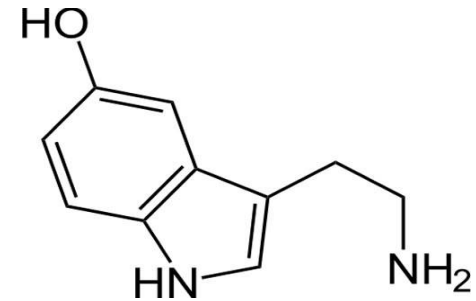
Norepinephine Noradrenaline

Related to:
adrenaline/epinephrine – fight/flight



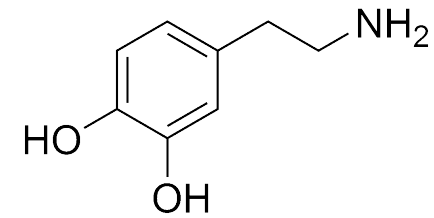
TOO MUCH:	JUST RIGHT:	TOO LITTLE:
Increased energy/rush	Alertness	Crash – no energy
Loss of appetite/weight loss	Rest/sleep cycles	Not moving
	Memory	

Serotonin



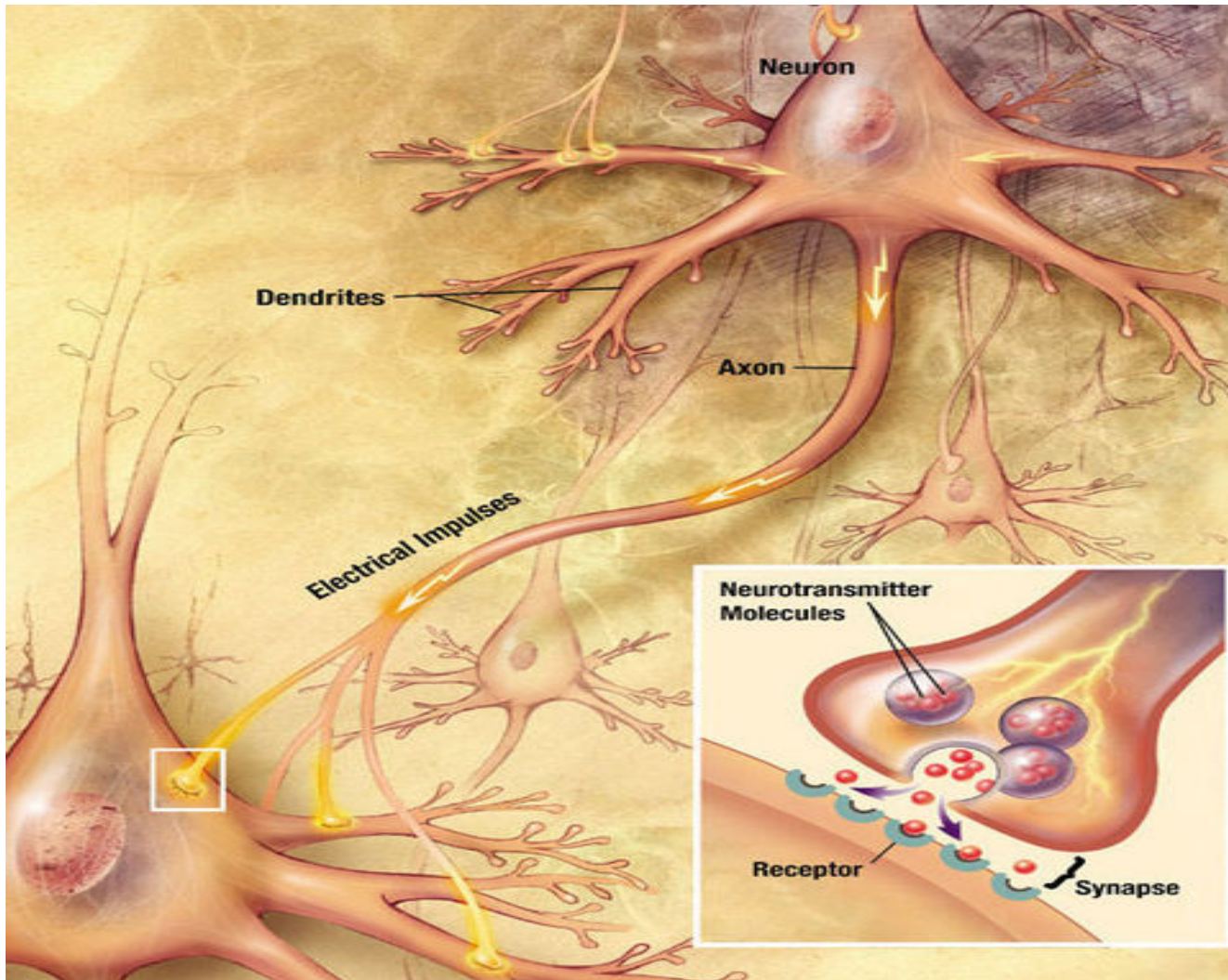
<p>TOO MUCH:</p> <p>Serotonin Syndrome</p>	<p>JUST RIGHT:</p> <p>appetite, sleep, sexual behavior, memory and learning, temperature, mood (not aggressive, mellow, happy), behavior, muscle contraction, and function of the cardiovascular system and endocrine system</p>	<p>TOO LITTLE:</p> <p>No calm</p> <p>Anger, Violence</p> <p>Anxiety/Depression</p> <p>Propensity to drugs/ETOH</p>

Dopamine



TOO MUCH:	JUST RIGHT:	TOO LITTLE:
<p>Mania: an elevated, expansive or irritable mood</p> <p>Psychosis: Auditory or Visual Hallucinations ex: Schizophrenia, Bipolar, Severe Depression</p> <p>Delusions: Paranoia, Persecution, Grandeur</p> <p>Disinhibition: & Impulsivity Excessive or Obsessive Behavior: gambling, alcohol, drugs, shopping, computer</p> <p>Preoccupation: Focus & Interest, Love/Lust</p>	<p>Reward system</p> <p>Controls motor actions</p> <p>Thought process</p> <p>Emotions</p> <p>Pleasure</p> <p>Euphoria</p> <p>Well being</p>	<p>Parkinson's Disease</p> <p>(Meth kills dopamine cells)</p>

Electricity is Essential to Make Circuits

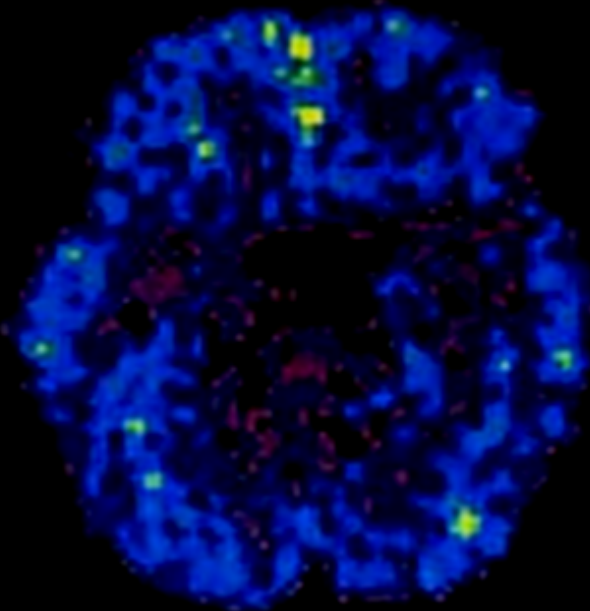


http://en.wikipedia.org/wiki/File:Chemical_synapse_schema_cropped.jpg

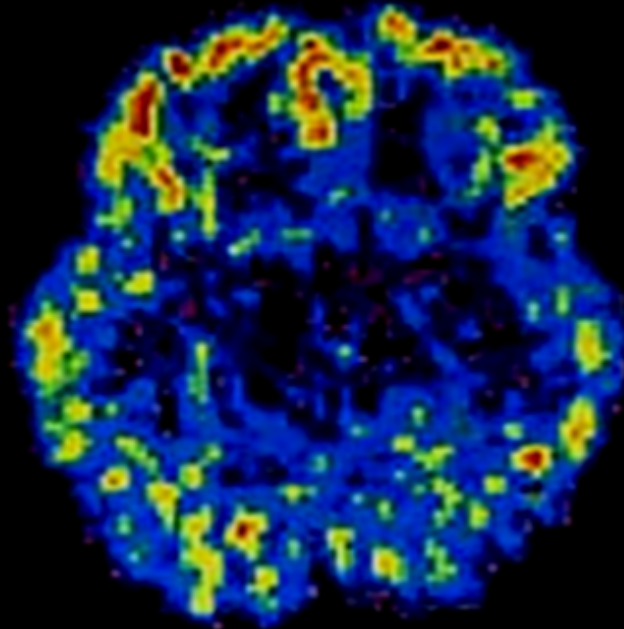
Little Electrical Flow Means Little Functioning

