

CHRONIC ILLNESS, DEPRESSION & DEMORALIZATION

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Case 1

- 67 year old DWM
- Came to Acadia by referral of PCP but did not want treatment
- Said he was planning to stop his cardiac meds-wants to die
- Denied depressive symptoms
- Described a life he did not want to live due to very restrictive health conditions

Case 1 Continued

- Could not identify cognitive distortions although did see extreme nihilism
- Could not justify involuntary admission for safety
- Nurse and student felt very uncomfortable letting him go
- Spoke with his PCP to let her know that he refused treatment and follow-up

Case 2

- 74 year old WWF
- Resident of SNF who constantly expressed wish to die
- Referred to clinic to treat depression
- Widowed six months ago
- Progressive dementia
- Immobile, chronic pain
- Renal failure

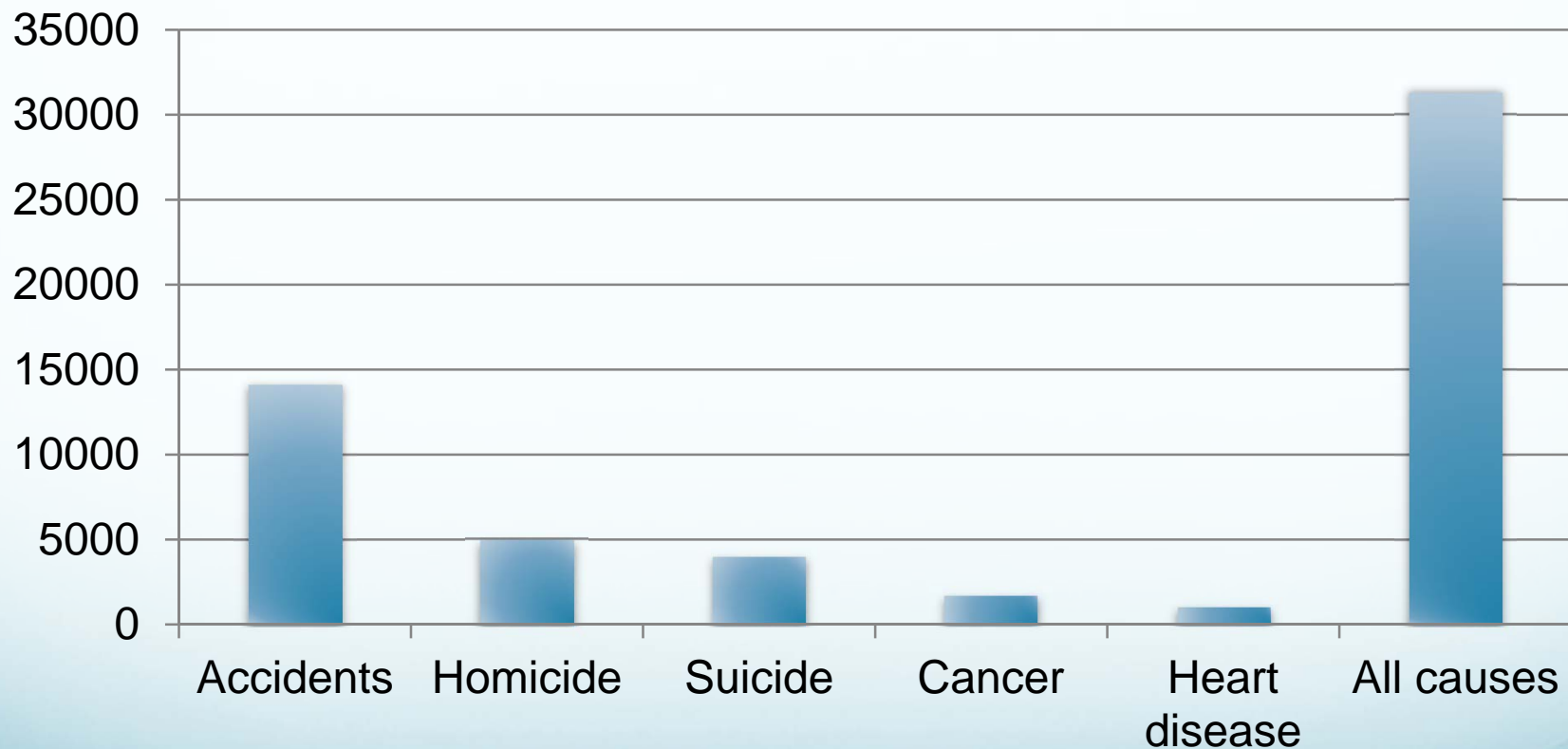
Case 2 Continued

- Delirious and physically uncomfortable on exam
- Could not sit up-was on gurney
- Repetitive statements that she wants to die
- Assessed to be in terminal delirium with no rehab potential

Suicide Risk in Adolescents w CI

Greydanus D et al. Dev Med & Child Neurol 2010; 52:1083-87

Causes of Death 15-24 year olds in 2000



CI and Suicide in Adolescents

- Primary mental disorders far more likely to result in SI and SA in young than chronic somatic illness, but.....
 - Chronic somatic illness (CI) has a strong relationship to mood and anxiety disorders and at least doubles risk of SA
- Diabetes mellitus
 - Recurrent hypoglycemic coma and self-neglect are common
 - Depression and or drug abuse found to be likely in 40 of 58 young adults who had died within 10 years of DM diagnosis
- Epilepsy
 - Greatly increased risk of SI/SA with childhood onset (9x in one study)
- Asthma
- Cancer

