Depression in the Elderly

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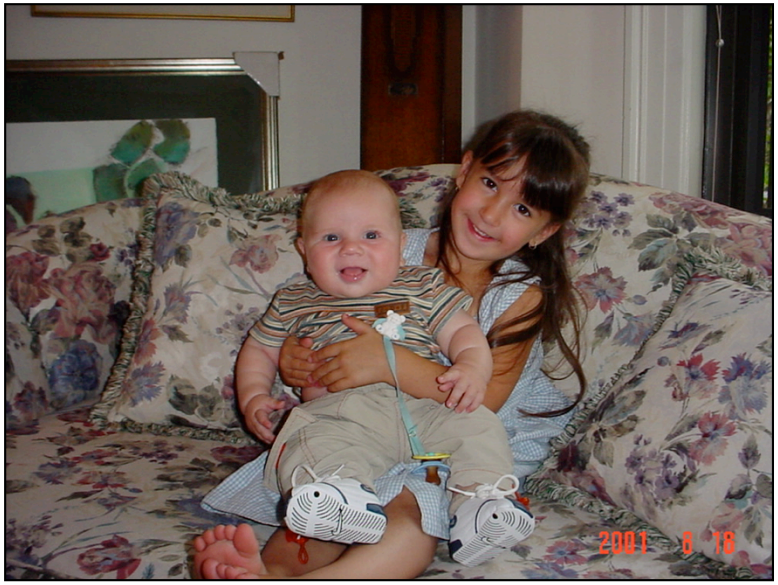
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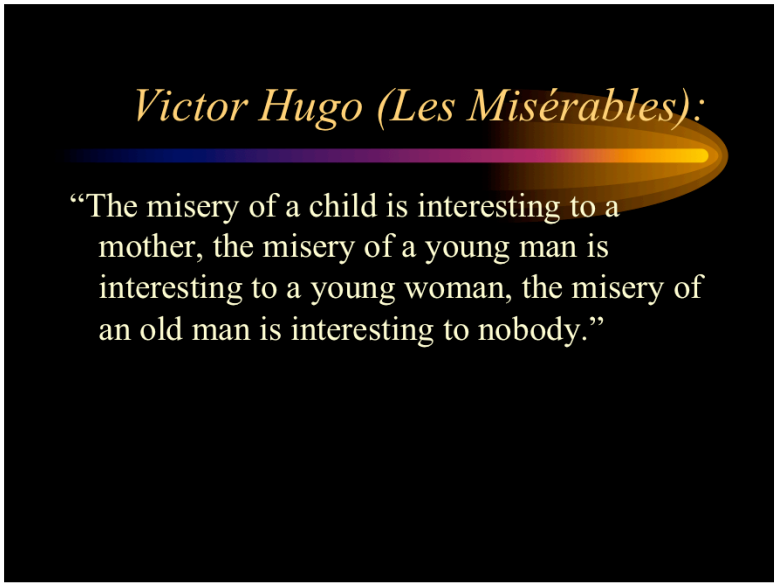
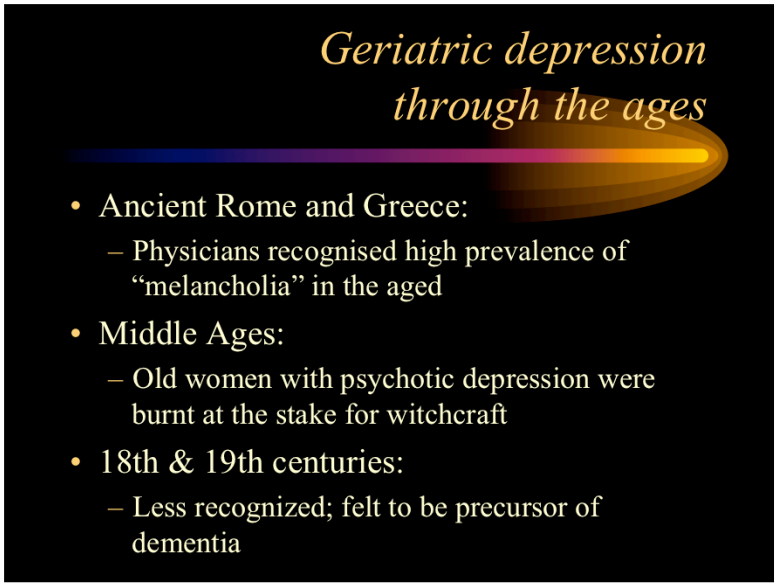


I would like to start with a quotation from Victor Hugo's novel, Les Miserables:

Was he right? Is depression in old age boring? The fact that you're all here suggests that at least some of us find the subject worthy of our attention.

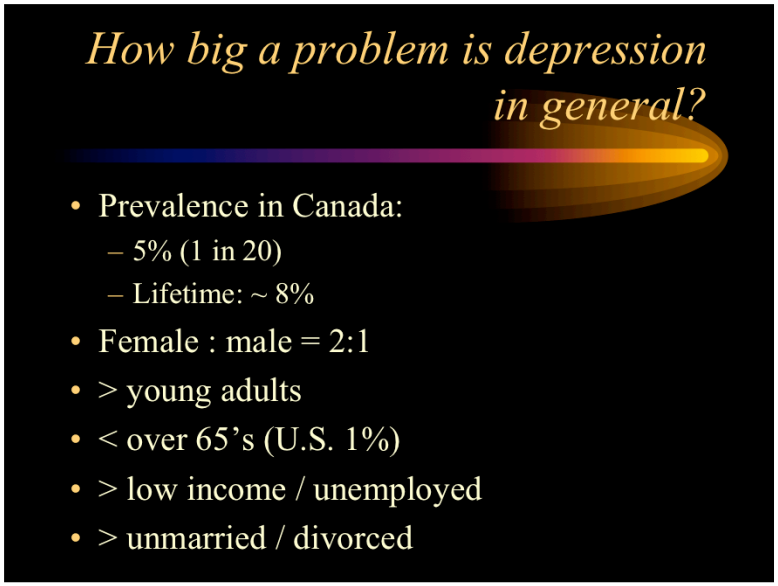


Although the physicians in classical Greek and Roman civilizations recognised how frequently depression, which they termed "melancholia" occurred in the elderly, this knowledge was forgotten in subsequent centuries.