Electricity is essential to make circuits

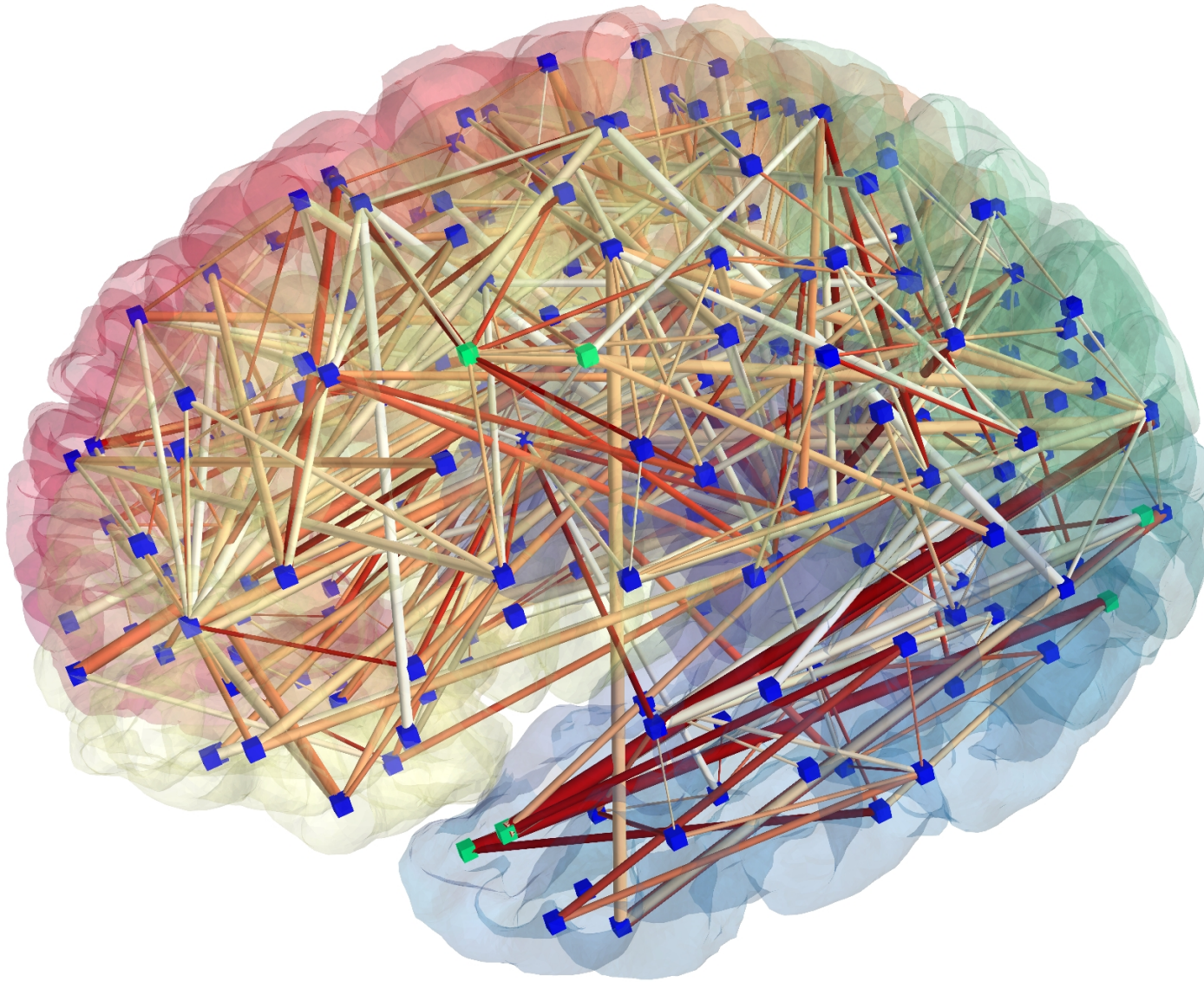
DEPRESSED



RECOVERED



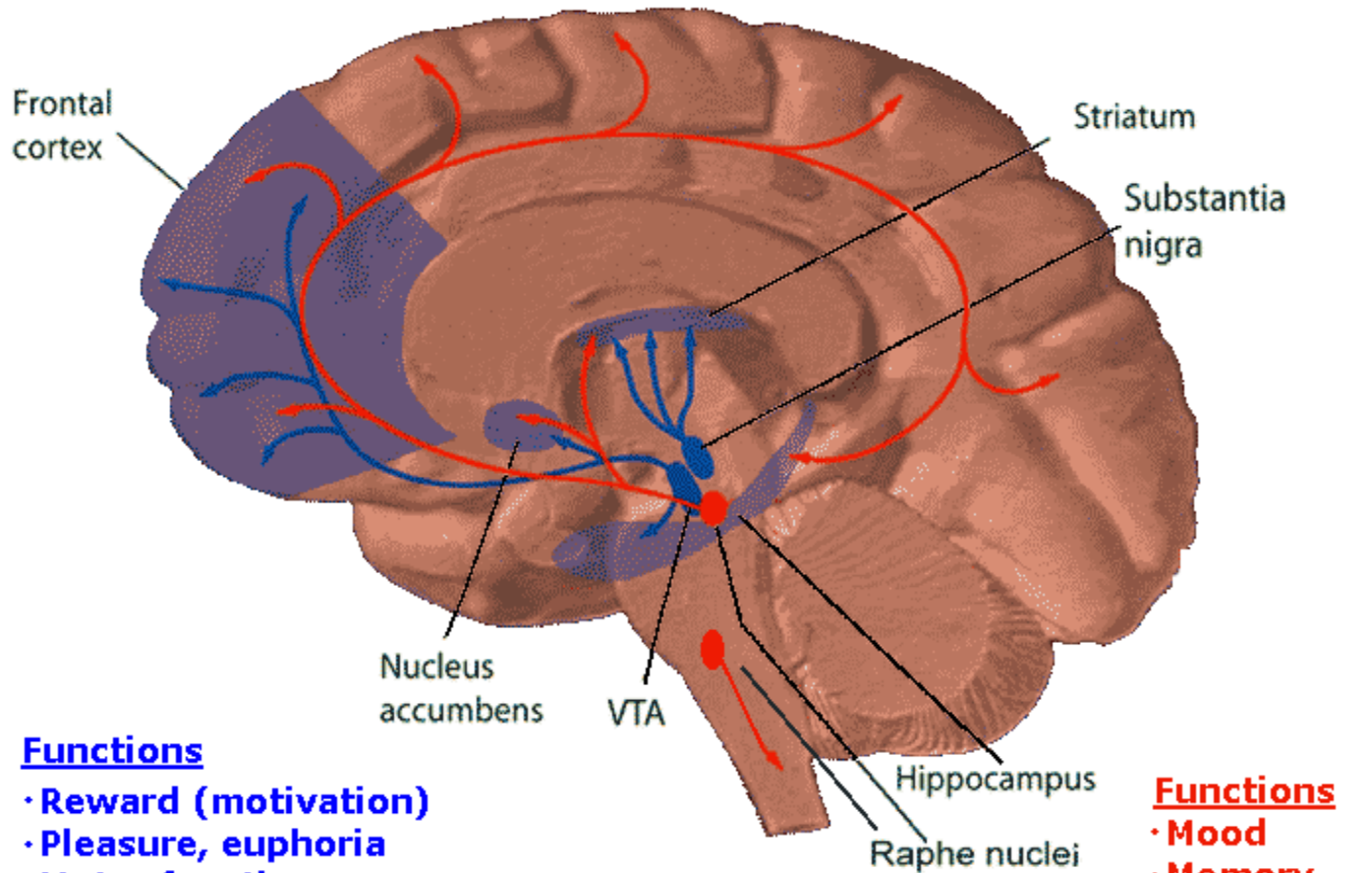
Nerve Cells Wire Together That Fire Together



Cell Chemistry and Circuits are Connected

Dopamine Pathways

Serotonin Pathways



Functions

- Reward (motivation)
- Pleasure, euphoria
- Motor function (fine tuning)
- Compulsion
- Perseveration

