

# **Suicidality and Older Adults**

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***The future is just old age and illness and pain . . .  
I must have peace and this is the only way.***

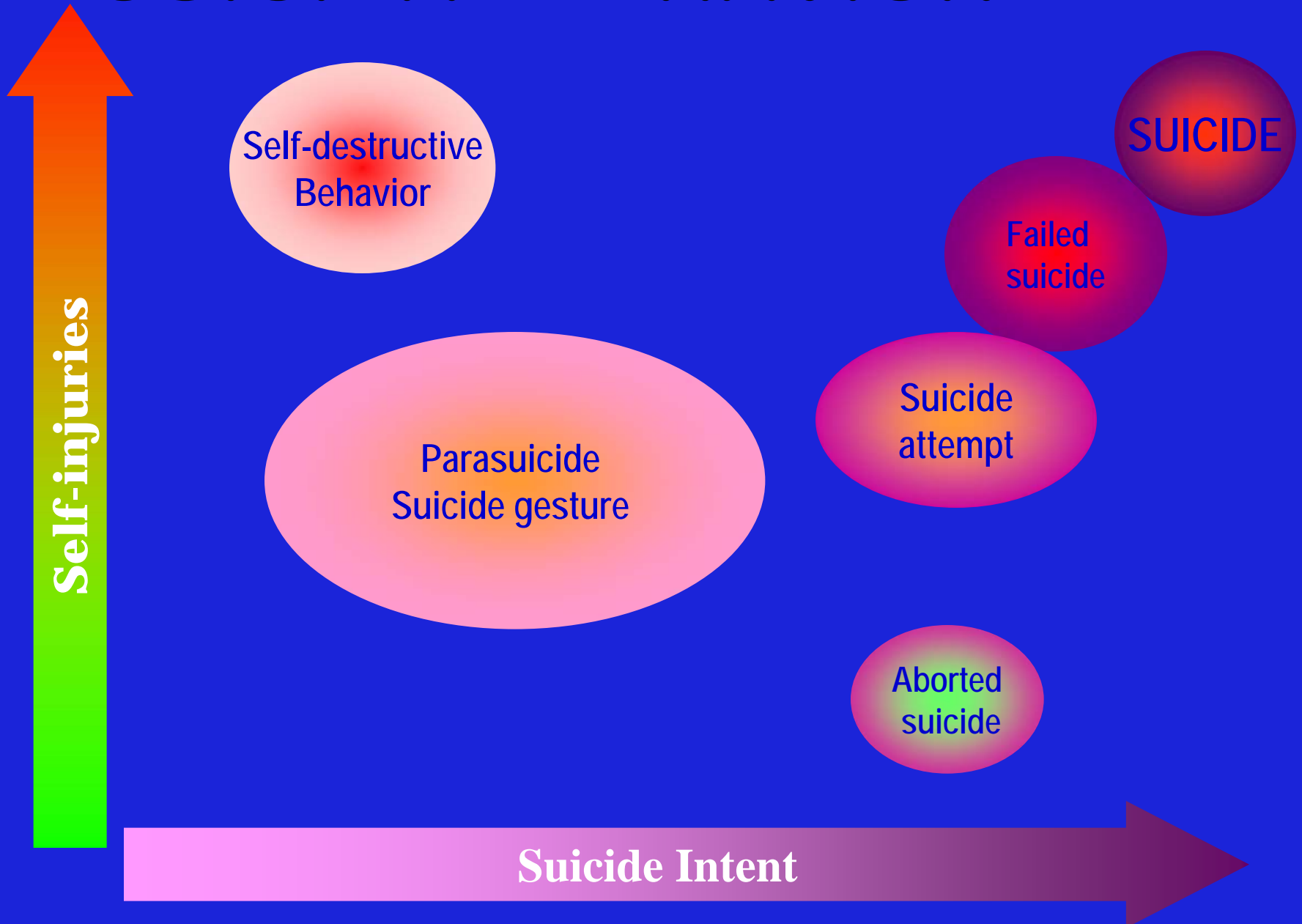
Suicide note left by James Whale, age 67

**Is suicide the most serious  
psychiatric pathology?**

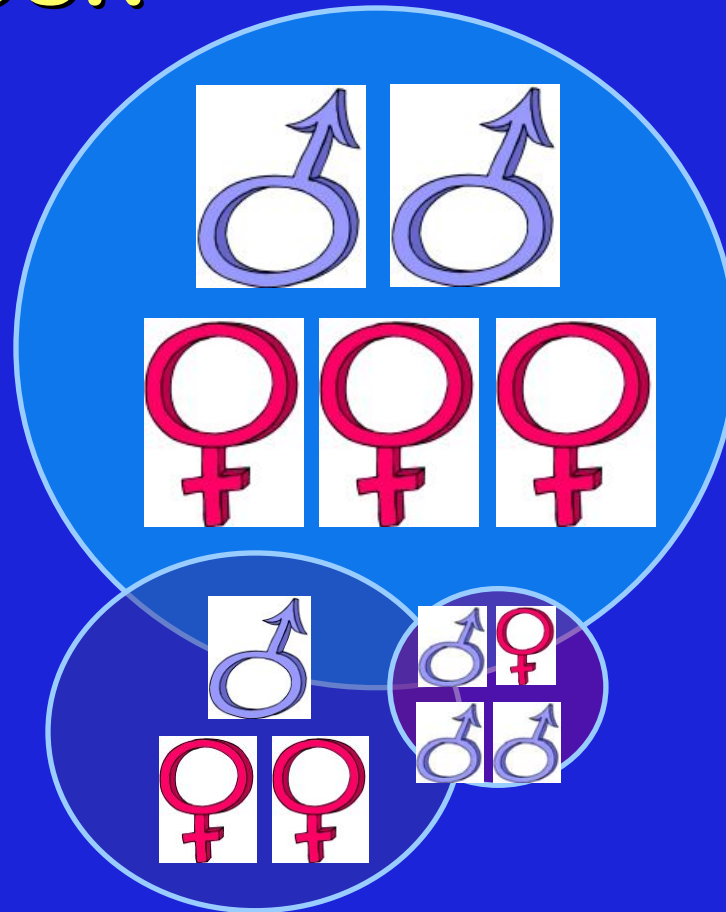
# What Is Suicidal Behavior?