Psoriasis

Reider E and F Tausk. Int J Dermatolog 2012; 51:12-26

- A model for a mildly to moderately disfiguring disease with psychological implications
- Most studies report 30-50% patients screen positive for depression and high levels of anxiety
- 10% report SI
- Many perceived themselves as sexually undesirable and reported “difficulties in close relationships”
- Some studies confirm association between stress and flares of disease---stress-reduction CBT shown to reduce psoriatic lesions in placebo-controlled trial

Depression in Rheumatologic Disorders

Bradley LA . www.uptodate.com 2013 Wolters Kluwer Health

- History of depression
- History of trauma or abuse
 - Found in 53-67% of FM patients
- Ongoing psychosocial stress
 - Stress increases inflammation and pain
 - External LOC and “learned helplessness” common
 - Supportive marriages modulates stress effect on disease
- Sleep disturbance
- Higher pain ratings (cause vs. effect)
- FM patients show higher brain activation in anticipation and experience of pain

Chronic Illness in Old Age

Van Orden K and Conwell Y. Curr Psychiatry Rep. 2011; June, 13:3:234-41

- Risk of suicide (and SA) increases with:
 - Number of chronic diseases
 - Functional impairment associated with the disease
- Respiratory and vascular diseases commonly found in those admitted for SA
- Pain is greater risk factor for men than women
- Impairment in IADLS from disease may be greater risk factor than depression
- Sense of burden to others and lack of autonomy are key factors, whereas internalized LOC has a protective effect

Risk Factors for Late Life Depression

Psychosocial

- Previous episodes
- Social isolation
- Family discord
- Low adaptability
- Resistance to change
- Lack of spiritual practice
- Perceived lack of purpose

Biomedical

- Pain
- Immobility
- Chronic illness
- Sensory impairment
- Functional impairment
- Neurobiological dysregulation
- Cerebrovascular disease

Illness and Suicide in Elderly

Warren M et al. BMJ.com 2002: 324:1355

Table 3 Multivariate logistic regression analyses (unconditional) between physical disorder variables, sociodemographic variables, history of depression, and suicide in 130 men and 108 women aged ≥ 65 years

	Odds ratio* (95% CI)
Interpersonal conflicts	19.4 (5.7 to 66.3)
History of major depression	15.9 (5.6 to 44.9)
Visual impairment	11.4 (2.4 to 54.5)
Malignancy	4.7 (1.2 to 18.2)
Neurological disorder	9.0 (2.0 to 40.1)

*Adjusted for age, sex, and overall burden of physical illness.

Screening for Depression

- Screening instruments double detection rates:
 - Geriatric Depression Scale
 - CES-D
 - PHQ-9
 - Beck Depression Inventory
 - Cornell Scale for Depression in Dementia
- But some instruments have questions on somatic symptoms of fatigue, loss of libido, “getting out”, appetite, etc.

Failing to Recognize Depression

- Recognized in 4.1% of chronically ill older adults > 85
- Recognized in 16.7% of acutely ill in hospital
 - Pouget et al. *Aging-Clin Exp Res* 2000; 12:4:301-7
- In nursing homes, only 14% of patients with dementia diagnosed with depression (estimates > 40%)
- CNA's have highest rates of recognition (37-45%)
 - Teresi et al. *Soc Psych & Psych Epid* 2001; 36:613-620

Sense of Burden and Meaning

Van Orden KA et al. Aging and Mental Health 2012; 1-6

- Measured sense of burden and meaning of life longitudinally in older adults
- Sense of burden known to be a risk factor for suicidal ideation (“interpersonal theory of suicidal ideation”)
- Found of depression associated with burden and higher rates loss of meaning in life
- Lower sense of burden associated with better social connectedness (“belongingness”)

Chronic Illness and Demoralization

- Persistent suffering can lead to spiritual and emotional fatigue and sense of helplessness
- Various levels of dysphoria, dysthymia, demoralization and apathy
- Can be normal part of initial adjustment to illness.....grieving
- Stress contributes to this depletion

From: Psychobiological Mechanisms of Resilience and Vulnerability: Implications for Successful Adaptation to Extreme Stress