In the Middle Ages, elderly women with psychotic depression who would make confessions of self-blame for the ills of the world, were believed to be witches and burned at the stake.

During the 1700s and 1800s, depression was often judged to be an early stage of dementia. Emil Kraepelin, one of the founding fathers of psychiatry, did not share this pessimism. He said: "The termination of the illness is generally pretty favourable. About a third of the patients make a complete recovery."

Only since the 1940s have there been reliable treatments for severe depression. However, it is still underrecognized.



Depression is common in all countries. It's considered a major public health problem. In Canada, about one in twenty adults is likely to have a depression at any given time. During your lifetime, your risk of having a depression at some point is about 8%. Women are twice as likely to become depressed as men.

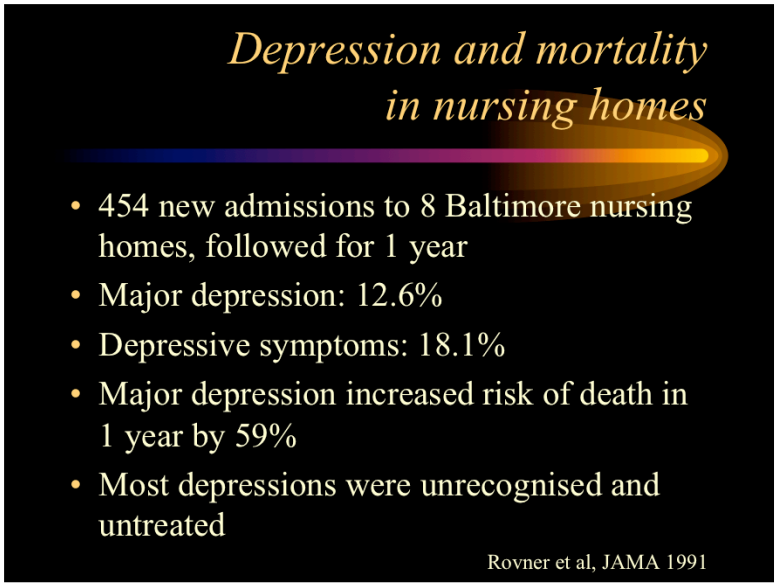
Depression rates appear to be higher in young adults, and lower in the elderly. Low income or unemployed status , and being single or divorced, also implies a greater risk for depression.

Depression in Older Adults

- Community prevalence: 1%
  - Clinically significant depressive symptoms: 8-15%
- Hospital prevalence: 11%
- Outpatient clinics (nonpsychiatric): 5%
- Long term care settings: 12%

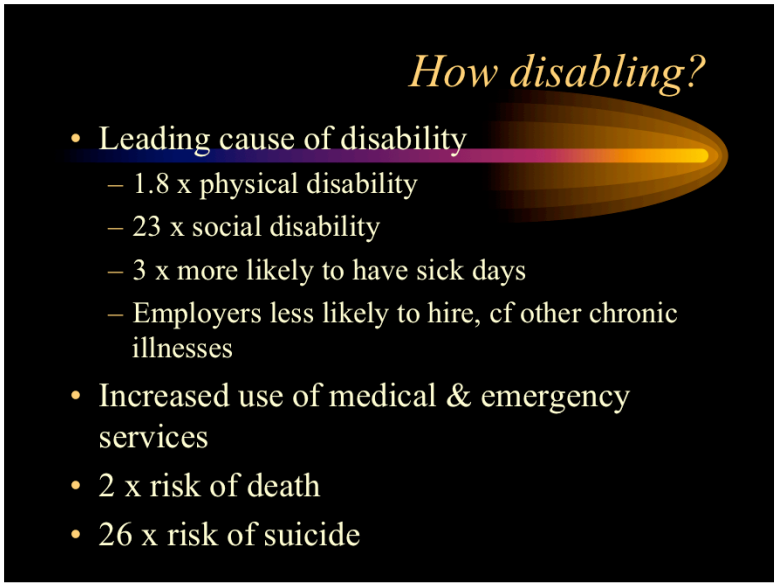
Depression in medical conditions affecting older adults

- Stroke: 10-27%
- Parkinson's disease: 50%
- Diabetes: 3x (around 15%)
- Myocardial Infarct: 40-65%
- Cancer: 25%
- Chronic fatigue syndrome: 46-75% lifetime



Here's one of the many studies on the topic, by Barry Rovner and colleagues, published in the Journal of the American Medical Association.

They examined all of the new admissions to 8 nursing homes during a 14 month period for depression, and then followed them for a year. Here are the results. Note that the incidence of depression is more than double that in the general population. Depression was also dangerous for the health of these nursing home residents.



In developed countries, depression is a leading cause of disability.

A World Health Organization study found that depressive illness increased the risk of onset of physical disability by 1.8 times after one year.