- Suicidal ideation
- Suicidal attempts
- Suicide completion
- Relationship to self-mutilation

# SUICIDAL BEHAVIOR



# EPIDEMIOLOGY OF SUICIDAL BEHAVIOUR



**Suicidal ideation**

**5-15%**

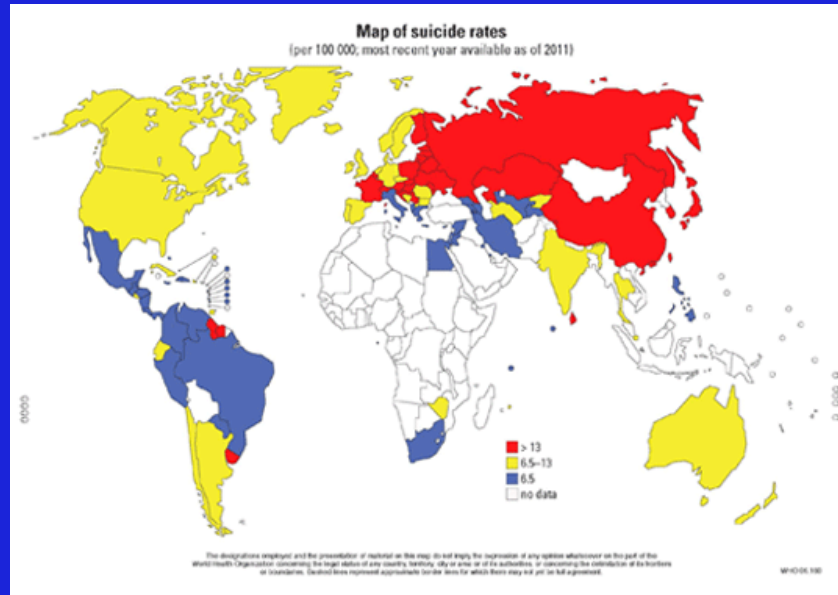
**Suicide related behaviour**

**3-5%**

**Suicide**

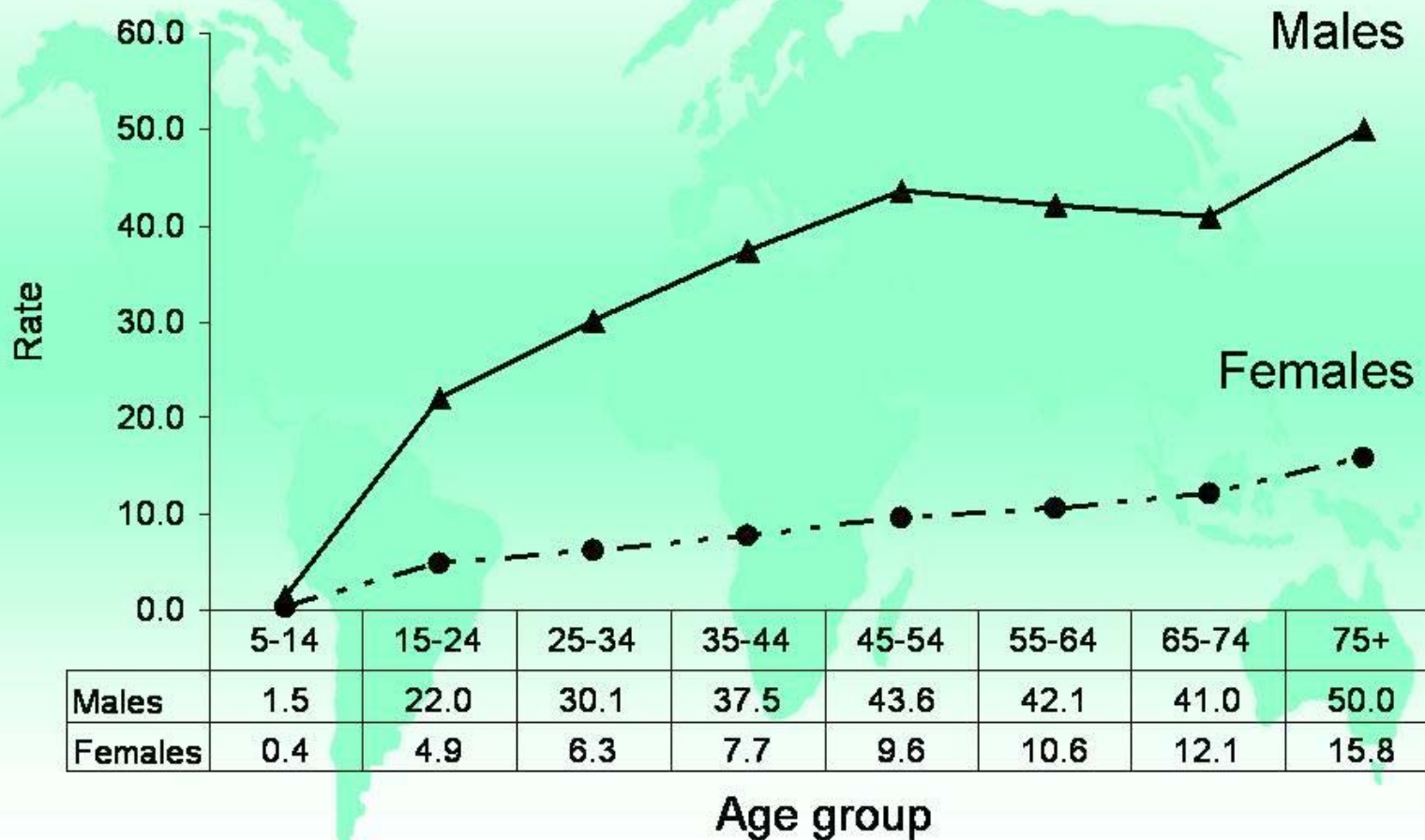
**6-90/100.000**

# Map of suicide rates



In the last 45 years suicide rates have increased by 60% worldwide. Suicide is among the three leading causes of death among those aged 15-44 years in some countries, and the second leading cause of death in the 10-24 years age group; these figures do not include suicide attempts which are up to 20 times more frequent than completed suicide (*World Health Organization*).