Am J Psychiatry. 2004;161(2):195-216. doi:10.1176/appi.ajp.161.2.195

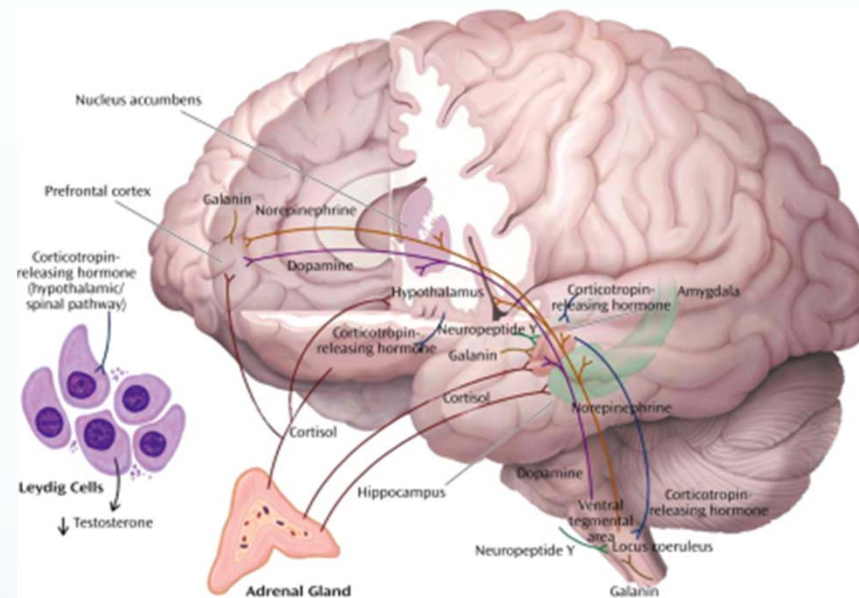


Figure Legend:

Neurochemical Response Patterns to Acute Stress^a

^aThis figure illustrates some of the key brain structures involved in the neurochemical response patterns following acute psychological stress. The functional interactions among the different neurotransmitters, neuropeptides, and hormones are emphasized. It is apparent the functional status of brain regions such as the amygdala (neuropeptide Y, galanin, corticotropin-releasing hormone [CRH], cortisol, and norepinephrine), hippocampus (cortisol and norepinephrine), locus coeruleus (neuropeptide Y, galanin, and CRH), and prefrontal cortex (dopamine, norepinephrine, galanin, and cortisol) will depend upon the balance among multiple inhibitory and excitatory neurochemical inputs. It is also noteworthy that functional effects may vary depending on the brain region. Cortisol increases CRH concentrations in the amygdala and decreases concentrations in the paraventricular nucleus

Apathy

Ishzaki J and Mimura M. Dep Res and Treat 2011

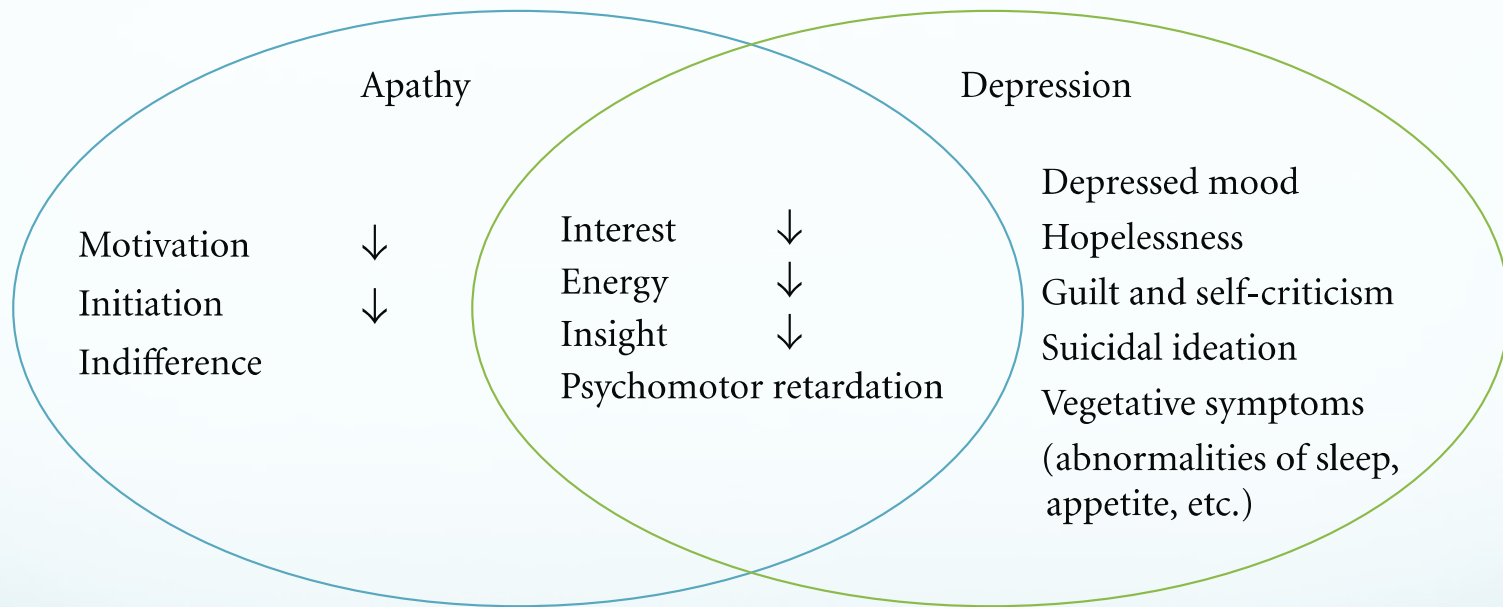


FIGURE 1: Apathy versus depression.

Suicide in Late Life

Van Orden K and Conwell Y. Curr Psychiatry Rep. 2011; June, 13:3:234-41

- Suicide rates peak in midlife for women, then decline.
- In black men, there are two peaks: early and late adulthood.
- In white men, rates are always higher than other groups and don't peak until after 85 years of age.
- Boomers appear to have higher rates overall than previous generations.