Functions

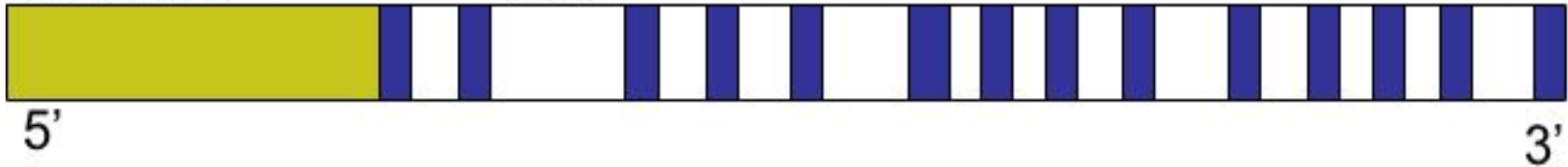
- Mood
- Memory processing
- Sleep
- Cognition

Newest Information on Anxiety and Depression

“Long” Allele

Transcriptional
Control Region

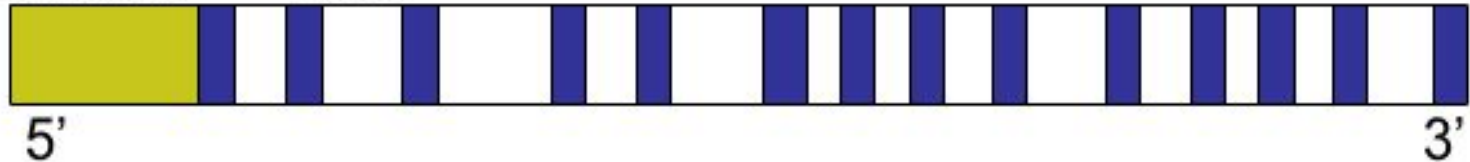
VNTR
Region



“Short” Allele

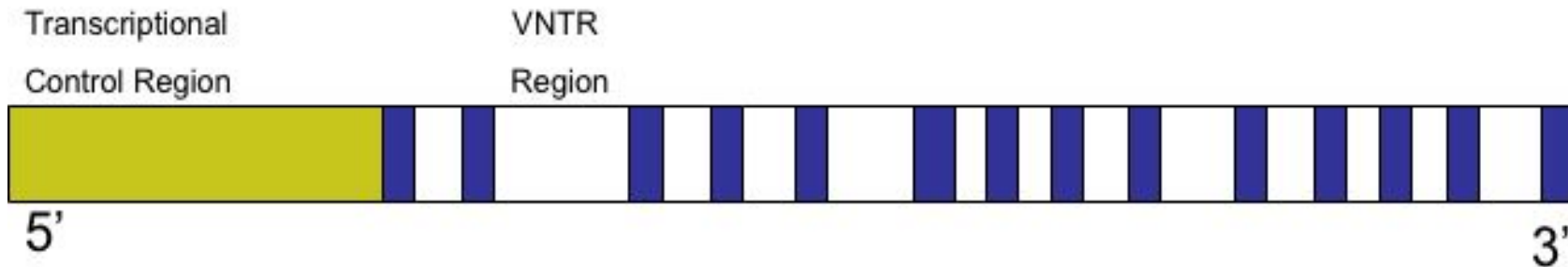
Transcriptional
Control Region

VNTR
Region

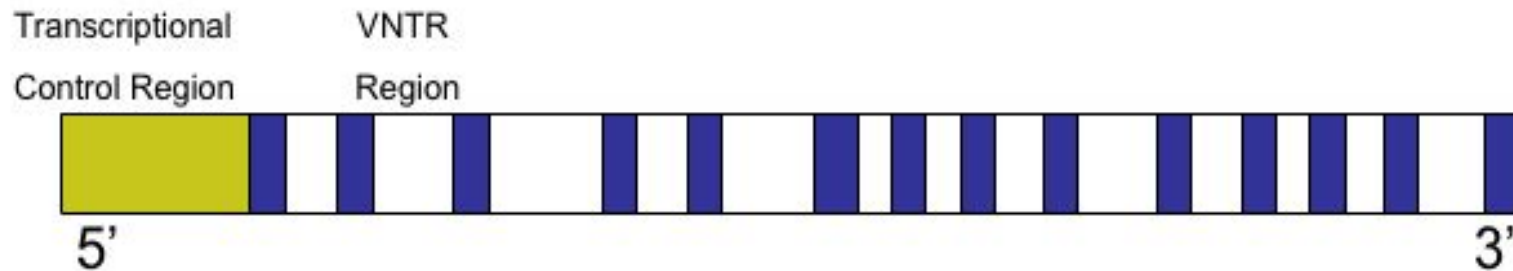


Newest Information on Anxiety and Depression


“Long” Allele



“Short” Allele



In the Human Population:

Short/short allele = 43%  more anxious

Long/long allele = 57%

Depression Connection

- The meta study, which was published in the January 2011 issue of the Archives of General Psychiatry, said that those with a short variation of the serotonin transporter gene, also known as 5-HTTLPR, are **more likely to become depressed when faced with stress**. These findings were the result of analyzing 54 depression studies published between 2000 and 2010 that involve more than 41,000 participants.

Note: This is not conclusive; not evidence-based yet.

Stress and the S Allele

Stress - The perception of a threat to one's physical or psychological well-being combined with the perception that one cannot cope with that threat

Benefits:

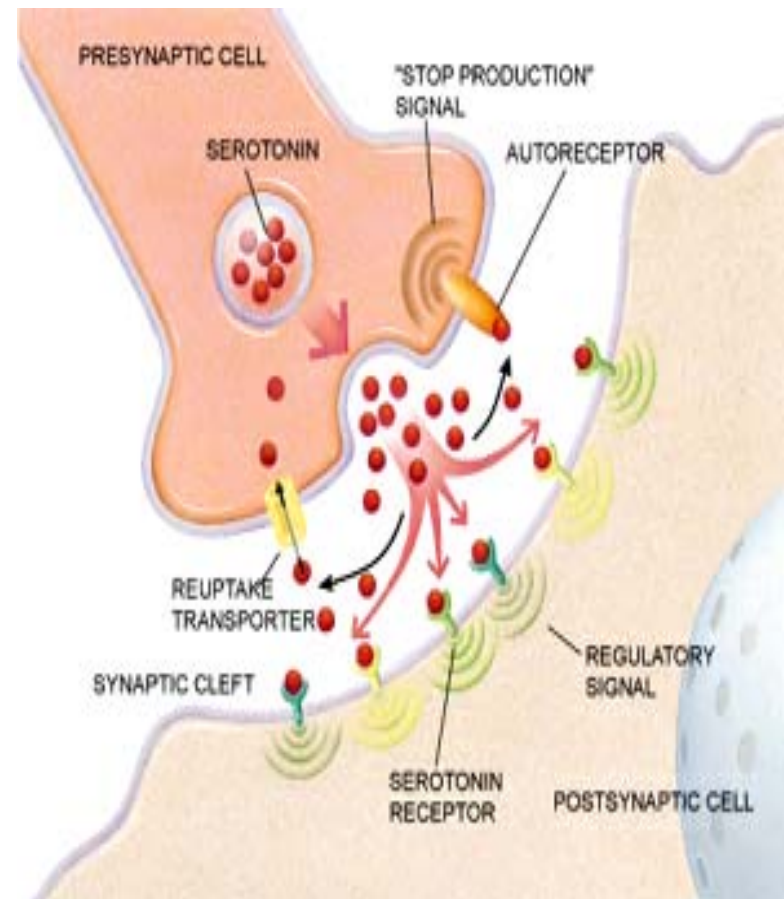
- Hyper vigilance
- Improved cognitive functions, decision making
- Conformity with social group
- Risk aversion
- Attention set shifting
- Creative dance
- ↑ responsiveness to social support

Increased risk for:

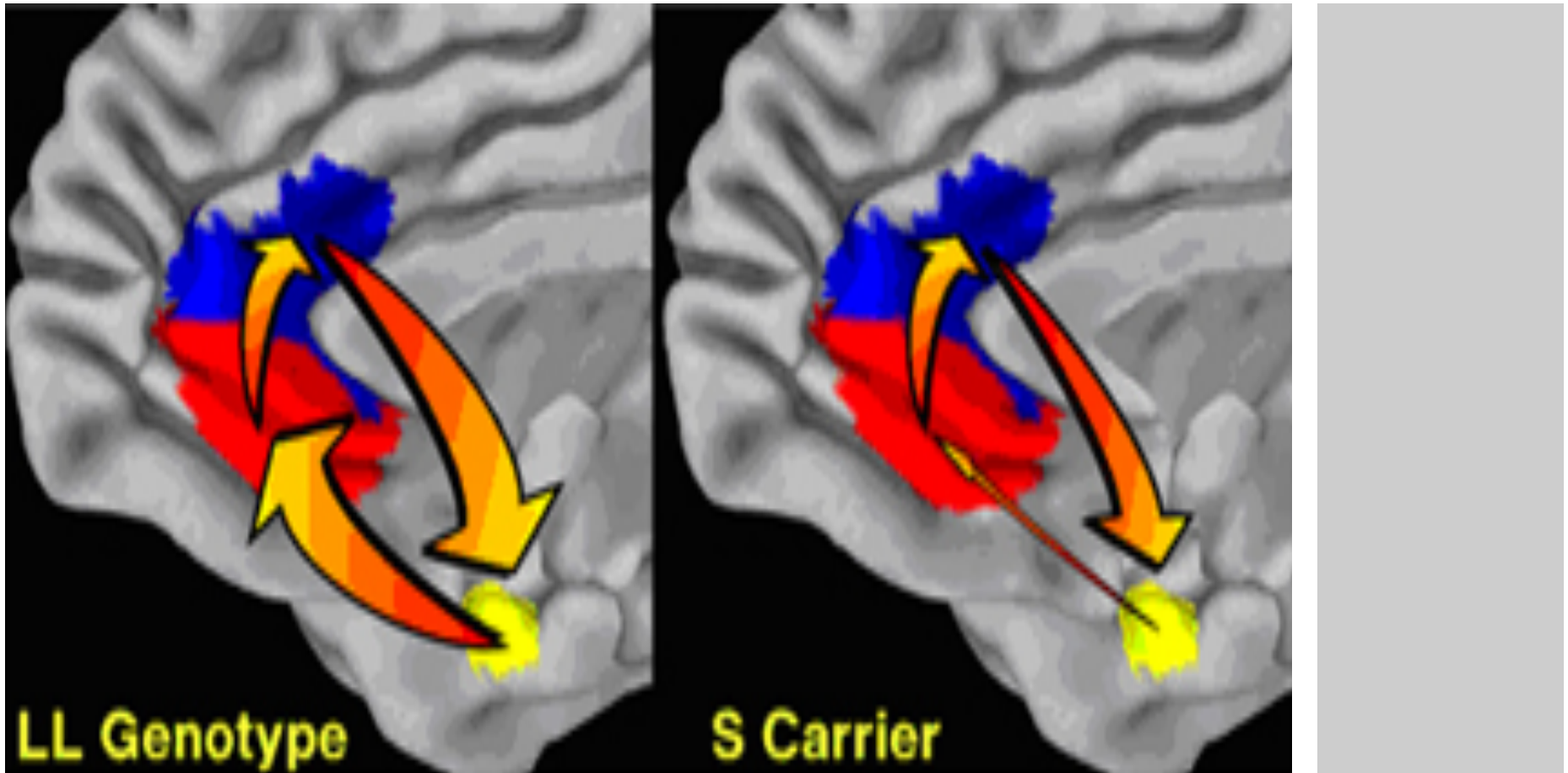
- Stress sensitivity
- Emotionality - ↑ startle, fear conditioning
- ↑ sensitive to -/+ stimuli – more sensitive to childhood trauma
- ↑ HPA reactivity
- **Anxiety related traits**
- **↑ Depression after stress**
- Disorders of emotional regulation
- Neuroticism
- ↑ Inflammatory cytokines
- Smoking, drinking, gambling, internet use, eating
- Social blushing
- ↑ aggressive behaviors

Reuptake Reduced – S-allele

- The # of serotonin transporter proteins determines length of time the chemical signal remains in the synapse.
- The polymorphism causes decreased gene expression and fewer serotonin transporters in the membrane of the cell. Thus, rate of reuptake of serotonin is reduced.



S Allele and the Fear/Anxiety Loop to Amygdala



Depression Gene May Weaken Mood-Regulating Circuit, May, 2005 <http://www.nimh.nih.gov/science-news/2005/depression-gene-may-weaken-mood-regulating-circuit.shtml>

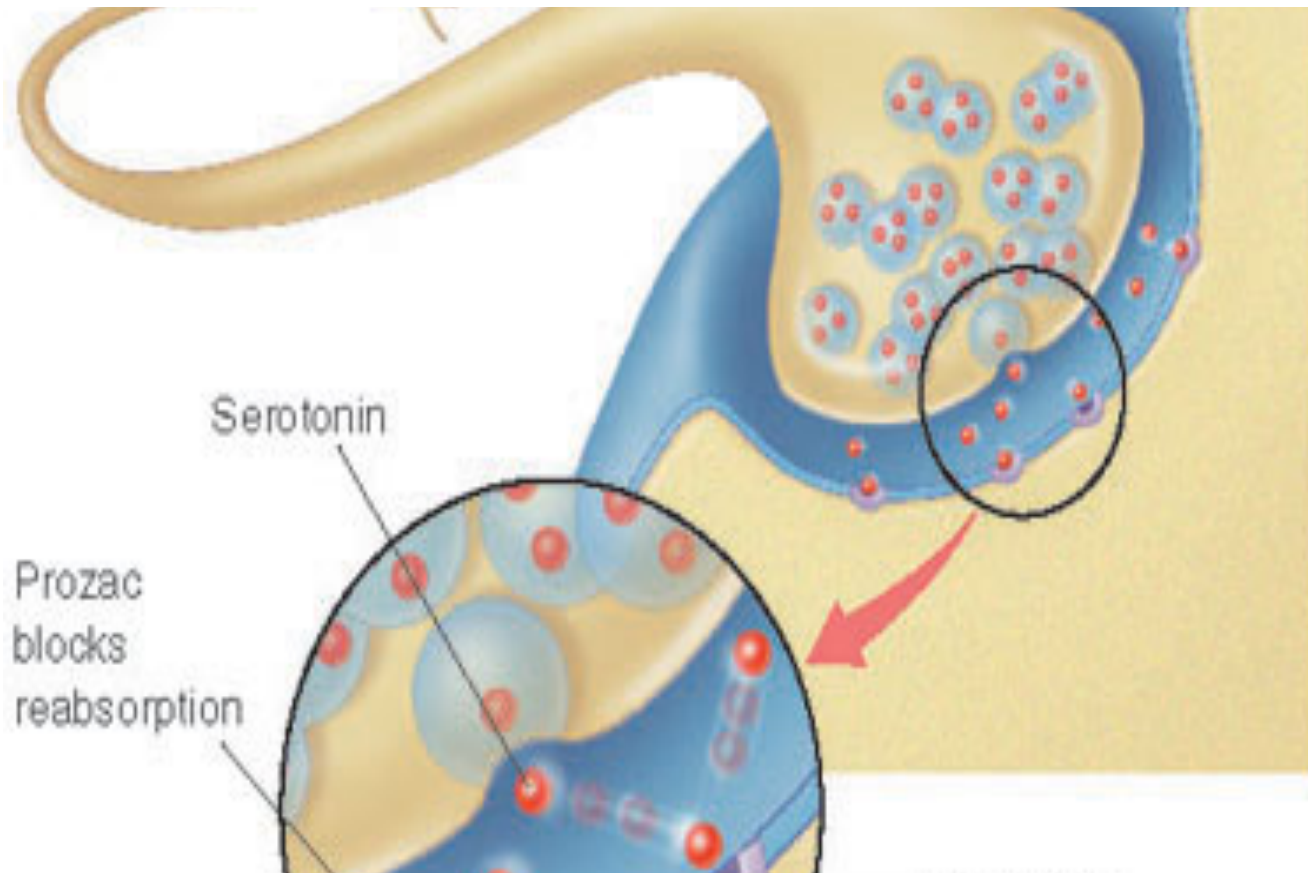
Nurture AND Nature

Question: Are anxiety and mood disorders the result of genetics or are they learned behaviors passed on from our parents?