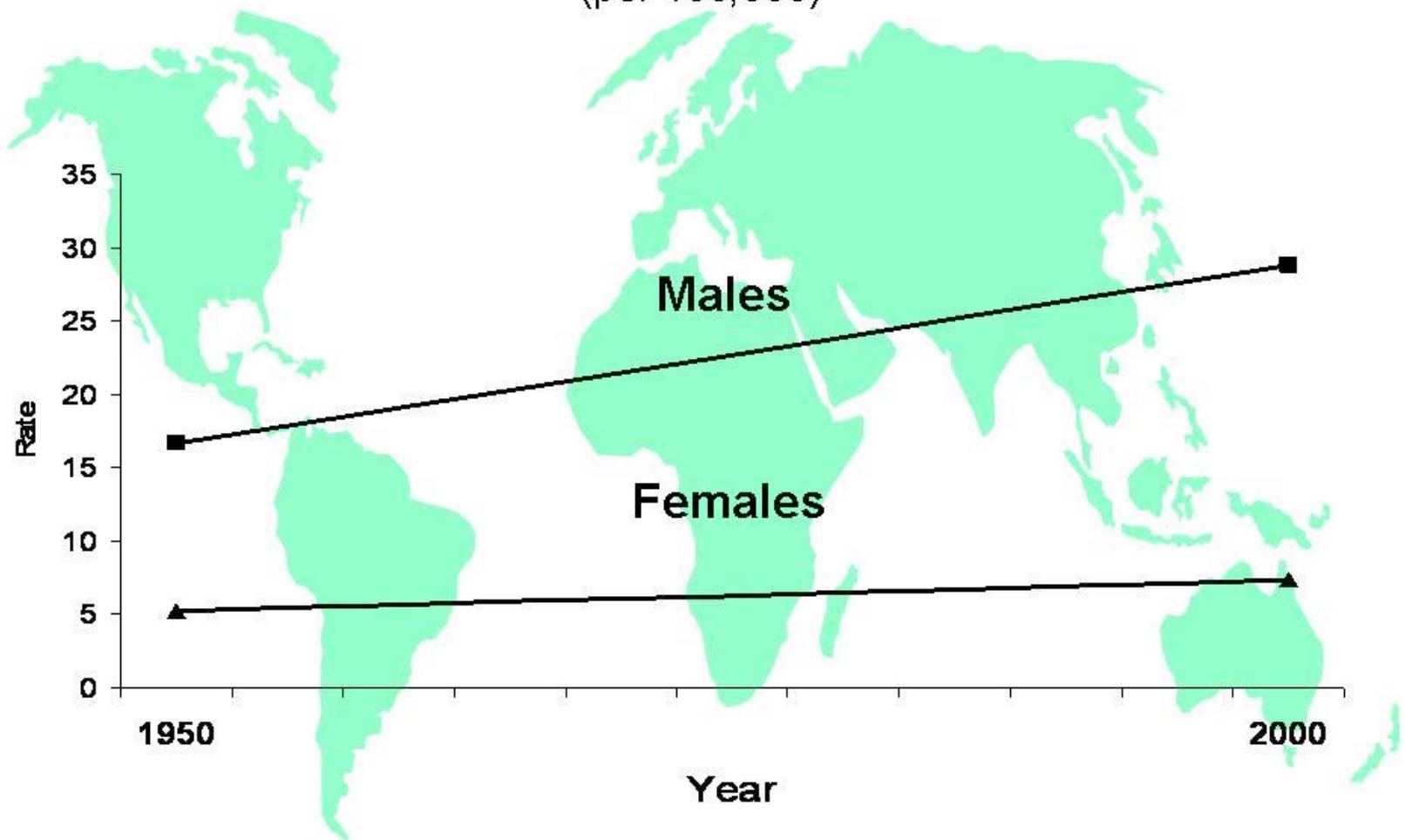
## Distribution of suicide rates (per 100,000) by gender and age, 2000



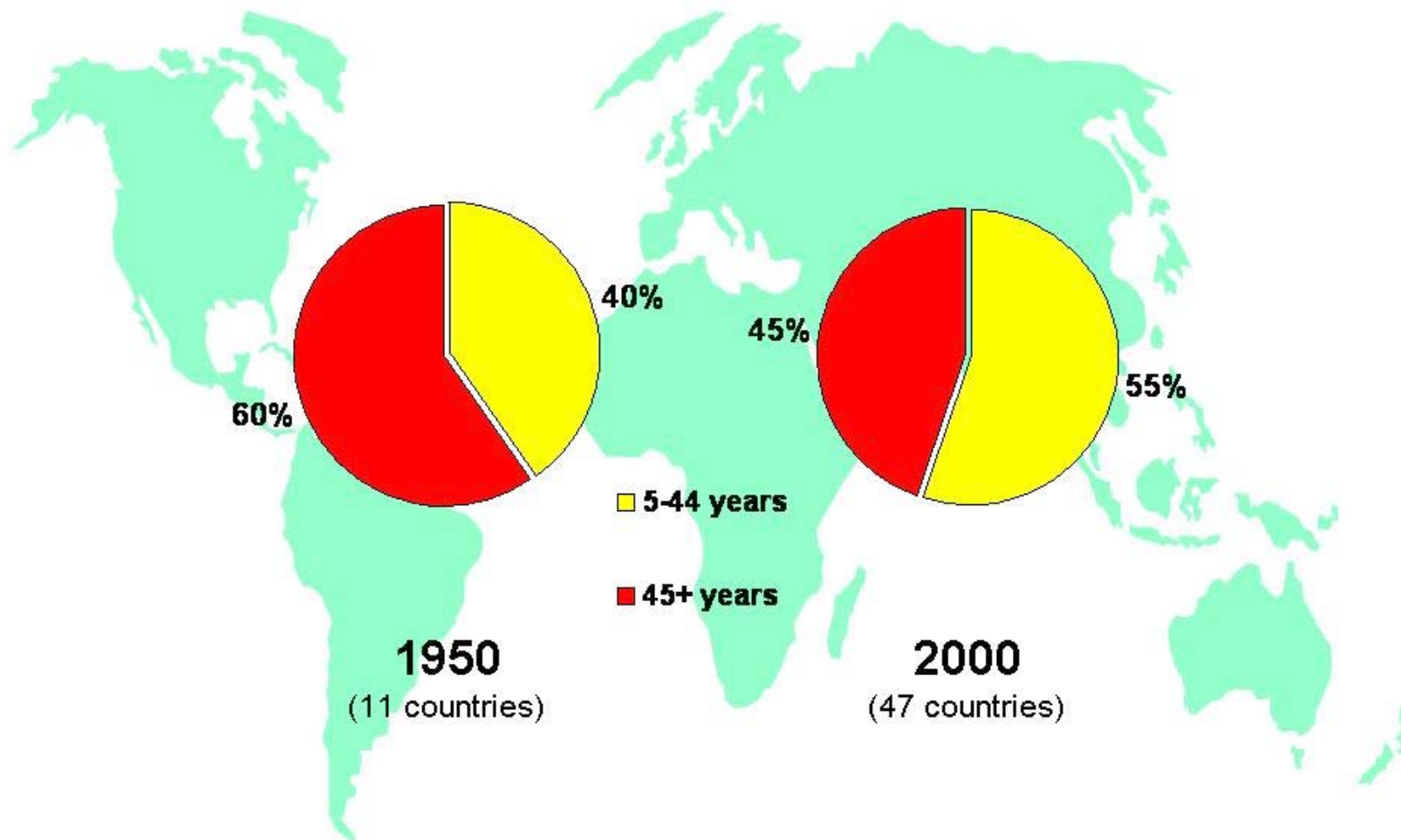


# Evolution of global suicide rates 1950-2000

(per 100,000)



## Changes in the age distribution of cases of suicide between 1950 and 2000



# U.S. Suicide Rates by Gender and Year - All Ages



# Suicidal Acts: US Epidemiology

- Completed suicide

BD: 15% to 20%.