Illness and Suicide in Elderly

Warren M et al. BMJ.com 2002: 324:1355

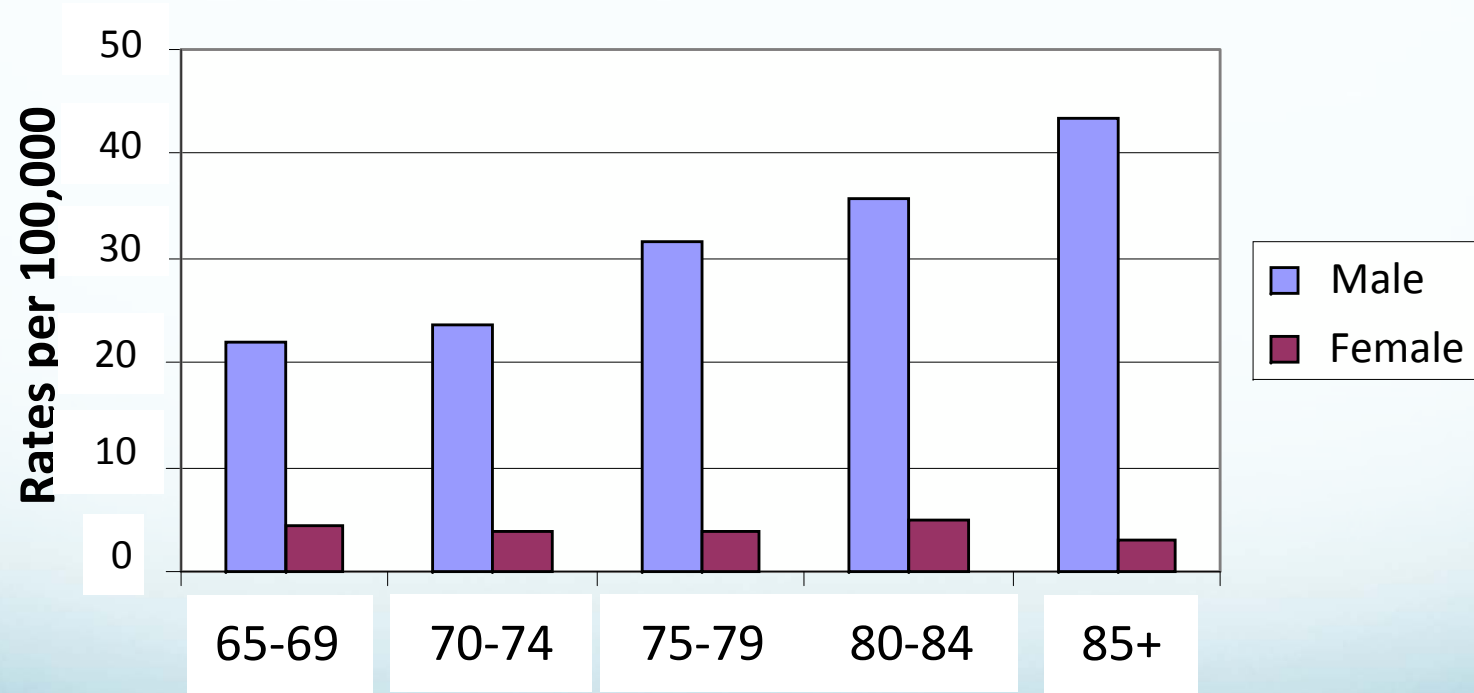
- Examined cumulative illness burden and specific types of illness for suicide risk.
- Visual impairment highest risk (OR = 7)
- Neurological disorders (OR = 3.8)
- Malignancy (OR = 3.4)
- Both risk of suicide and sense of burden from illness had stronger correlations in older men than older women.

SI and Old Age Depression

- Depression diagnosed in 54% to 87% of suicides in old age
 - > 65% are seen by PCP within 1 month of suicide
 - 50% within 1 week
- Geriatric Depression Scale-15 increases detection of depression and suicidal ideation
 - Can be improved by specifically asking about SI

Data from NCIPC (CRC)