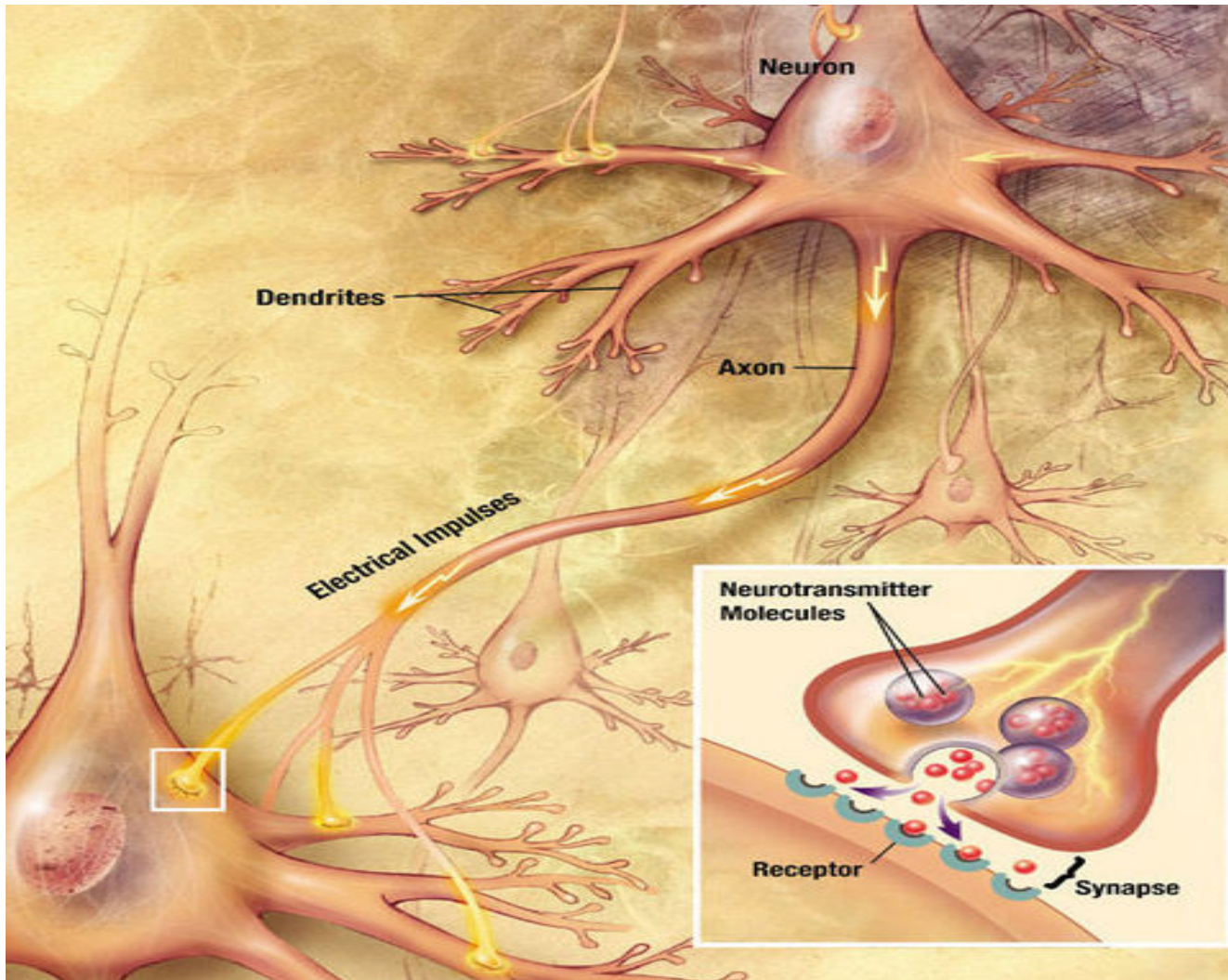
Answer: Yes.

- [This study published in Translational Psychiatry in 2011](#) suggests the short allele of the 5-HTTLPR serotonin gene, often linked to low serotonin, doesn't doom kids to mental illnesses. Instead, the study suggests **it makes those kids more susceptible to parenting—good parenting or bad parenting**. Kids with parents who have a healthy, positive parenting style, end up being happier and healthier than average. Conversely, kids with parents that don't have a healthy, positive parenting style, end up unhappier and unhealthier than average.

Experience Changes Cell and Circuit Chemistry



Experience Changes Cell and Circuit Chemistry



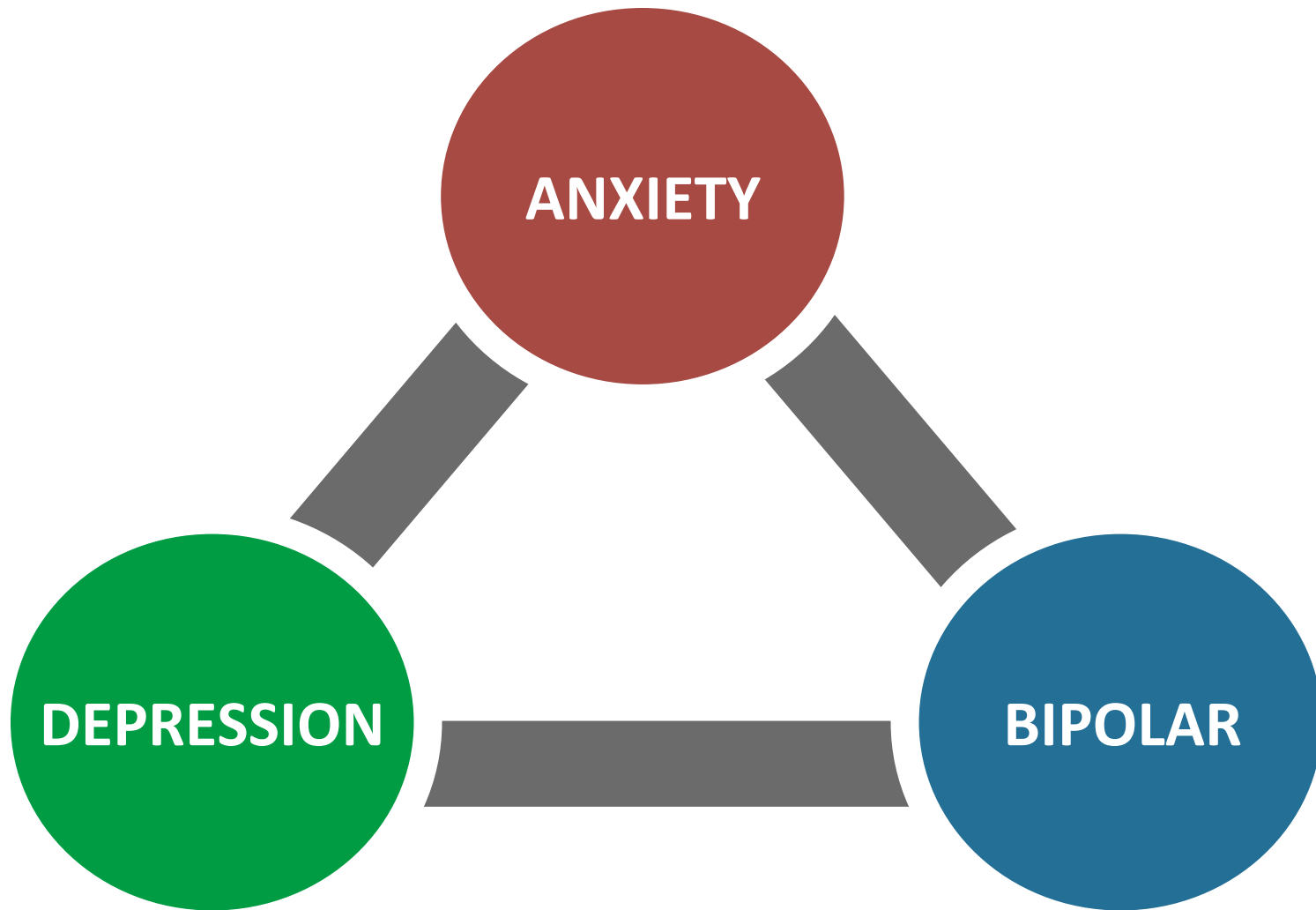
http://en.wikipedia.org/wiki/File:Chemical_synapse_schema_cropped.jpg

Therapy as a Drug

- Learning and environmental experiences, such as therapy, change brain circuits as do drugs by improving the efficiency of information processing in malfunctioning brain circuits
- Epigenetic drug – change gene expression/behavior, not DNA

**2. Recognize mood
disorder symptoms and
evidence-based treatments**

Mood Disorders



<http://www.nimh.nih.gov/health/publications/anxiety-disorders/nimhanxiety.pdf>



Depression Treatment for Primary Care

Carla Cobb, Pharm.D., BCPP

- 
- **Depression Treatment in Adults for Primary Care Providers**
 - **Bipolar Disorder Treatment in Adults for Primary Care Providers**
 - <mailto:info@meritmeds.com>

Symptoms in Children and Teens are Different

- **Irritability or anger**

- Feelings of worthlessness or guilt
- Incessant feelings of sadness, hopelessness
- Increased anxiety, tension or panic
- Pessimism
- **Vocal outbursts or crying**
- Social withdrawal
- Loss of interest in activities at home or with friends, in school, extracurricular activities and in other hobbies or interests

- Heightened sensitivity to rejection
- Significant increases or decreases in appetite
- Noticeable changes in sleep habits - **insomnia or excessive sleep**
- Fatigue and sluggishness
- Restlessness, agitation and increased fidgeting
- Difficulty concentrating
- **Self-harm** such as cutting or taking excessive physical risks
- **Suicidal thoughts**