MDD: 5% to 10%

Pop: 11 /100000 (<.0002%)

- Lifetime suicide attempt

BD: 29%

MDD: 16%

Any psychiatric disorder: 4%

# Risk Factors for Suicidal Acts Identified in Prospective Studies

- History of suicide attempt
- Presence of:
  - Ongoing major depression
  - Alcohol or substance use disorder
  - Hopelessness
  - Separation or loss
  - Anger
  - Suicidal ideation

# Past Suicidal Behavior as a Predictor of Future Suicidal Behavior

- History of suicide attempt increases the risk for future suicidal behavior—both completions and attempts.
- Studies (Nordstrom 1995, Fawcett 1990) report that a suicide attempt is the most powerful predictor of suicide completion in mood-disordered patients
- Other prospective studies have also shown that a history of suicide attempt increases the risk for subsequent attempts (Duggan 1991, Brent 2002)

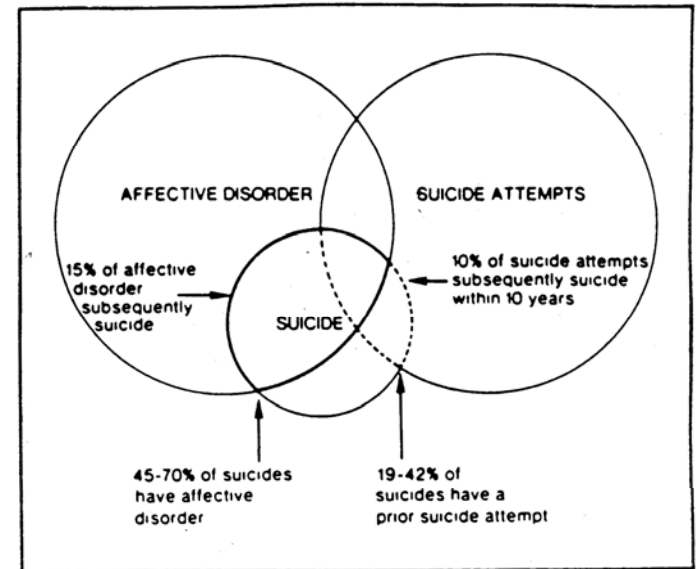


# Risk factors

## Past suicide attempt

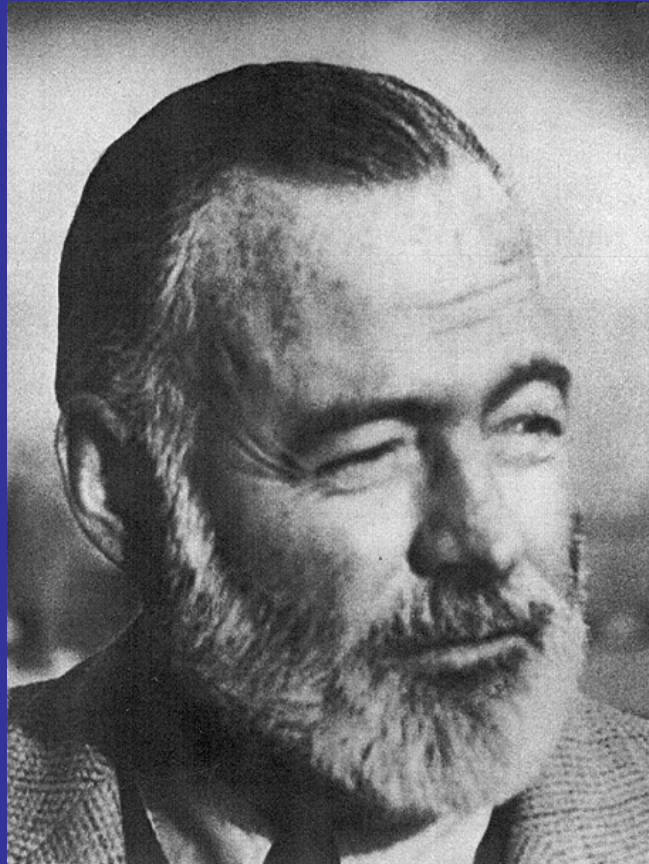
(See diagram on right)

- After a suicide attempt that is seen in the ER about 1% per year take their own life, up to approximately 10% within 10 years.



Venn diagram summarizing data concerning suicide and its relationship to affective disorder and suicide attempts.

# Suicidal Behavior Runs in Families



Ernest Hemingway



- **Some three weeks short of his 62nd birthday, Ernest Miller Hemingway took his own life on the morning of July 2, 1961 at his home in Ketchum, Idaho, with a shotgun blast to the head.**
- **Other members of Hemingway's immediate family also committed suicide, including his father, Clarence Hemingway, his siblings Ursula and Leicester, and his granddaughter Margaux Hemingway. On July 2, 1996, the anniversary of her grandfather's own suicide, Hemingway was found dead in her studio apartment in Santa Monica, California at age 41. She had taken an overdose of phenobarbital.**

A model for understanding suicidal  
behavior.