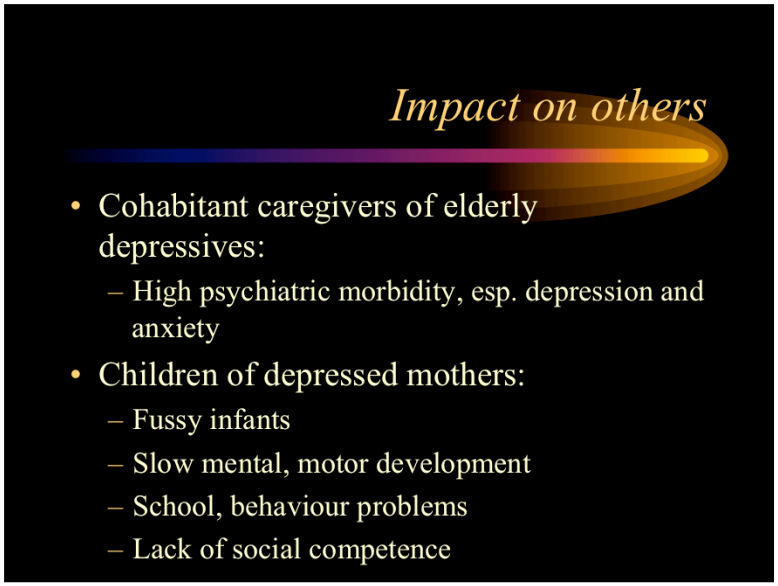
Also, depression caused a 23 times increase in the risk of social disability, after controlling for physical disease and disability.

Work productivity is also markedly affected. Ontario residents with a history of depression during the year prior to the study, were nearly 3 times more likely than control subjects to have sick days during the preceding month.

Employers have been shown to hold negative attitudes toward mental illness and to be less likely to hire persons with depression than persons with other chronic illnesses, such as diabetes.

Both major depression and dysthymia are associated with an increased use of general medical services or emergency services for emotional problems.

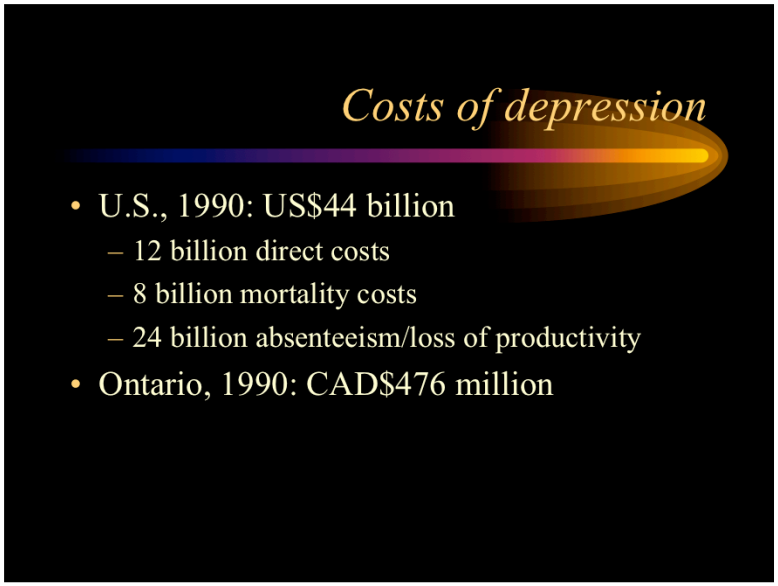
In a study of 4000 patients with depressive disorders, the standardized mortality rate doubled for all cases of death but was increased 26 times for suicide.



The social and emotional costs of depression are also seen in the mental health of family members and caregivers.

Living with an elderly individual with depression was associated with high levels of psychiatric morbidity, particularly depression and anxiety symptoms, in caregivers.

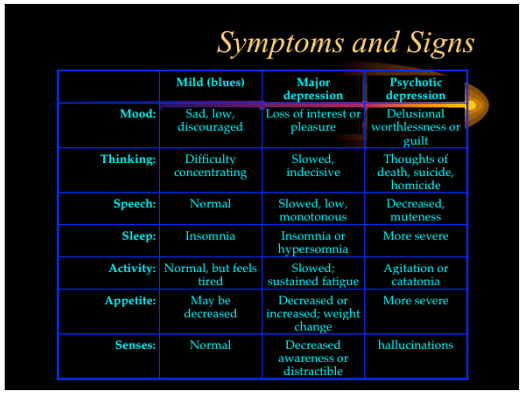
Parents with depression can negatively affect their children: large numbers of studies have linked maternal depression to infant fussiness, slow mental and motor development, school problems, lack of social competence, behaviour problems, and low levels of self-esteem in children.



Depression is more prevalent than other major public health problems and imposes significant costs on society.

In the U.S. in 1990, the total annual cost of derpession was estimated to be 44 billion US dollars; that's 803 gazillion Canadian dollars. Direct costs were 12 billion, 8 billion for mortality costs, and costs due to loss of productivity and absenteeism were 24 billion. These figures do not include out-of-pocket family expenses, costs of minor depression, or excessive hospitalization or diagnostic tests.

An Ontario study found the the total annual cost of depressive disorders to be almost half a billion dollars. Again, this does not take into account the impact on overall general medical service use and family burden costs.



A classic depression is easy enough to recognize, but there are enough variations that even experienced psychiatrists can be fooled.

The essential feature is feeling bad, and continuing to feel bad for too long.