Suicide Rates for Ages 65 to 85+



Mental Health in Old Age

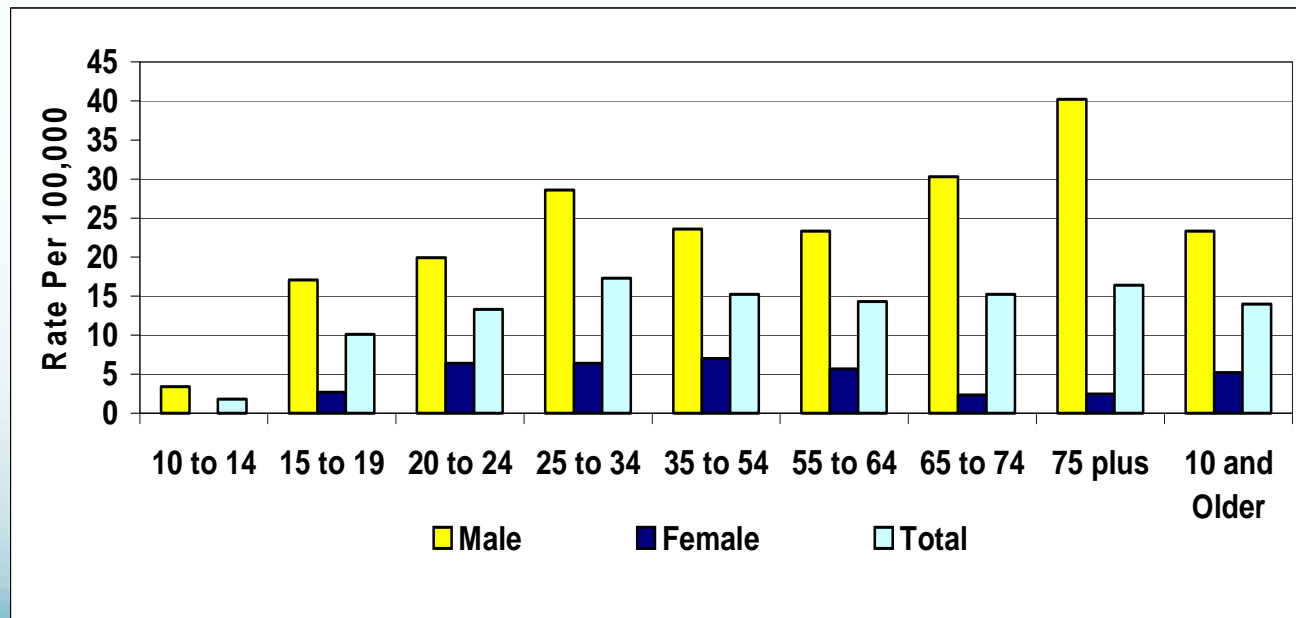
CDC Data 2006

Age	50-64 Maine	50-64 US	65+ Maine	65+ US
Perceived inadequate social support (% \pm CI)	7.1 (5.7- 8.9)	8.1 (7.7-8.5)	10.9 (8.8- 13.4)	12.2 (11.8- 12.7)
Poor life satisfaction	4.6 (3.5- 5.9)	5.8 (5.5-6.1)	4.2 (2.8- 6.2)	3.5 (3.3-3.8)
Frequent mental distress	9.1 (7.5- 10.9)	11.1 (11.1- 11.6)	4.5 (3.2- 6.3)	6.5 (6.5-6.9)
Currently depressed	5.4 (4.3- 6.9)	9.4 (8.9-9.9)	3.7 (2.4-5.6)	5.0 (4.6-5.4)

Maine Suicide Rates 1999-2003

Figure 2.c. illustrates suicide rates by age and gender in Maine between 1999 and 2003. In all age groups, males have higher suicide rates than females. Those 75 years and older has the highest suicide rate for males, at 40.2 per 100,000 population. Among females, the age group with the highest suicide rate is women aged 35 to 54, with a rate of 7.0 per 100,000 population.

Figure 2.c. Age and Gender-specific Suicide Rates (per 100,000), Maine, 1999-2003.



*Data Source: NCHS Database

Risk Factors

Conwell et al. Bio Psychiatr 2002, 1:52:3:193-204

- Age > 85
- Male
- White race
- Independent personality traits
- Mental illness
 - Depression (74%)
 - Alcohol
 - Psychotic disorder
- Social Factors
 - Recent stress
 - Recent bereavement
 - Widowed or divorced
 - Social isolation
 - Access to means
 - Family history
- Neurobiological
 - 5HT dysfunction
 - Executive dysfunction

Cognitive Mediators of Suicide Risk in CI

- Increases with:
 - Impulsive decision-making
 - Negativity affecting problem solving judgment
 - Loss of longitudinal perspective (things may get better)
- Decreases with:
 - Effective problem solving
 - Successful emotional processing
 - Positive tally of reasons for living

Collaborative Care for Depression

Gilbody S et al. Arch Intern Med 2006; 166:2314-21

- Collaborative care models range from case managers calling patients to remind them to take medication as prescribed to multidisciplinary treatment teams providing intensive psychosocial interventions.
- Meta-analysis of 37 studies that met quality criteria.
 - Case managers who were mental health professionals or supervision of case manager by a mental health professional yielded better results.
 - Medication compliance positively associated w improvement.
 - Number of sessions or addition of psychotherapy to case management did not improve outcomes. (“ceiling effect”)

Collaborative Care and Suicide in Older Adults

Alexopoulos GS et al. Am J Psychiatry 2009; 166:8:845-8

- Collaborative care model resulted in much higher rates of treatment for major depression (85-89% vs. 49-59%) over 24 months.
 - No significant difference for minor depression (ceiling effect?)
- Depression outcomes, including remission were much better in the intervention group.
- Suicidal ideation declined significantly more in the intervention group.
- NNT = 4 for response and 7 for remission relative to usual care for major depression.

Helpful Techniques

- Acknowledge difficult situation
- Listen without interrupting
 - Resist urge to reassure too quickly
- Gently challenge negativity
- Remember that depression passes
 - Hopelessness is a symptom of depression
 - Depression affects reasoning
- Avoid being “infected” by pessimism

Rational and Passive Suicide

- Data from Oregon indicate that those choosing physician-assisted suicide are not depressed but do have a strong “internalized locus of control”
- Desire to die does not always indicate depression....but statements about wanting to die should lead to conversations about quality of life, prognosis and rational treatment refusal

Oregon's Death with Dignity Act

- 2011: 26 males, 45 females
- 1998-2010: 282 males, 243 females
- Must have terminal illness
- Depression must be ruled out
- Autonomy is major factor motivating people who chose to get prescription
- Since law was passed in 1997, 935 people have obtained prescription and 596 people used it to die.