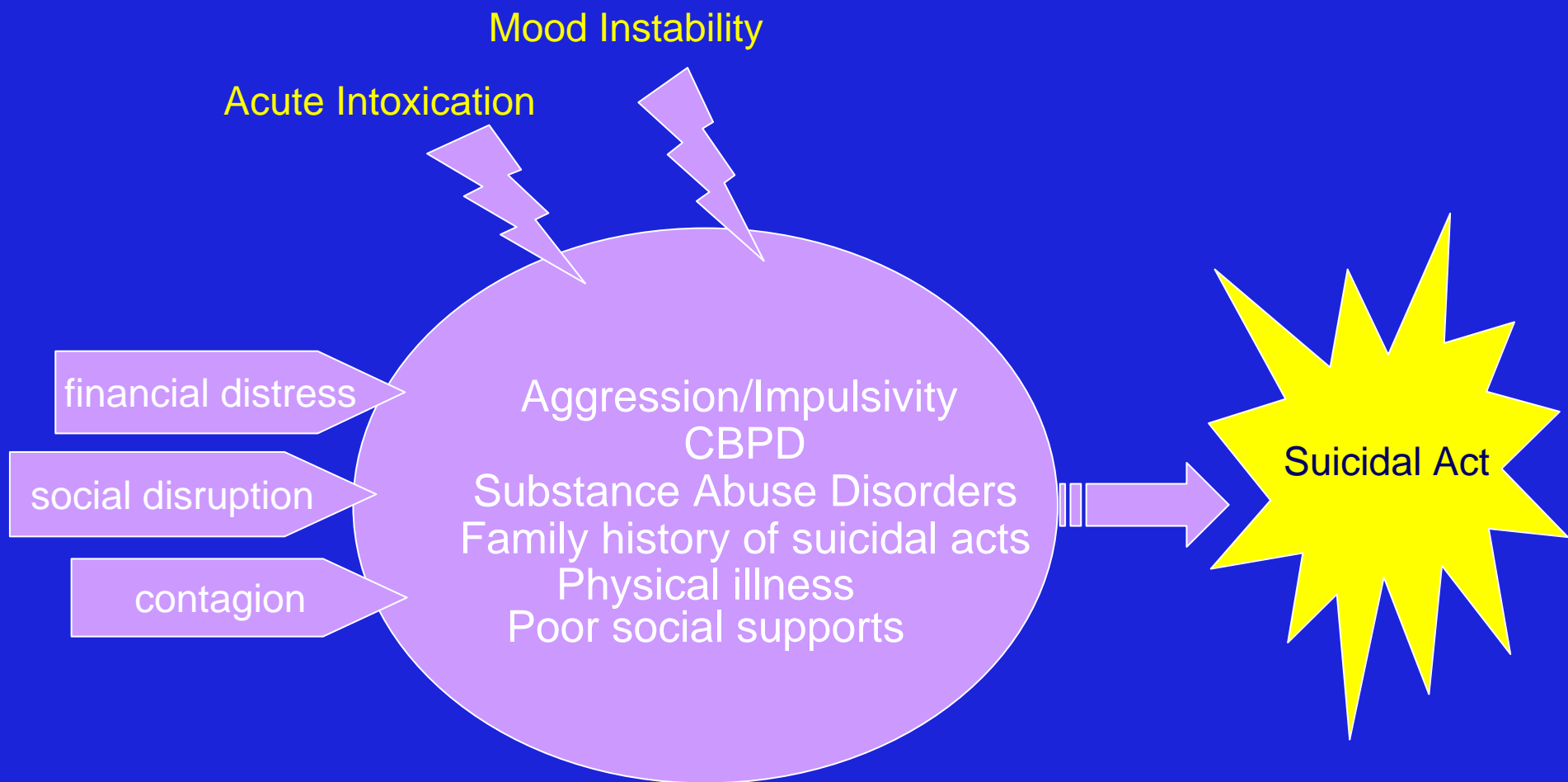
The Stress-Diathesis Model

- Psychiatric Illness is *NOT* a sufficient condition for suicidal acts:

Although 90% to 95% of completed suicides have an identifiable psychiatric disturbance, only 10% to 20% of those with major affective illnesses die by their own hand.

- ***Most patients with psychiatric illnesses never attempt suicide.***

# The Stress-Diathesis Model of Suicidal Behavior



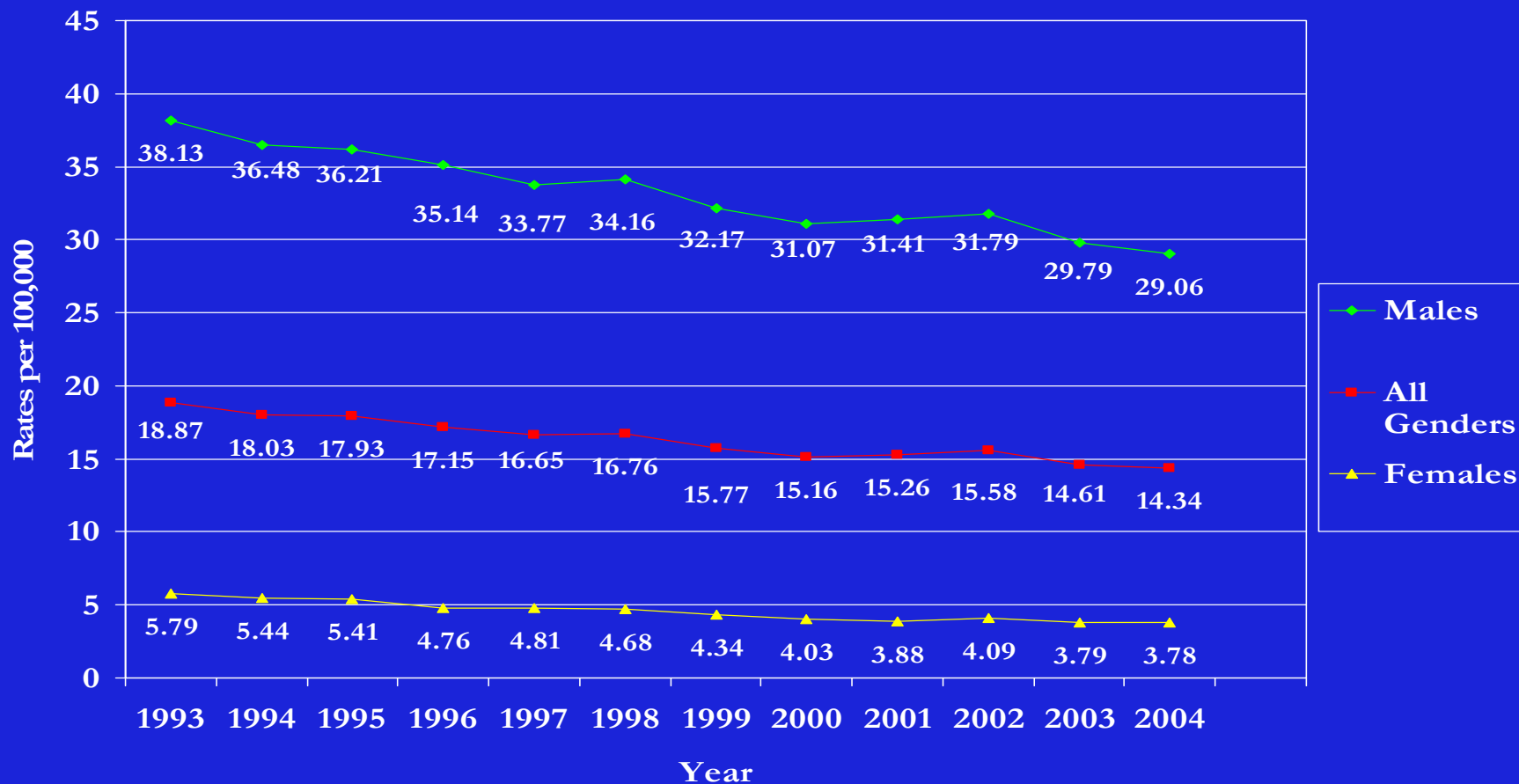
# Stressors That May Precipitate Suicidal Acts

- Stressors Intrinsic to the patient:
  - Presence of major depression or mixed episode.
  - Acute intoxication, especially alcohol.
- Environmental Stressors:
  - Psychosocial problems -marital for women, financial for men.
  - Contagion- especially for adolescents.

# **Geriatric suicide**



# U.S. Suicide Rates by Gender, Age 65+



# Epidemiology

- Males aged 75 and over have the highest rates of suicide in nearly all industrialized countries
- Cross-cultural differences clearly influence suicide rates. For example, in the UK, rates in elderly first-generation immigrants from the Indian subcontinent are low compared with the indigenous elderly population
- In the USA, the highest suicide rates occur among elderly White men, although rates among Black men are higher in younger age groups.