This table presents the symptoms, that is, those things that the person complains of, and the signs, defined as what the doctor observes, for a mild depressive state, what most people would call the blues, and contrasts these with signs and symptoms of full-blown depression, and finally , with a severe depression with psychotic features.

Under low mood, I would add that depressed people may feel hopeless, that there is no future for them. The loss of interest or pleasure may be a complaint of "not caring anymore" or even an inability to experience pleasure. The family may notice withdrawal from friends and family, and a neglect of hobbies or interests.

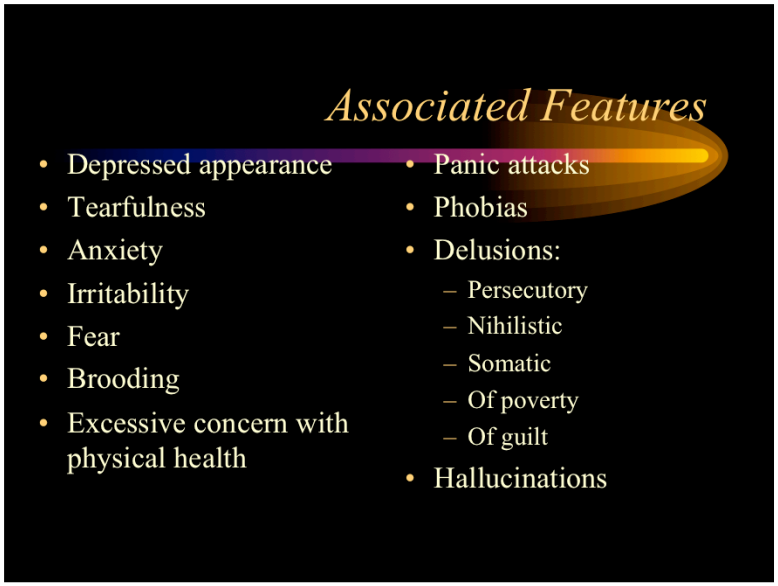
The so-called psychomotor retardation is most noticeable with slowed speech, often with long pauses before answering, and a low tone of voice, sometimes even a whisper.

Severely depressed people may begin to believe that they are evil or worthless, and that the world would be a better place without them. These people are at high risk for suicide. Sometimes these people will also kill their loved ones, in a misguided wish to spare them pain and suffering.

The classic pattern of insomnia associated with depression is early morning awakening. There is some evidence that this may actually be the brain's attempt to treat the depression, since it is known that late partial sleep deprivation is an effective treatment for depression. Unfortunately, these individuals that complain of waking at 3 or 4 am will often fall asleep at 5 or 6 am and then sleep until 8 or 9 am or even later, thus possibly perpetuating the depression.

Some people sleep more than usual. This pattern is often associated with increased appetite, especially craving for carbohydrates.

The fatigue experienced by depressed people is often crippling and pervasive, and occurs even in the absence of any physical

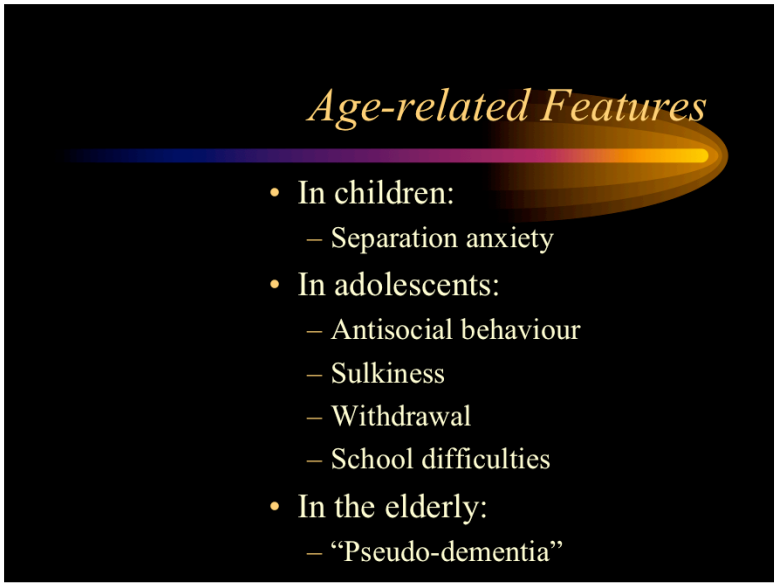


Most of these associated features don't need any explanation. However, I do want to mention some of the types of delusions that people with depression might have. As you know, a delusion is a false belief that you can't talk the person out of. It needs to be distinguished from beliefs which are held by a group that you are a member of, but often the boundaries are blurry. For example, many Christians look forward to going to heaven at the end of their lives. Is this much different from that sect that believed they were going to be picked up from the earth by aliens? How do you decide is it's a delusion or not?

Nihilistic delusions might be along the lines of, the world is going to be destroyed. Somatic delusions include the belief that you have cancer or some other serious illness, or that your insides are rotting.

Well-off individuals may believe that they are destitute, in a delusion of poverty. Finally, it is quite frequent that a depressed person begins to believe that he is being punished for something, such as padding an expense account or overstating your expenses when filing your income tax return.

Hallucinations when they occur are usually of short duration. The person may hear voices which criticize her and run her down for sins or shortcomings.