Requesting PAS

Oregonians Age 65+, 2003

	Females	Males
Reported to be depressed	61%	50%
Reported to be receiving treatment	54%	20%
Physical health problems	72%	76%
Disclosed suicidal intent	39%	27%

2011 Data for Reasons to Choose Prescribed Suicide

End of life concerns ⁸	(N=71)
Losing autonomy (%)	63 (88.7)
Less able to engage in activities making life enjoyable (%)	64 (90.1)
Loss of dignity (%) ⁹	53 (74.6)
Losing control of bodily functions (%)	24 (33.8)
Burden on family, friends/caregivers (%)	30 (42.3)
Inadequate pain control or concern about it (%)	23 (32.4)
Financial implications of treatment (%)	2 (2.8)

Death with Dignity Act

Age Distribution Data

Age	2011	1998-2010	Total
18-34 (%)	0 (0.0)	6 (1.1)	6 (1.0)
35-44 (%)	1 (1.4)	13 (2.5)	14 (2.3)
45-54 (%)	5 (7.0)	39 (7.4)	44 (7.4)
55-64 (%)	16 (22.5)	107 (20.4)	123 (20.6)
65-74 (%)	23 (32.4)	147 (28.0)	170 (28.5)
75-84 (%)	18 (25.4)	150 (28.6)	168 (28.2)
85+ (%)	8 (11.3)	63 (12.0)	71 (11.9)
Median years (range)	70 (41-96)	71 (25-96)	71 (25-96)

Coping with Chronic Illness

- Protective: Self-efficacy and optimism
- Acceptance
 - Less attention to pain, more engagement in daily activities
 - Reduced catastrophizing
- Skill Training
 - Meditation and relaxation techniques
 - Pacing activity
 - Cognitive techniques to build self-efficacy, reduce helplessness
- Greater success with CBT for pain in RA and OA than in FM

Mindful Practices for Illness

Jon Kabat-Zinn. *Full Catastrophe Living*. 1990 Random House

- Non-judging
- Patience
- Beginner's mind
- Trust in self
- Non-striving
- Acceptance
- Letting go

“Oh I’ve had my moments, and if I had to do it over again, I’d have more of them. I’d try to have nothing else. Just moments, one after the other, instead of living so many years ahead of each day. *Nadine Stair* age 85

Study Mindfulness-Based Stress Reduction

Carmody J et al. J Clin Psychol 65:613-26, 2009

Table 1

Means and Standard Deviations, Paired Sample t Tests, and Pre- and Post-MBSR Effect Sizes for All Variables

Variable	Pre-MBSR		Post-MBSR		<i>t</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Mindfulness facets (FFMQ)						
Observe	25.67	5.44	30.20	4.81	−16.41***	.95
Describe	26.82	6.48	29.69	6.06	−11.38***	.66
Act with awareness	22.91	5.34	27.13	4.94	−15.96***	.92
Nonjudge	24.09	7.10	29.37	5.92	−17.21***	.99
Nonreact	18.51	4.11	23.04	3.85	−18.93***	1.10
Decentering (EQ)	31.15	6.97	39.77	6.32	−21.63***	1.29
Attentional self-regulation (SRS)	30.48	6.14	35.07	5.38	−14.95***	.88
Environmental mastery (PWB)	34.33	7.97	39.29	7.73	−14.92***	.86
Purpose in life (PWB)	37.13	7.04	40.98	6.91	−11.65***	.68
Exposure	13.86	3.77	16.07	3.83	−9.60***	.56
Perceived stress (PSS)	20.90	6.73	14.59	5.94	17.73***	1.02
Medical symptoms (MSCL)	19.15	11.91	12.18	9.53	14.10***	.81
Psychological symptoms (BSI)	13.09	8.68	7.33	0.38	12.93***	.74

Note. MBSR = Mindfulness-based stress reduction; FFMQ = Five-Facet Mindfulness Questionnaire; EQ = Experiences Questionnaire; SRS = Self-Regulation Scale; PWB = Psychological Well-Being Scale; PSS = Perceived Stress Scale; MSCL = Medical Symptom Checklist; BSI = Anxiety and Depression items from Brief Symptom Inventory. *** $p < .001$.