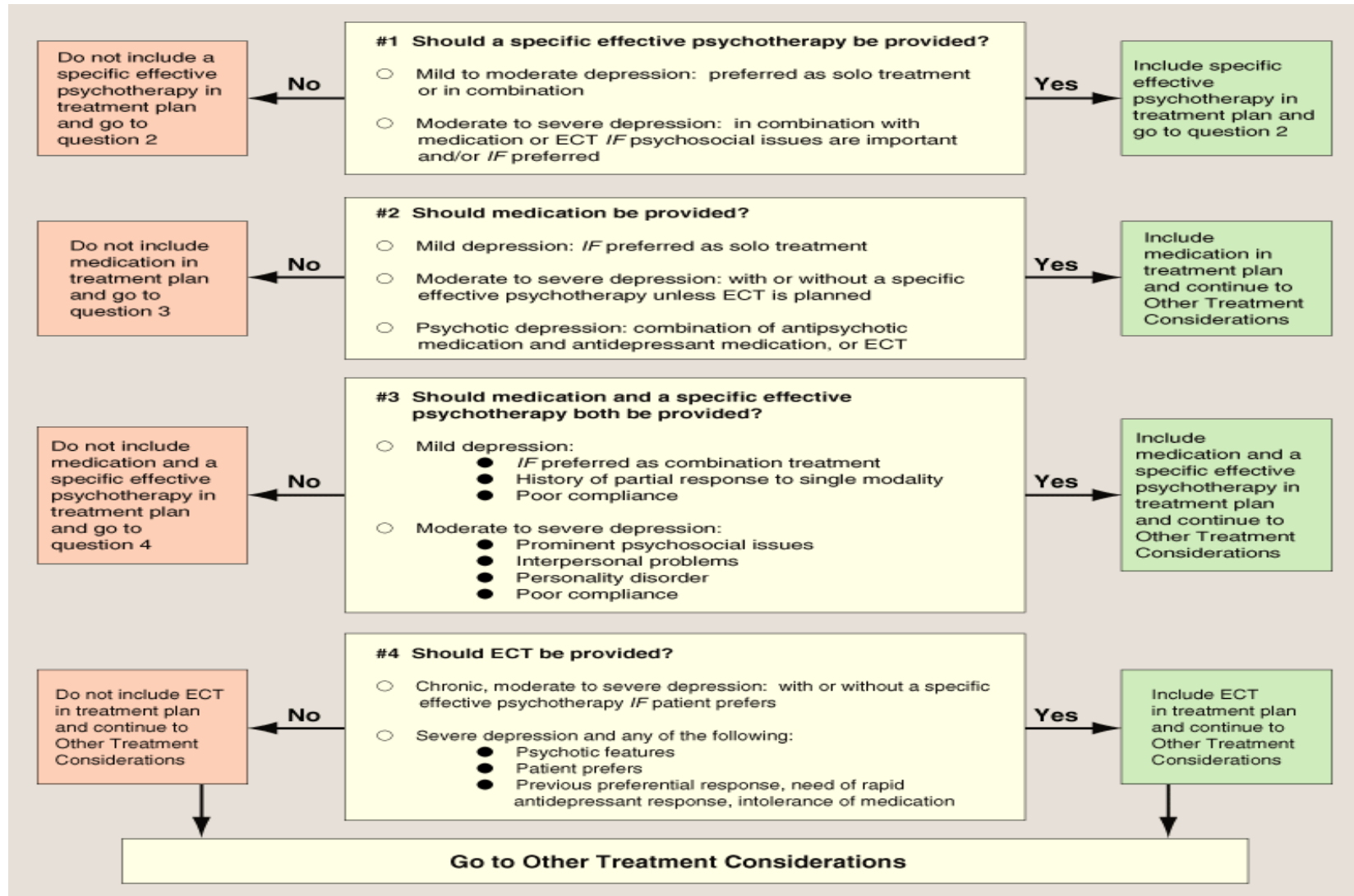
Depression

- Major depressive disorder – single/recurrent
- Dysthymic Disorder
- Depressive Disorder not otherwise specified

SYMPTOMS

- | | |
|-------------------------------------|--|
| • Sad most of day, every day | • Feelings of worthlessness/guilt |
| • Anhedonia | • ↓concentration or indecision |
| • Weight loss/gain | • Recurrent thoughts of death with ideation/plan/attempt |
| • Insomnia/hypersomnia | • Impaired functioning |
| • Psychomotor agitation/retardation | • Not a medical condition |
| • Loss of energy | • Not bereavement |

Treatment for Depression





Bipolar Disorders

- Bipolar I
- Bipolar II
- Cyclothymic Disorder – hypomanic/depressive sx's 2 yrs for children for 1 yr
- Bipolar Disorder not otherwise specified
- Mood disorder due to medical condition
- Substance-Induced Mood disorder (includes antidepressant)
- Mood disorder, not otherwise specified

What's Bipolar?

Manic – abnormally and persistently elevated, expansive, or irritable mood lasting at least a week

Symptoms:

- Inflated self-esteem grandiosity
- Decreased need for sleep
- More talkative than usual or pressured to keep talking,
- Flight of ideas or racing thoughts
- Distractibility
- Increase in goal directed activity or psychomotor agitation
- Excessive involvement in pleasurable activities that have A high potential for painful consequences
- Severe impairment – psychotic features
- May need hospitalization because unable to care for self

Hypomanic - abnormally and persistently elevated, expansive, or irritable mood lasting at least 4 days that is clearly different from usual mood

Symptoms:

- Inflated self-esteem grandiosity
- Decreased need for sleep
- More talkative than usual or pressured to keep talking,
- Flight of ideas or racing thoughts
- Distractibility
- Increase in goal directed activity or psychomotor agitation
- Excessive involvement in pleasurable activities that have a high potential for painful consequences
- No impairment in functioning
- No psychotic features
- No hospitalization
- Treat as outpatient

Anxiety

40 million adults in the U.S. (~18% of population) annually

- Feeling of fearfulness and uncertainty
- Lasts at least 6 months; can get worse without treatment.
- Anxiety disorders commonly occur along with other mental or physical illnesses, including alcohol or substance abuse, which may mask anxiety symptoms or make them worse.
- In some cases, these other illnesses need to be treated before a person will respond to treatment for the anxiety disorder.

Anxiety Disorders

- Panic disorder with and without agoraphobia
- Agoraphobia without panic disorder phobia
- Specific phobia
- Social phobia
- Obsessive compulsive disorder
- Posttraumatic stress disorder
- Acute stress disorder
- Generalized anxiety disorder
- Anxiety disorder due to medical condition
- Anxiety disorder, not otherwise specified

DSM-IV-TR

Panic Disorder

A real illness – 6 million adults in the U.S.

- Sudden attacks of terror; feeling of impending doom, feeling of unreality, fear of losing control, losing their mind – more common in women, might be inherited
- Pounding heart, sweating, fainting, dizzy, feel like they are having a heart attack & can last 10 minutes
- Worry about when the next attack will occur
- Condition can progress to agoraphobia
- Can be accompanied by depression, drug abuse, alcoholism
- Treatment: Ativan, Xanax

<http://www.nimh.nih.gov/health/publications/anxiety-disorders/nimhanxiety.pdf>

Obsessive-Compulsive Disorder

2.2 million adults in U.S.

- Men = women, might be inherited
- Appears in childhood (1/3) & adolescence
- Upsetting thoughts + Rituals to control anxiety
- Rituals interfere with daily life; are distressed
- Can be accompanied by eating disorders, other anxiety disorders, or depression

Post-Traumatic Stress Disorder

7.7 million adults in U.S.