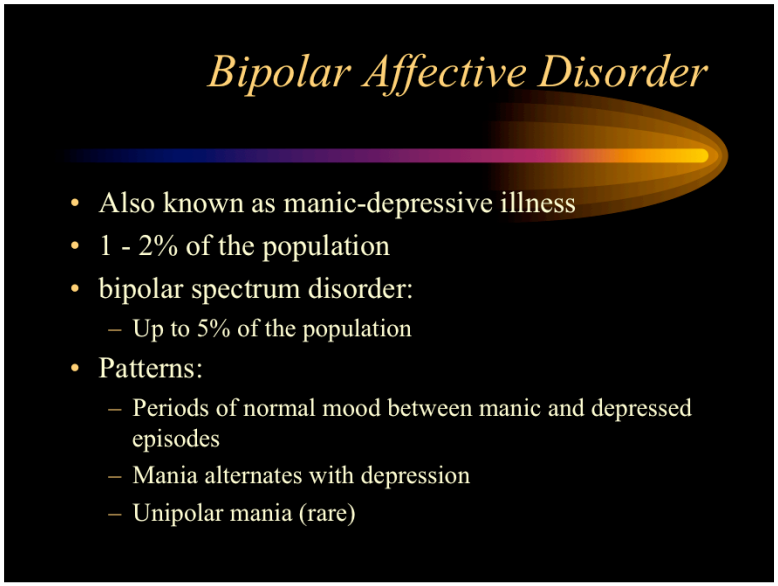


Depression looks different in different age groups. For example, in children, separation anxiety may cause the child to cling, to refuse to go to school, or express fears of dying or of the parents dying.

In adolescents, there might be antisocial behaviour, such as shoplifting or bullying others. Sulkiness, for example, refusing to do things with the family.

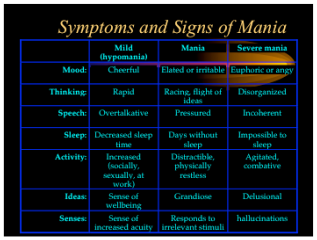
He might withdraw from social activities by retreating to his room. School difficulties are likely.

The elderly may have symptoms which suggest dementia, such as not knowing the time of day or the date, or where one is; difficulty remembering or concentrating, apathy or inattentiveness.



Many people who present with depression, may actually be suffering from what used to be called manic-depressive illness, now known as bipolar affective disorder. The proportion of depressives who are unipolar, as opposed to those who are bipolar, seems to be dropping all the time, as we become better at recognizing bipolar disorder. When we include milder forms of the disorder such as cyclothymia, and also include entities such as dysphoric mania, we get a prevalence of about 5% of the adult population who may have disorders in the bipolar spectrum.

Considering the classic form of bipolar illness, what some call Bipolar I, there are 3 main patterns, as shown on this slide.



It is often helpful in making a diagnosis of depression, to ask about any episodes of mania. The family may be able to provide information here.

Even though this table attempts to divide mania into three levels of severity, it usually considerably more complicated because there's so much overlap of symptoms and signs.

Mood in mania is often described as unusually good or high; there is often an infectious quality, called infectious good humour. Individuals who know the patient well are able to recognize the good humour as being excessive.

While we usually think of euphoria as the predominant mood in manic states, irritability or anger is probably even more common. Unfortunately, these people may be misdiagnosed as schizophrenic.

Manic speech is typically loud, rapid, and difficult to interrupt. It may be full of jokes, puns, plays on words, and amusing irrelevancies. It may become theatrical, with dramatic mannerisms and singing.

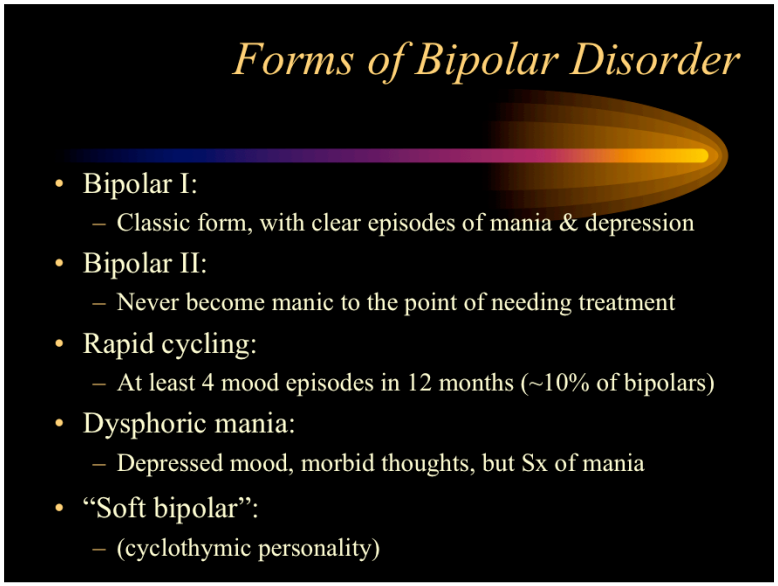
Flight of ideas is a nearly continuous flow of accelerated speech with abrupt changes from topic to topic. You can usually follow the rapid changes, which may be based on plays on words. In severe mania, the thinking becomes disorganized, and may resemble schizophrenic thought.

With regard to sleep, the manic individual may awaken several hours before the usual time, feeling full of energy.

The hyperactivity seem in mania often involves excessive planning of and participating in multiple activities, whether work-related, sexual, political, or religious. The person is usually excessive social, for example, calling friends or family at all hours of the day or night, perhaps running up incredible long distance telephone charges.