# Epidemiology – U.S.

- The rate of suicide for the elderly for 2007 was 14.3 per 100,000
- There was one elderly suicide every 97 minutes
- There were about 14.9 elderly suicides each day, resulting in 5,421 suicides in among those 65 and older
- Elderly white men were at the highest risk with a rate of approximately 31.1 suicides per 100,000 each year
- 84.4% of elderly suicides were male; the rate of male suicides in late life was 7.3 times greater than for female suicides

# Method of suicide

- In the USA, firearms are used by over 60% of all completed suicides, with elderly White men employing this method most frequently.
- In England and Wales, hanging currently remains the most common method employed by men, while self-poisoning is most often used by women.

# Elderly Suicide in the US: Statistics

- Completed suicides for ages 65 and over comprise nearly 17% of all suicides

This age group is 12.36% of total US population

- Method is overwhelmingly by use of firearms (not the case for Europe and elsewhere)

73.40%: firearms

10.27%: suffocation (hanging)

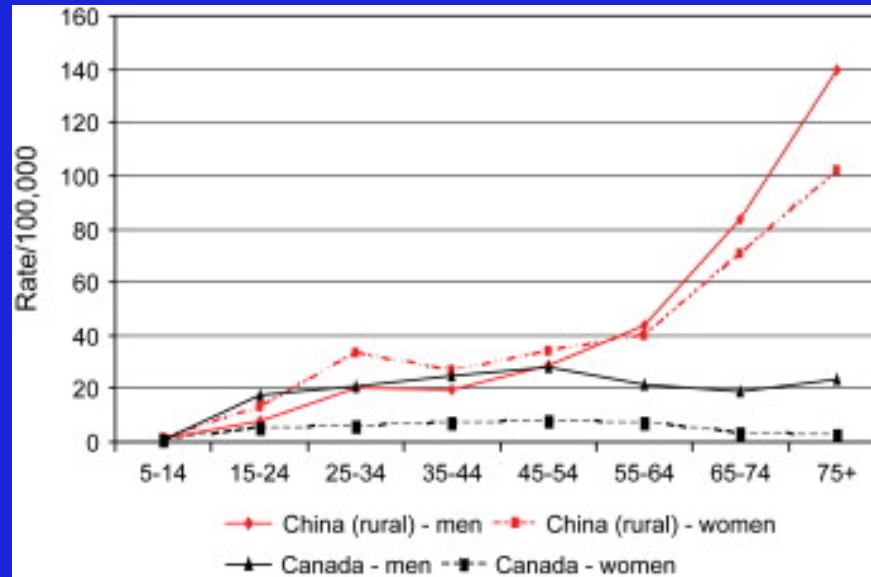
10.20%: poisoning

2.00%: falling

0.99%: drowning

0.17%: fire

Note: 53.71% of all suicides in the U.S. in the year 2003 were committed using a firearm



**Suicide rates by age and gender for Canada (2002) and rural China (1999)**

## **Are some ethnic/racial groups at a higher risk of suicide?**

**For every 100,000 people age 65 and older in each of the ethnic/racial groups below, the following number died by suicide in 2004:**

- Non-Hispanic Whites — 15.8 per 100,000**
- Asian and Pacific Islanders — 10.6 per 100,000**
- Hispanics — 7.9 per 100,000**
- Non-Hispanic Blacks — 5.0 per 100,000**

# Risk factors for elderly suicide:

- Older age
- Male gender
- Living alone
- Bereavement (especially in men)
- Psychiatric illness
- Depression
- Alcohol misuse
- Previous suicide attempt
- Vulnerable personality traits
- Physical illness
- Pain

# Prominent symptoms prior to elderly suicide

Barracclough's study (1971) reported

- complaints of insomnia (90%)
- weight loss (75%)
- guilt feelings (50%)
- hypochondriasis (50%)

# Role of bereavement

- The role of bereavement does appear to be a significant influence, with studies of completed and attempted suicide citing its relevance
- Elderly men seem especially vulnerable – one study reports a relative risk for widowed men being over three times that of married elderly males, whereas widowed and married elderly women showed similar risk
- The first year of widowhood seems to be a vulnerable period



- In general, for every 12 suicide attempts made, one is completed; however, in those over 75, for every four suicide attempts made, one is completed
- Older men are frequently more determined to die compared to other demographic populations
- High lethality of their suicide attempt in conjunction with their fragile physical state contributes to the high suicide rates

# Attitudes Towards Elderly Suicide

- Society is more accepting of death and dying with the elderly compared to adolescents: years of potential life lost much greater
- Less media attention towards elderly suicides
- Less attention in research and literature compared to adolescents and young adults

PubMed search of almost 10,000 articles from 1966-1999

21.4% included Ages 65+ (of these, 3.1% were 80+)

# Recommended Interventions

- Recognizing and treating depression  
Education to PCP and nurse assistants
- Elderly attempters
- Means restriction (Ex: reduce accessibility to firearms via gun locks)

# Prevention

- Improved diagnosis of depression
- better treatment of depression
- better control of possible means of suicide
- increased supervision
- further education of primary care physicians

**Does this help?**

**Many older adults see their general physician shortly before committing suicide**

**Rates for contact with a primary care provider within 1 month of suicide are 50% to 75% and as high as 39% within 1 week**

Schmutte T, O'Connell M, Weiland M, Lawless S, Davidson L. Stemming the tide of suicide in older white men: a call to action. Am J Mens Health. 2009 Sep;3(3):189-200.