Immune Modulation by Meditation

Davidson RJ et al. Psychosomatic Med 2003; 65:564-70

R. J. DAVIDSON et al.

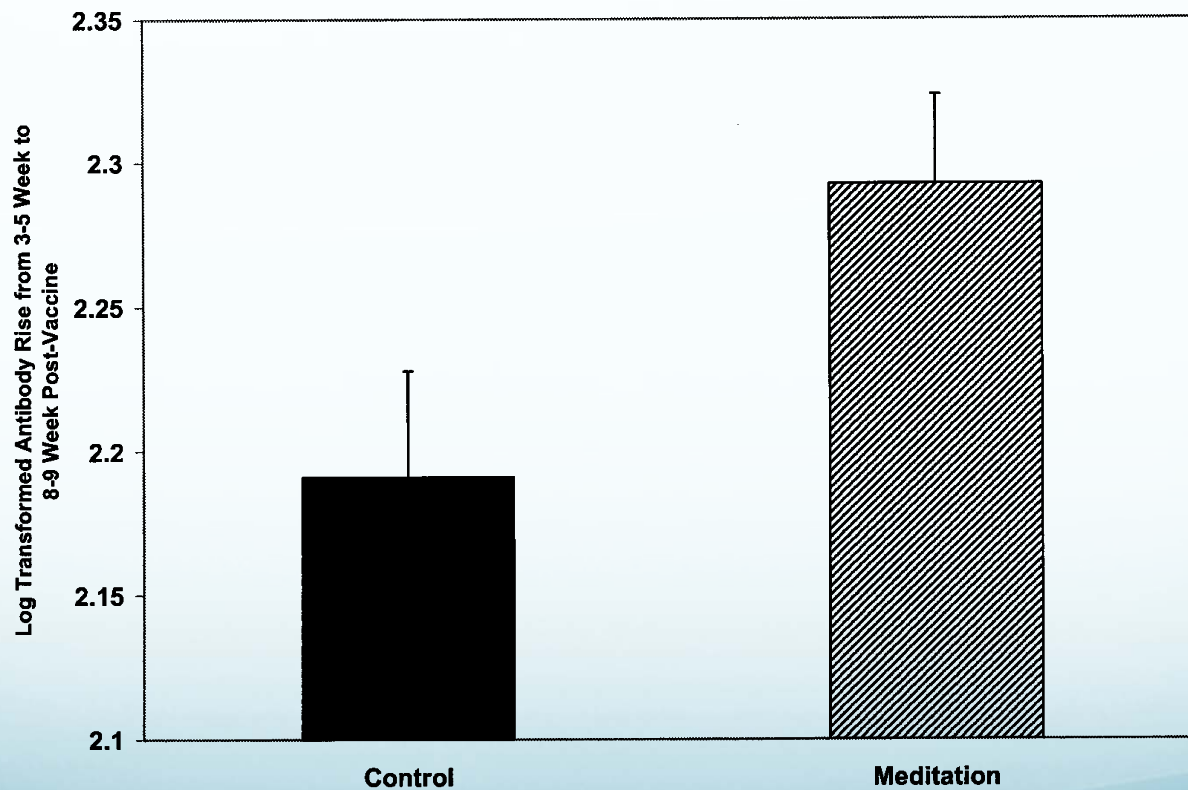
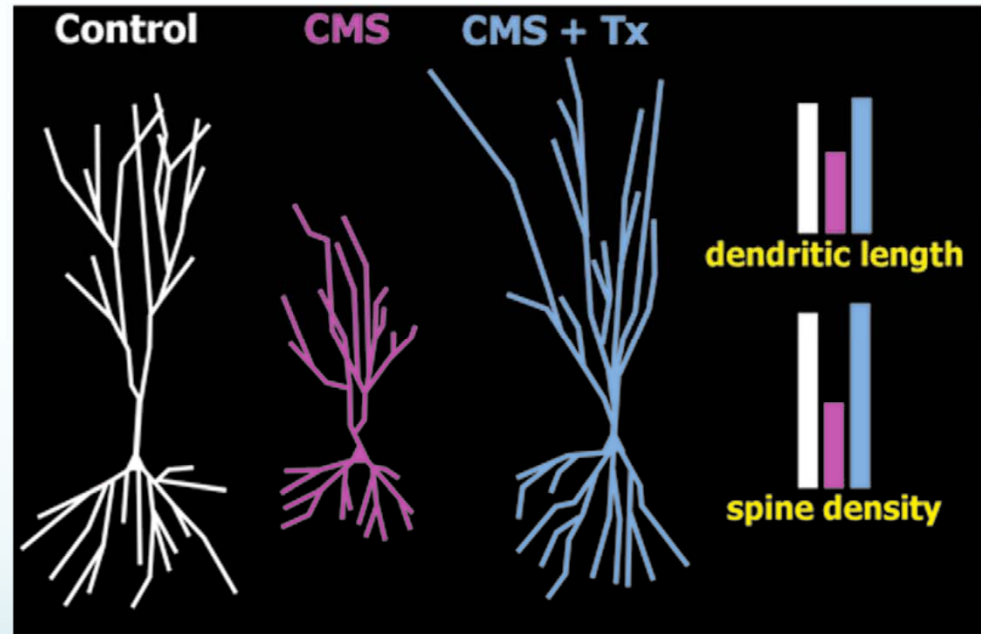


Fig. 5. Means \pm SE antibody rise from the 3- to 5-week to the 8- to 9-week blood draw in the Meditation and Control groups. The ordinate displays the difference in the log-transformed antibody rise between the 3- to 5- and the 8- to 9-week blood draws derived from the hemagglutination inhibition assay.