- After terrifying ordeal of physical harm or threatened harm - includes person harmed, loved one of person harmed, witness to harm even a stranger; may run in families
- War veterans...any trauma - acute/chronic
- Feel numb, lose interest, not affectionate, irritable, aggressive, violent, avoidance, flashbacks
- Accompanied by depression, substance abuse, other anxiety disorders

Vicarious Trauma (VT)

- If one cares for traumatized persons/populations, then one has risk for secondary trauma-occupational hazard
- Has immediate and long term effects
- Effects are “essentially similar to those experienced by the primary victim”
- Affects nurse’s feelings, beliefs, values, judgments, sense of survival, safety, security, self esteem and self actualization, cognitive functioning, levels of stress

Vicarious Trauma

- Burnout - look for signs/symptoms like emotional numbing and avoidance
- +peer support, older age, increased education
- Young nurses are particularly vulnerable
- Example: compassion fatigue group for oncology
- Need to handle on personal, professional, and organizational levels
- Self care: sleeping, eating, exercise, relaxation

Stop the silence

Social Phobia

15 million American adults; begins in childhood or adolescence; genetic factors

- Men = Women Social anxiety disorder - overwhelmingly anxious and self conscious in everyday social situations
- Fear of being watched (all eyes on them), judged by others, being embarrassed, worry before social event, hard to make friends
- Blushing, sweating, trembling, nausea, difficulty talking
- Accompanied by depression, other anxiety disorders, and substance abuse
- Treatment: Inderal/beta blocker

<http://www.nimh.nih.gov/health/publications/anxiety.disorders/nimhanxiety.pdf>

Phobia

Affects 19.2 million American adults

- Women x2; appear in childhood and adolescence; may run in families
- Intense, irrational fear of something that poses little or no threat
- If can't avoid, life is disabling
- Treatment: Exposure-based therapy

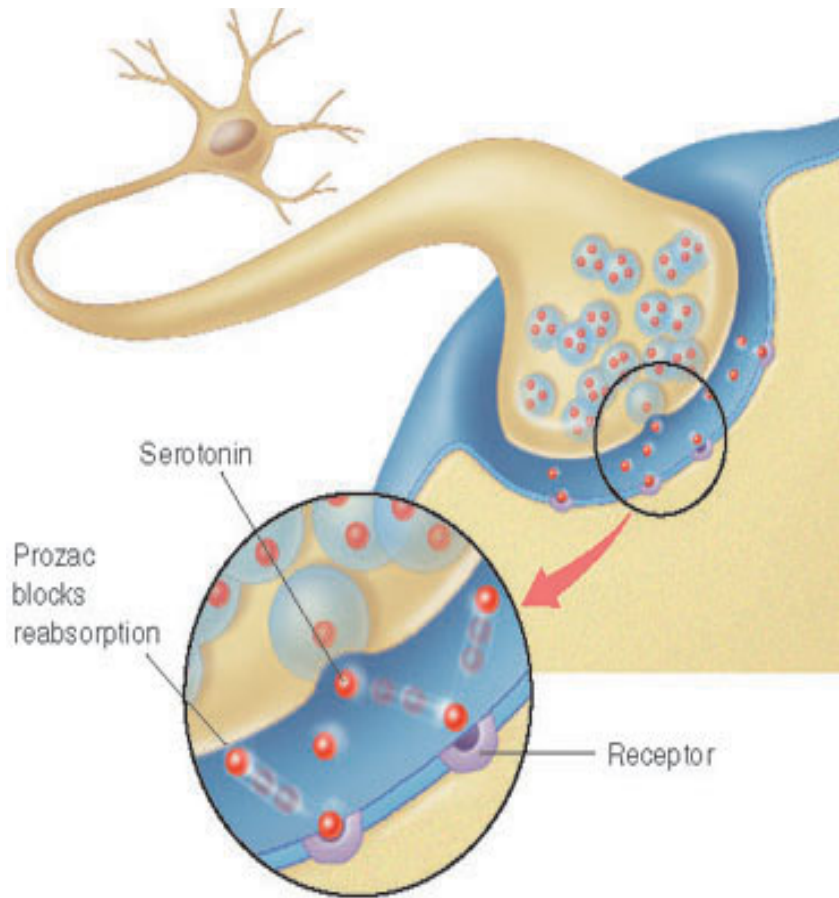
Generalized Anxiety Disorder

Affects 6.8 million American adults

- Women x2 – develops gradually at any point in time; genes are somewhat involved
- Go thru life with worry and tension anticipating disaster for at least 6 months
- Can't relax, startle easily, can't concentrate, trouble falling asleep/staying asleep
- Fatigue, headaches, muscle tension/aches, difficulty swallowing, trembling, irritability, sweating, nausea, lightheadedness, go to bathroom frequently, out of breath, hot flashes
- Can be accompanied by depression, other anxiety disorders or substance abuse.
- Treatment: Buspar, Klonopin, Ativan, Xanax

Treatment: CELLS CAN CHANGE

Medications



Experience - Talk Therapy



Treatment Guidelines - Anxiety

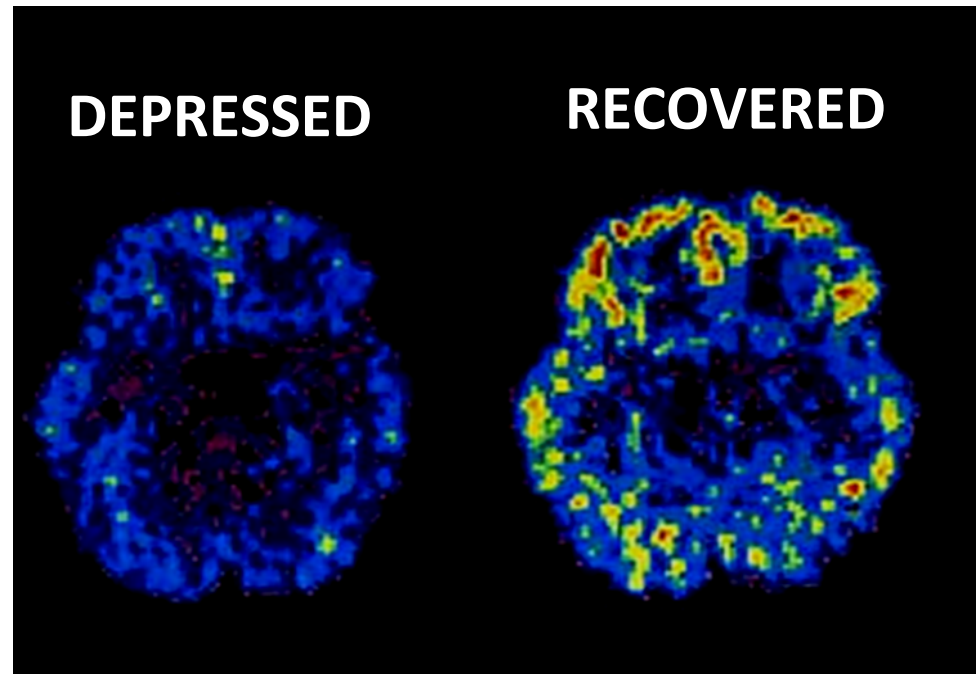
- Rule out physical conditions – thyroid disorder
- Treat coexisting condition- depression or substance abuse
- Psychotherapy – cognitive behavioral therapy (12 weeks) or desensitization
- Medication: antidepressants, anti-anxiety meds, beta-blockers with careful use of benzodiazepines
- Self care: Stress management, meditation, aerobic exercise, avoid caffeine, certain drugs, OTC meds

BEST CARE: medications + therapy

3. The Costs of Mood Disorders

Impact of Brain Disorders

- The most common mental illnesses in adults are anxiety and depression.
- The impact ranges from minor disruptions in life to incapacitating critical life functions and causing premature death.





Death

- Patients with brain disorders die 25 to 50 years sooner.
- Moreover, mental illness exacerbates morbidity in serious (and associated) conditions like diabetes, obesity, heart disease, and epilepsy.

Depression COST

- Mental health costs are the **largest single source**; larger than cardiovascular disease, chronic respiratory disease, cancer, or diabetes.
- Depression **increases risk of other chronic disease** so even more cost.

Much of the economic burden of mental illness is not the cost of care, but **the loss of income due to unemployment, expenses for social supports**, and a range of indirect costs due to a **chronic disability that begins very early in life**

Depression and Disability



The World Health Organization (WHO) estimates that mental illnesses account for more *disability* in developed countries than any other types of illnesses, including cancer and heart diseases.