# Assessment of the Suicidal Patient

## Clinical Evaluation of the Patient

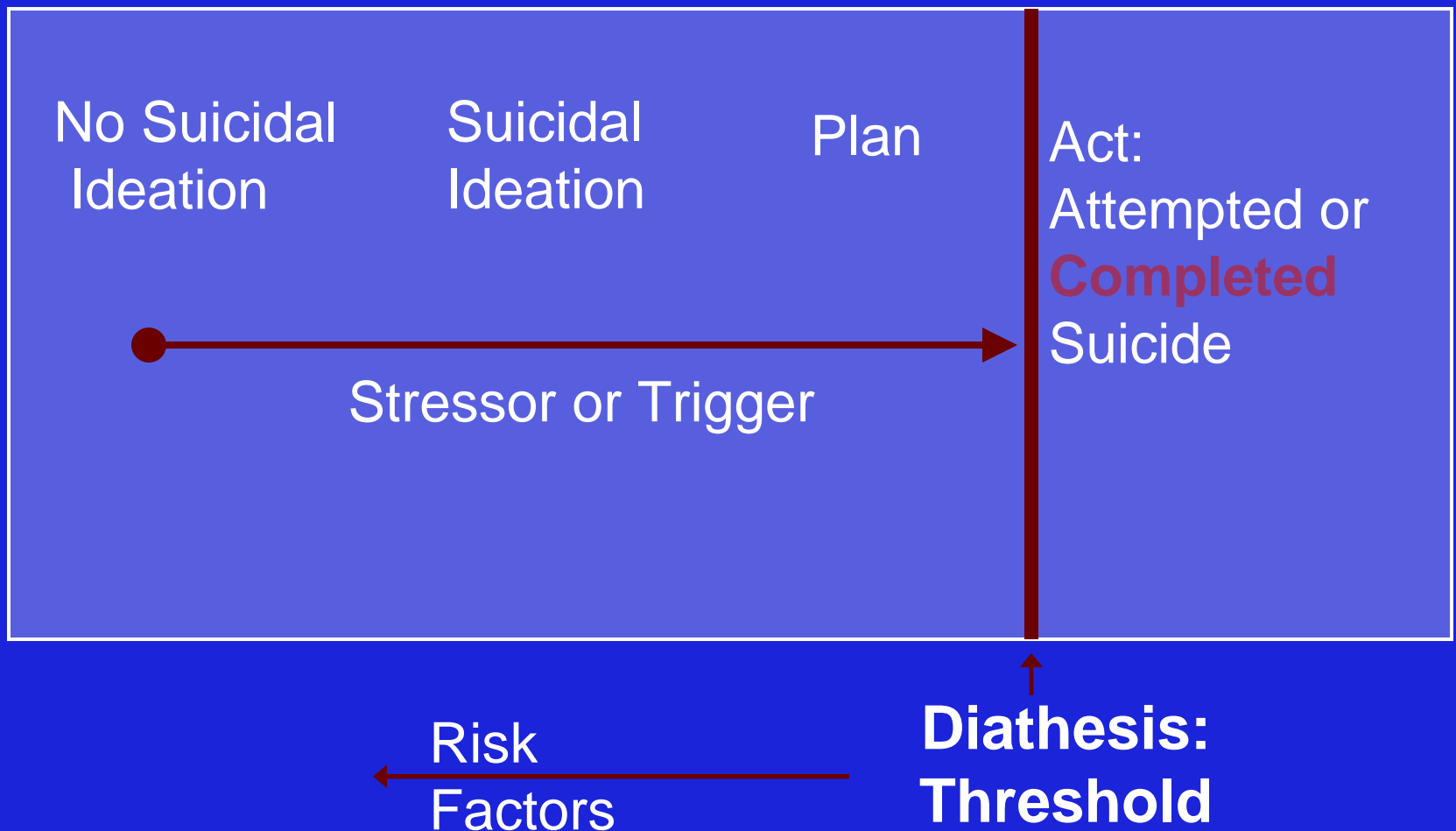
- a. Risk Factors

- b. Protective Factors

# Useful questions that should be considered in any evaluation for suicidal risk

- How has the patient reacted to stress in the past, and how effective are his or her typical coping strategies?
- Has the patient contemplated or attempted suicide in the past? If so, how frequently and under what circumstances?
- What are the patient's current social circumstances, and how similar are they to past situations when suicide was attempted?
- Is the patient depressed, hopeless, helpless, powerless, angry?
- Does the patients have psychotic symptoms such as hallucinations or delusions?