Stress and Neuroplasticity

Kays J et al. J Neuropsychiatry Clin Neurosci 2012; 24:2:118-124

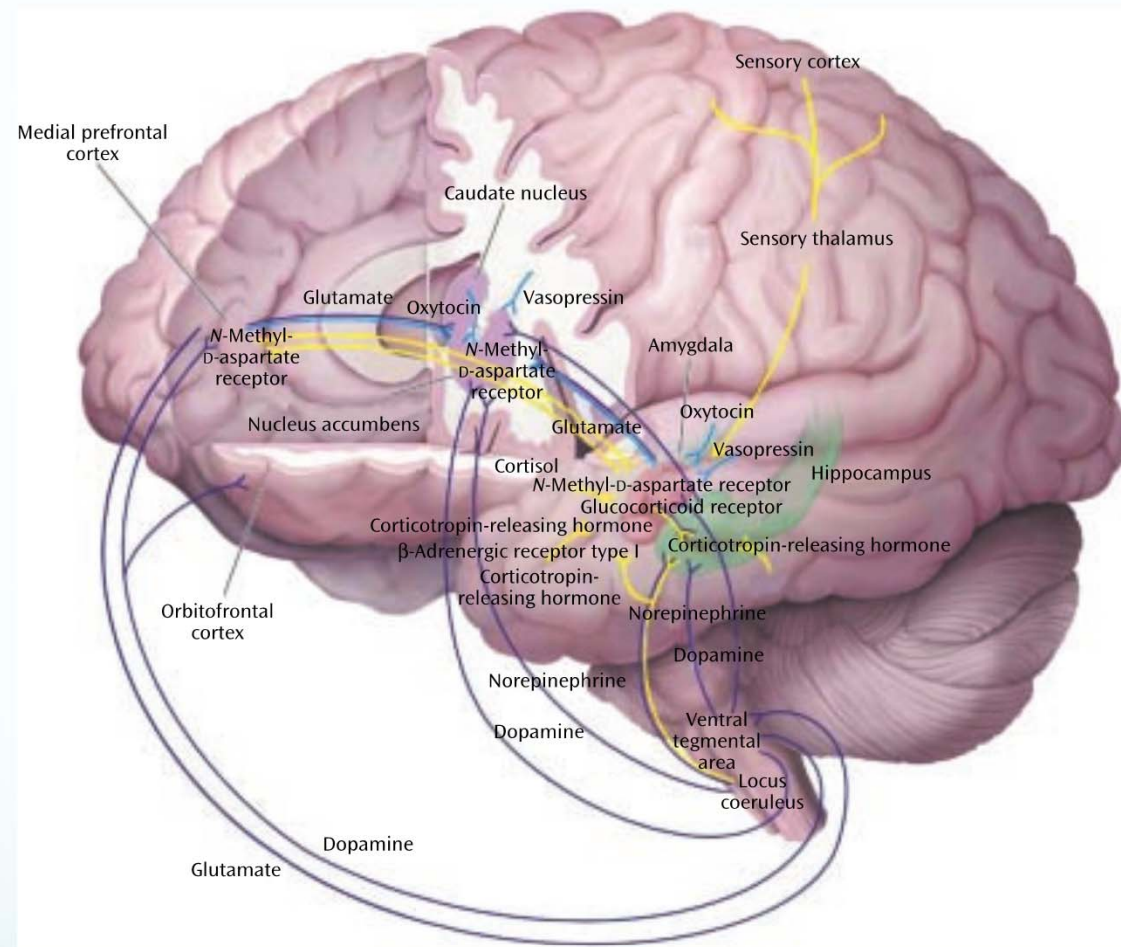
FIGURE 3. Exposure of rats to 6 weeks of unpredictable chronic mild stress (CMS; pink) induces depressive-like behaviors (e.g., anhedonia, learned helplessness) and multiple detrimental effects in the hippocampus and medial prefrontal cortex (mPFC), including decreases in neurogenesis, dendritic length, and synaptic density, as compared with control conditions (white). Both behavioral and structural deficits can be reversed by administration of antidepressants (Tx) during the final 2 weeks of CMS (CMS + Tx; blue).¹³ Schematic representations of mPFC neurons under the three conditions illustrate average dendritic changes. The authors of this study noted that these results were independent of neurogenesis, suggesting that restoration of normal dendritic length and synaptic density underlie behavioral recovery.



Strengthening Will

- Address sensory and social isolation
- Break tasks down to simple steps to stimulate reward responses and activate frontal circuits
- Stimulant medication
- Music, art, spiritual practices
- Maximize comfort and sleep
- Physical movement
- Nutrition

FIGURE 2. Neural Circuits Associated With Reward, Fear Conditioning, and Social Behavior^a



^a The figure depicts a simplified summary of some of the brain structures and relevant neurochemistry mediating the neural mechanisms of reward (purple paths), fear conditioning and extinction (yellow paths), and social behaviors (blue paths). Only a subset of the many known interconnections among these various regions is shown, and relevant interneurons are not illustrated (see text), yet it can be seen there is considerable overlap in the brain structures associated with these neural mechanisms. This suggests that there may be clinically relevant functional interactions among the circuits. For example, a properly functioning reward circuit may be necessary for the reinforcement of positive social behaviors. An overly responsive fear circuit or impaired extinction process may negatively influence functioning of the reward system. The assessment of these neural mechanisms must be considered in the context of their neurochemical regulation. Alterations in one neurotransmitter, neuropeptide, or hormone system will affect more than one circuit. Several receptors that are related to putative anti-anxiety and antidepressant drug targets are illustrated. The functional status of these circuits has important influences on stress-related psychopathology and the discovery of novel therapeutics (see text).

Case 1 Follow-Up

- OD'd several weeks later
- Outpouring of support from neighbors uplifted his mood
- Trust earned at initial visit lead to agreement to take antidepressant and come to clinic
- Came to clinic 3 times with improving morale and sense of purpose

Case 2 Follow-Up

- Family was grateful for the realistic and practical approach
- Family was relieved that her suffering would end
- Physician called to express his gratitude