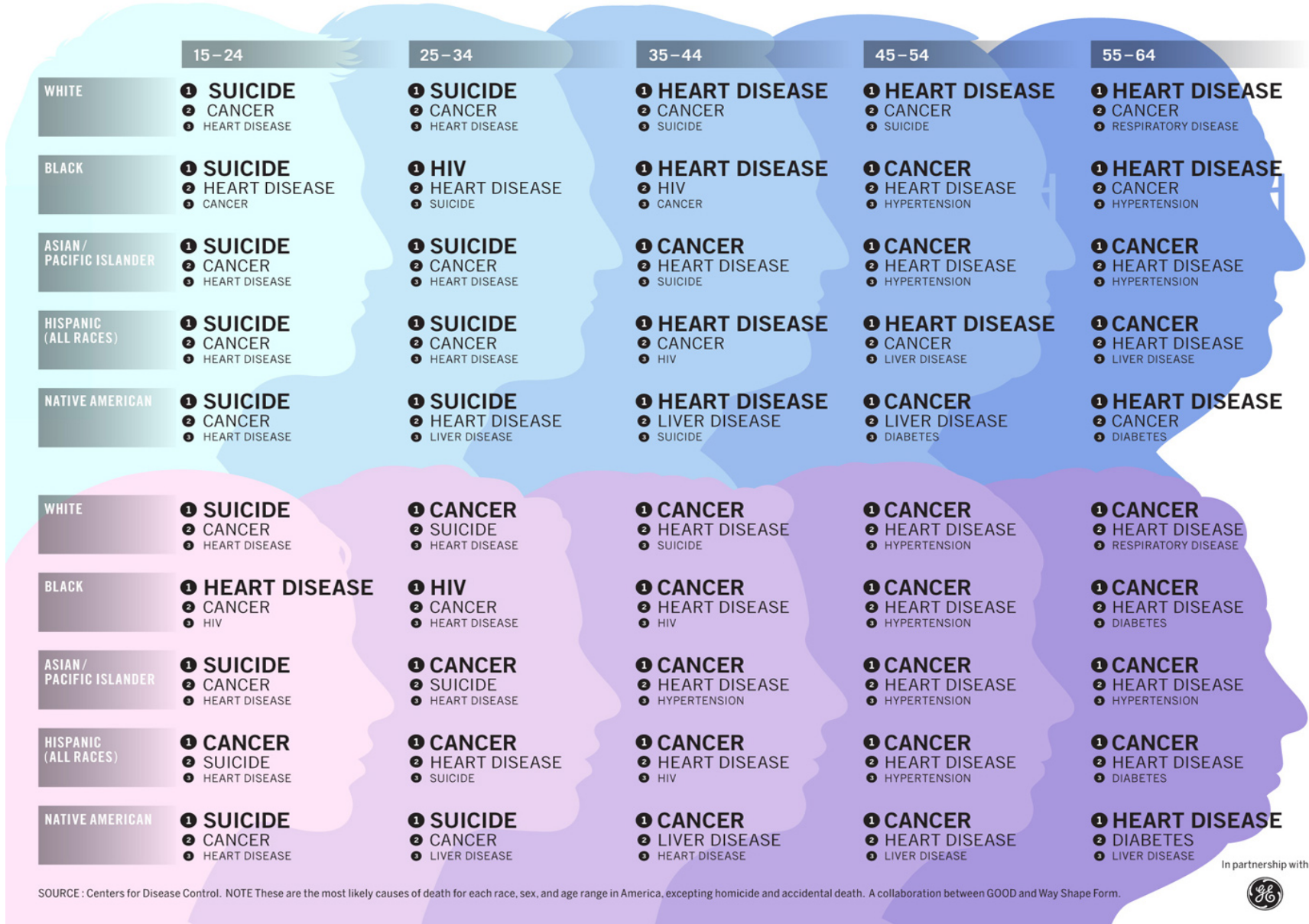
In 2015, depression will be #1 illness in the world

Impact of Anxiety and Depression

CAUSES OF DEATH

While you may be worried of catching of an obscure disease you heard about on the news, the truth is that we are far more likely to die of a small range of illnesses, nearly all of which are tied in some way to your lifestyle choices, like the food you eat or how much exercise you get. But you can lessen—sometimes dramatically—

the likelihood of succumbing to the most common causes of death by knowing your risk factors and making informed choices. This is a look at your most likely cause of death (excluding uncontrollable events like accidents and homicide), given your race, sex, and age. Use this information to make choices that will keep you healthy.



SOURCE : Centers for Disease Control. NOTE These are the most likely causes of death for each race, sex, and age range in America, excepting homicide and accidental death. A collaboration between GOOD and Way Shape Form.



**4. Transform your practice
to influence care and
client self-care**

Look and Take Action

Brain disorders begin early, so always look

Look for early symptoms and “look further upstream” in your health care system

Screen if mental health care can be made available – can refer to primary care practitioner, mental health centers, services for the homeless and emergency departments

Recognize symptoms of mood disorders especially anxiety & depression

Motivational Interviewing (MI) is a hopeful practice. Change can and does happen. Add Cognitive Behavioral Therapy and MI to your tool kit and practice.

Call 911 if client is of harm to self, to others, or cannot care for self.

Share Information on Brain Disorders

Using Motivational Interviewing, ask client if you can share information about:

- **Brain Disorders**

Use that term – brains get disordered and can get ordered – clients often say, “my brain’s out of whack” – they are right

- **Stress**

Impacts how and what we do, feel, and think – I can see you’re having a difficult time. What do you worry about? You’re sad.

Hope and Change

Can share information on what best care for brain disorder = EVIDENCE BASED MEDICATION AND TALK THERAPY

- Examine your own behaviors with brain disorder clients. Can these clients change their genetic eye color or gene for s allele? Can they change the impact of their childhood? What traumas or abuses might they have experienced? What did that do to their cells and circuits? Is a brain disorder a chronic condition? Is having a disordered brain the same as having a disordered heart or lungs or pancreas?
- You, as care provider, can't change genetics, but you are the patient's environment and experience while they are with you so being calm, empathetic about their stresses, respectful of their right to exist, and civil in your communication can change the client's cell and circuit behaviors.



Partner with Colleagues

- Talk about vicarious trauma and burn out
- Talk about how colleagues can partner to reduce vicarious trauma
- Literature suggests forming a **COMPASSION FATIGUE GROUP**
- Take time for care of self, especially stress management and pleasure activities with positive consequences

Partner with Clients to Help Them with Self Care

A Recovery-Oriented Mental Health System by William A. Anthony - 1993

- A mental health services system that is guided by the recovery
- vision incorporates the critical services of a community
- support system organized around the rehabilitation model's
- description of the impact of severe mental illness—all under
- the umbrella of the recovery vision. In a recovery-oriented
- mental health system, each essential service is analyzed with
- respect to its capacity to ameliorate people's impairment, dysfunction, disability, and disadvantage.



Rubric of Integrated Care

- **DEFINITION:**
Bringing together or merging of elements or components that were formerly separate
- Based on systems theory. Best known is Chronic Care Model (CCM), now expanded model
- SAMHSA-HRSA Center for Integrated Health Solutions
- CIHS promotes the development of integrated primary and behavioral health services to better address the needs of individuals with mental health and substance use conditions, whether seen in specialty behavioral health or primary care provider settings.

Population Health Improvement Learning Collaborative



Please Submit Questions for Discussion

- Use the GoToWebinar control panel to submit your questions now
- We will respond to as many questions as possible

Population Health Improvement Learning Collaborative

Keep in Touch & Share Between Meetings

Join your colleagues online. Visit HealthSciences Institute at www.HealthSciences.org for links to:



LinkedIn. Share what's top of mind, get answers to questions, respond to discussion items, post or view jobs.



Twitter. Follow HealthSciences Institute on Twitter for health care news and community updates.

Population Health Improvement Learning Collaborative

Obtain Your Certificate of Completion

- This event is preapproved for 1.0 contact hour for CCP recertification and may meet other certification or licensure CE requirements. Please check with your licensing board.
- All registered attendees may obtain a CE certificate now by completing an evaluation form at: http://healthsciences.org/ce_program_evaluation.php
- In the next two hours, registered attendees will receive a follow-up email with a link to the evaluation form that **must** be completed **prior** to next event.
- **To ensure receipt of your certificate please** add HealthSciences.org as a “safe sender.”
- **Please check your spam/junk mail folder** before contacting us about your certificate.

*Please note that ALL past LC replays and PDFs are provided at no cost **only** through the online CCP program and by request for all CCP professionals in good standing.*



Upcoming Learning Collaborative Events

Date	Title	Presenter
2/1/13	Psychological Assessment & Treatment of Obese Patients Seeking Bariatric Surgery	Gretchen E. Ames, PhD, Mayo Clinic
3/1/13	TBA	
4/5/13	TBA	

Learn more or register now at: www.HealthSciences.org

**Population Health Improvement
Learning Collaborative**

**Learning Collaborative
Community Call**

Population Health Improvement Learning Collaborative

Learning Collaborative Community Call

- Health Engagement Center (HEC)
 - Industry assessment of engagement best practices
 - White paper with HealthSciences Institute faculty case studies
 - Resources for improving engagement
 - Direct patient outreach by HealthSciences Institute staff
 - Engagement/Enrollment Specialist training, assessment, improvement
- Chronic Care Professional (CCP) Program Update
 - Transition plan
 - New CCP 5.0 manual (CCP enrolled/certified; non-CCPs)
 - Access to CCP online program (CCP enrolled/certified; non-CCPs)
- 2013 MI Health Coaching Workshop options