# The Stress-Diathesis Model: Two Opportunities for Prevention

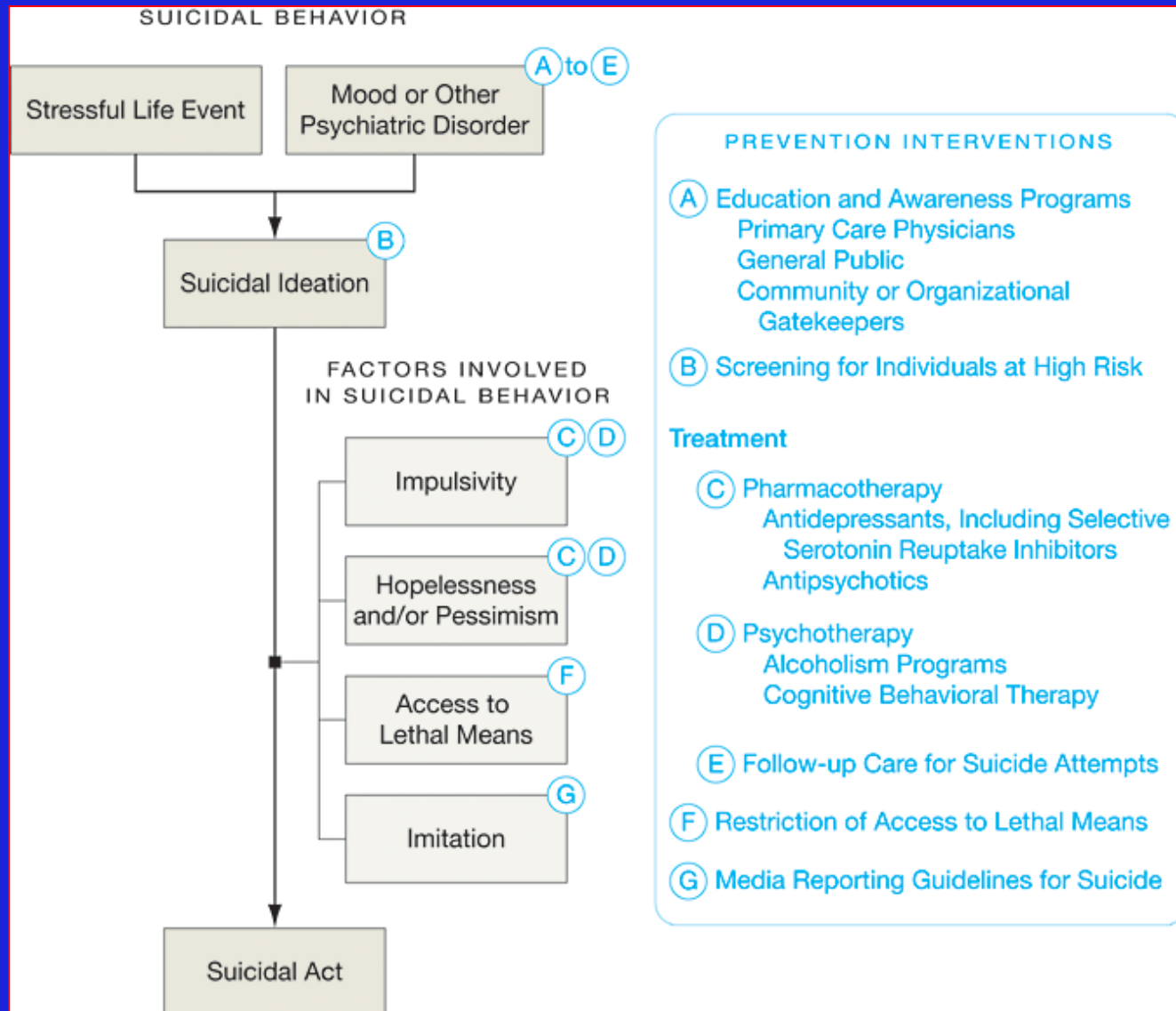


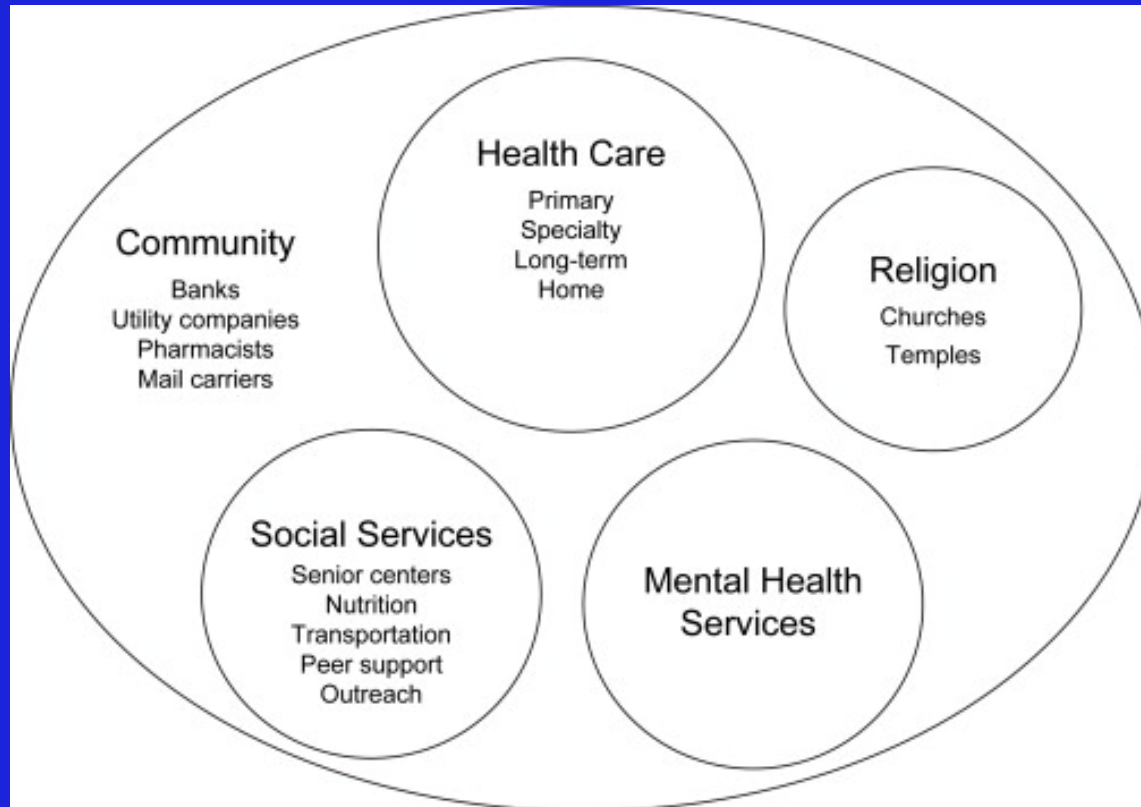


## **Relation between rates of geriatric suicide and consumption of alcohol beverages in European countries**

- This study examined the relationship between rates of suicide in 65- to 74-year-olds and per capita consumption of alcoholic beverages in European countries.
- Correlations were computed to examine relationships between suicide rates in 65- to 74-year-old males and females and per capita consumption of beer, wine, and spirits in the general population in 34 European countries.
- There was a positive correlation between suicide rates in 65- to 74-year-old males and per capita consumption of spirits.
- The results of this study are consistent with reports that consumption of spirits is associated with suicide events.

# Targets of Suicide Prevention Interventions





## Points of access to older adults at risk for suicide

Conwell Y, Thompson C. Suicidal behavior in elders. *Psychiatr Clin North Am.* 2008 Jun;31(2):333-56.

**Although suicide and its prevention remain a significant public health concern, suicide in the elderly still receives little focus in terms of specific preventive strategies or research**

# Testosterone and suicidal behavior

**Patients with a DSM-IV diagnosis of a bipolar disorder, in a depressive or mixed episode with at least one past suicide attempt were enrolled.**

**Testosterone levels positively correlated with**

- the number of manic episodes and**
- the number of suicide attempts**

Sher L., Grunebaum M.F., Sullivan G.M., Burke A.K., Cooper T.B., Mann J.J., Oquendo M.A.  
Testosterone levels in suicide attempters with bipolar disorder. *Journal of Psychiatric Research*, 2012, Vol. 46, No. 10, pp. 1267-1271.

# **Testosterone and suicidal behavior (cont.)**

**A connection between testosterone and suicidal behavior may be related to:**

- a direct influence of testosterone on suicidality**
- testosterone influencing aggression and, consequently, suicidality**
- testosterone influencing mood and, consequently, suicidality**
- testosterone influencing cognition and, consequently, suicidality**

Sher L. Testosterone and suicidal behavior. Expert Review of Neurotherapeutics, 2012, Vol. 12, No. 3, pp. 257-259.

# High and low testosterone levels may be associated with suicidal behavior in young and older men, respectively

- Aggression may mediate the effect of high testosterone levels on suicidal behavior in adolescents and young adults
- In older men, depressed mood and impaired cognition are associated with decreased testosterone levels
- Both depression and cognitive impairment are associated with suicidal behavior
- Depression and cognitive impairment may mediate the effect of testosterone deficiency on suicidality in older men
- The treatment of hypogonadism in older men may improve mood and cognition, and consequently, reduce suicidal behavior

Sher L. High and low testosterone levels may be associated with suicidal behavior in young and older men, respectively. *Australian and New Zealand Journal of Psychiatry*, in press.

Sher L. Low testosterone levels may be associated with suicidal behavior in older men while high testosterone levels may be related to suicidal behavior in adolescents and young adults: a hypothesis. *International Journal of Adolescent Medicine and Health*, in press.

# Conclusion

- Obtaining a good history of suicidal behavior, assessment of substance abuse disorders, personality disorders, impulsivity, and aggression.
- Interventions to prevent relapse or recurrence of depressive symptomatology, may protect at-risk individuals from future suicidal behavior.
- Some agents may offer further protection by decreasing aggressive or impulsive behavior.
- FFT and DBT may protect patients from impulses to act on suicidal thoughts.



**An individual who is determined to commit suicide will prevail despite the best efforts of health care professionals. However, most of the people who desire to kill themselves at one time will feel different after improvement in their psychiatric disorder and/or after receiving help with other problems.**

**It is important to note that our concern about prediction of suicide is related to our failure to prevent all suicides. Absence of suicide generates no data. If suicide is difficult to predict, its prevention is even more difficult to detect. It is likely that many suicidal individuals are recognized and successfully treated.**



«As knowledge increases,  
so does doubt »

Johann Wolfgang von Goethe (1749-1832)