The grandiosity may be an uncritical self-confidence. For example, despite an absence of talent, the person may try to write a book, compose music, or sell an invention. When grandiosity becomes delusional, it may involve a belief of a special relationship with God or with wellknown political, religious, or entertainment stars. The person may believe he has a special mission in life. Frequently there are persecutory delusions - this is particularly likely to lead to a misdiagnosis of paranoid schizophrenia. Keep in mind, however, that, almost by definition, being paranoid also means being grandiose. After all, you have to be somebody pretty special if people are after you!

The manic person is unable to recognize how intrusive, domineering, and demanding his or her behaviour is. Frequently, the

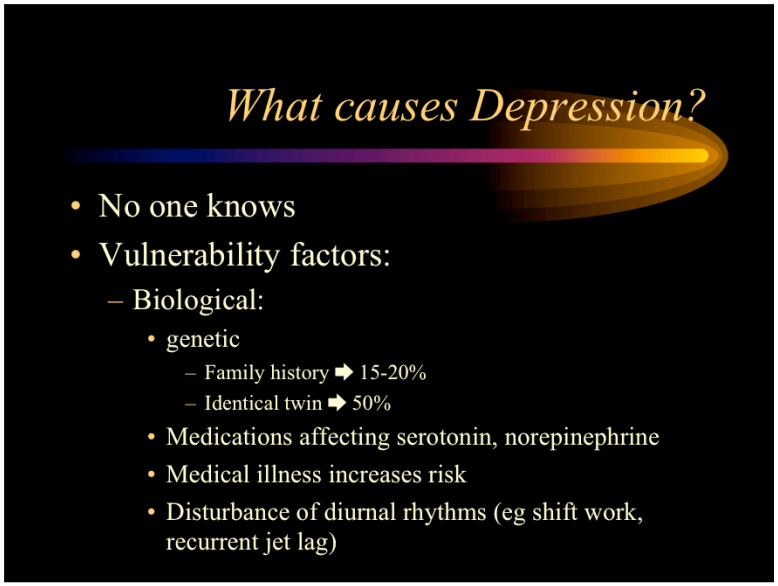


Besides the classic form of bipolar disorder, now referred to as Bipolar I disorder, the bipolar spectrum includes the entities shown on this slide.

Dysphoric mania I find the most interesting. These individuals will complain of being very depressed, even to the point of suicide. However, when talking to them, they present with agitation, anger and irritability. On the inpatient unit, these people wait for you by the nursing station. When you go by, they sort of grab you and say emphatically, "I'm so depressed, Doc! You gotta do something!" Their speech is often rapid and hard to interrupt. They may be aggressive with staff or other patients. They often sleep little, waking up early in the morning but not returning to bed as more typical depressives often do.

These patients in the past were often diagnosed as having an agitated depression. They didn't respond well to antidepressants, which would usually just increase the agitation. ECT was often the only effective treatment.

We now are more likely to recognize this pattern as dysphoric mania, and recognize that antidepressants would simply worsen the manic symptoms without helping the depressed mood. More effective are mood stabilizers, possibly in combination with antidepressants. An anticonvulsant medication called lamotrigine may be more helpful in this kind of disorder than other mood stabilizers.



No one knows why depression occurs. Some think that depression is the final outcome of a variety of clinical conditions.

Depression occurs in all cultures, races, and ages, and affects individuals at all income levels, amount of education, status, or gender.

However, at least four major factors are known to affect vulnerability to depression: biological factors; early life experiences; personality styles, and social support systems.

Inherited, that is, genetic, biological factors clearly contribute to vulnerability. About 15-20% of people with family histories of depression are likely to develop depression. For an individual with an identical twin who has suffered from depression, the likelihood of becoming depressed goes up to 50%.

Because medications which affect serotonin and norepinephrine systems in the brain have been found useful in treating depression, it is believed that these neurotransmitters are implicated in depression.

Because of correlations between certain physical illnesses and depression, additional biological factors are thought to be involved.

Finally, disturbance of circadian rhythms seems to be implicated. Sleep loss is known to trigger mania, and

In terms of certain early life experiences which increase vulnerability to depression, having suffered a major loss such as the death of a parent or extreme neglect before the age of 5 years, seems to be particularly important.

Poor relationships throughout childhood, or a history of abuse or neglect, often influences personality development in such a way as to increase vulnerability to depression in adulthood.

Personality styles are another influence. For example, highly self-critical individuals or those who suffer form chronic low self-esteem are more likely to become depressed.

Finally, the presence or absence of a social support system exerts a major influence on depression vulnerability. People who are isolated and lonely are at high risk not only for depression but particularly for suicide. Major life changes, such as divorce, a move to a new home, change of job, or the loss of a loved one, increase risk of depression for several months after the event.

Research shows that having even one close friendship helps protect against depression. Interestingly, marriage exerts a protective effect for men, but probably not for women.

Finally, stress. However, lots and lots of people have major stresses in their lives and do not become

Associated Medical Conditions

- Alzheimer's & other dementias
- Cancer
- Cerebral infarctions
- Cushing's Syndrome
- Multiple Sclerosis
- Myocardial Infarction

Associated Medical Conditions - 2

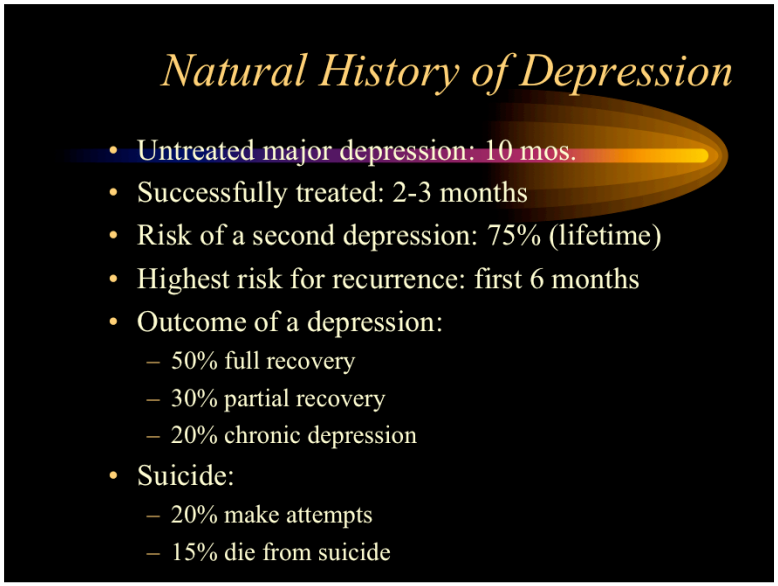
- Chronic Fatigue Syndrome
- Chronic pain
- Diabetes
- Fibromyalgia
- Hypo/hyperthyroidism
- Infectious diseases
- Irritable Bowel Syndrome
- Menopause/post-partum
- Metabolic imbalances (calcium, uremia)

Associated Medical Conditions - 3

- Migraines
- Nutritional imbalances: folate, vitamin B12, iron
- Parkinson's Disease
- Psychiatric illnesses: schizophrenia & related, obsessive compulsive disorders, panic disorder, substance abuse disorders
- Sleep apnea

Hormones include birth control pills.

Many other medications, including a large number of medications people take for high blood pressure or angina, are also believed to cause depression in some people.



Mild depressions typically last a few months and may go away by themselves. However, moderate and severe depressions tend to last significantly longer. On average, an untreated major depression lasts about 10 months which can be reduced to 2 to 3 months with successful treatment.

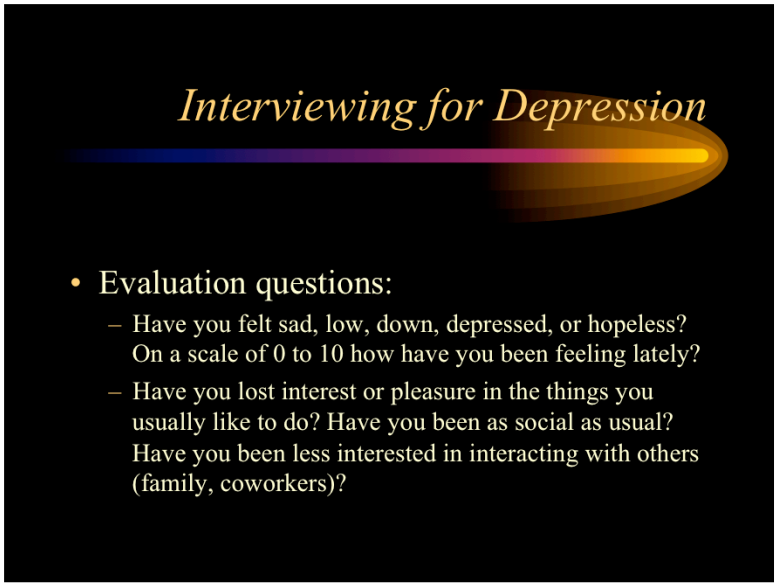
Once an individual has had a depression, he or she has a 75% risk of having another during their lifetime. The risk for recurrence is highest during the first 6 months after the first episode.

For those who have recurrent depressions, the average number of episodes over a lifetime is about 5.

Half of people who become depressed can expect full recovery from their episode. Another 30% will mostly recover, while the remaining 20% go on to have chronic depression.

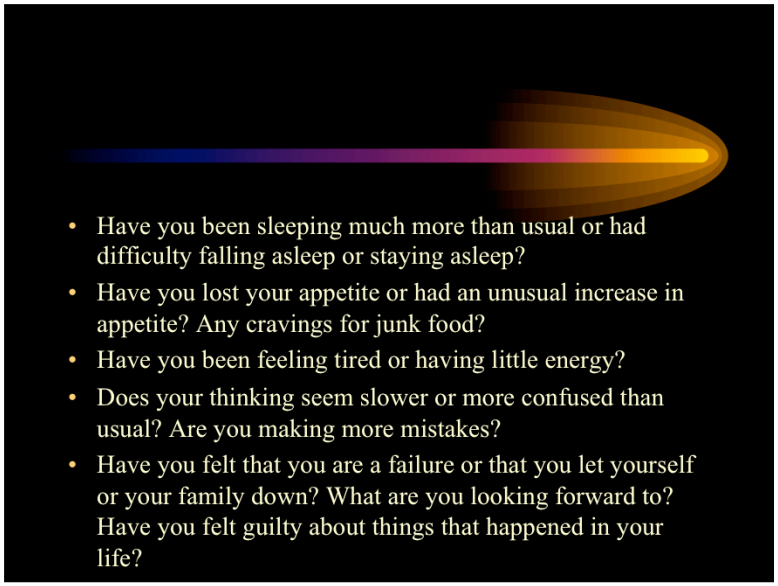
Suicidal thoughts are extremely common in individuals with depression. About 20% of people with major depression attempt suicide. Approximately 15% of people who experience severe recurrent depressions do die by suicide.

If you suspect that someone may be depressed, based on one or more of the factors as shown in this slide, how do you go about screening for depression?

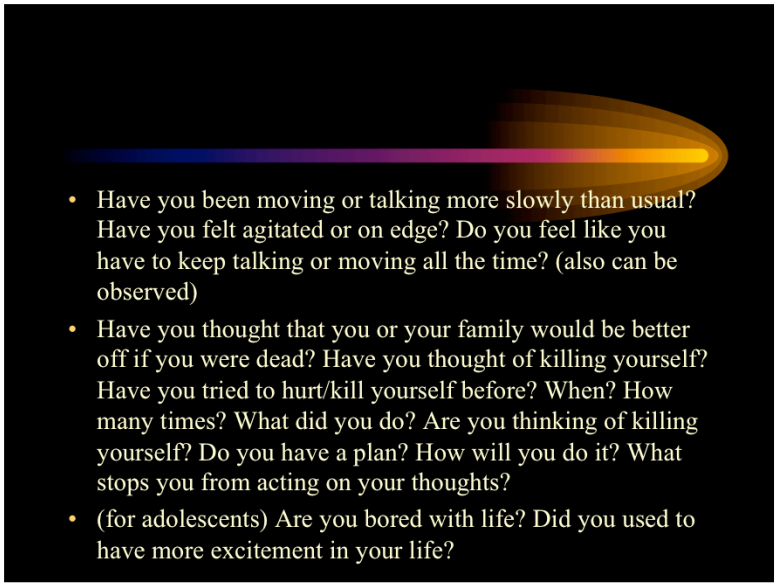


This slide and the next two provide a series of questions you might ask to assess whether an individual is depressed. The first two evaluate for depressed mood and loss of interest.

If the person answered yes to one or both of these questions, go on to the following questions.



These questions find out about sleep disturbance, appetite disturbance, loss of energy, difficulty concentrating, feelings of worthlessness...



Psychomotor retardation or agitation, and finally, suicidal thoughts. Note that for adolescents, suicidal tendencies may manifest as boredom.

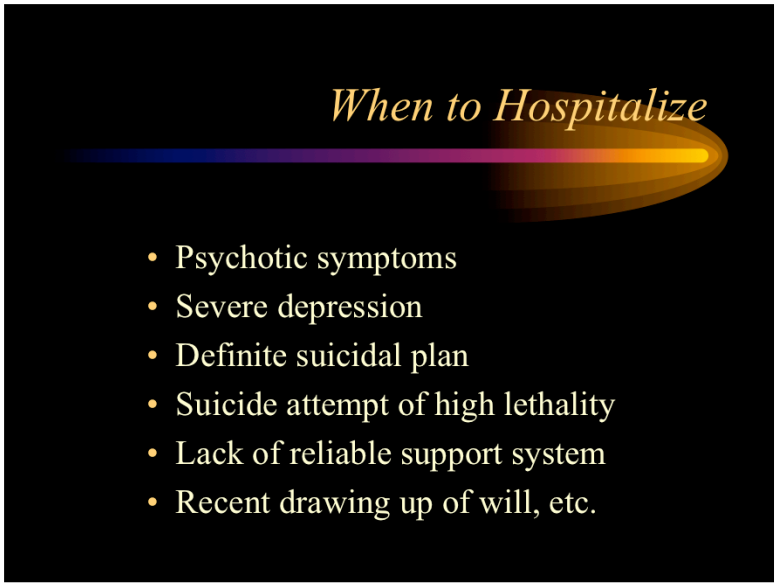
That makes a total of 9 major symptoms for depression. If the person has experience 5 or more of these, for at least two weeks, we can look at this flowchart...

Risk Factors for Suicide

- Male
- Caucasian, aboriginal
- Elderly, adolescent
- Isolated, withdrawn, alienated
- Unemployed
- Single, divorced, separated
- Failure of support systems
- Prior attempts
- Impulsive behaviour
- Recent discharge from hospital
- Family history of suicide or substance abuse

Risk Factors for Suicide - 2

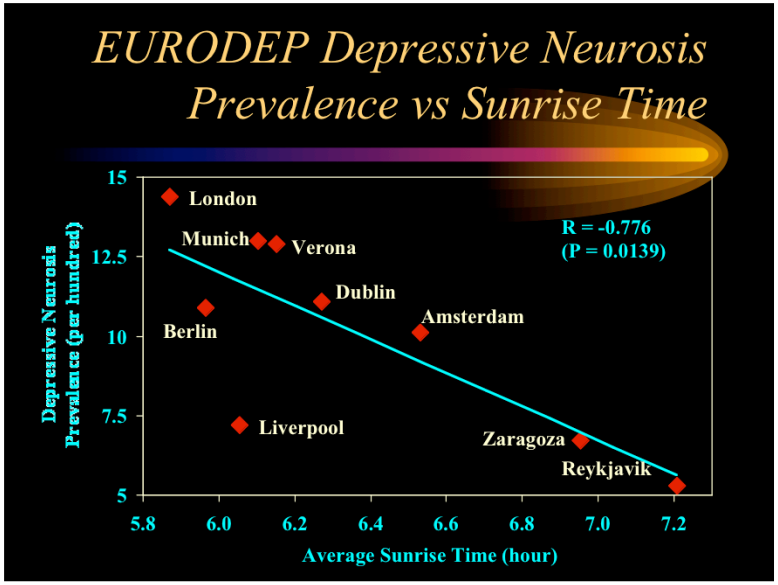
- Not in touch with reality (psychotic)
- Severe hopelessness
- Manic patient becoming depressed
- Presence of agitation, lack of self-care
- Alcohol or substance abuse
- Borderline or antisocial personality traits
- Chronic psychiatric disorder
- Concomitant or chronic medical illness (eg cancer, HIV, multiple sclerosis)



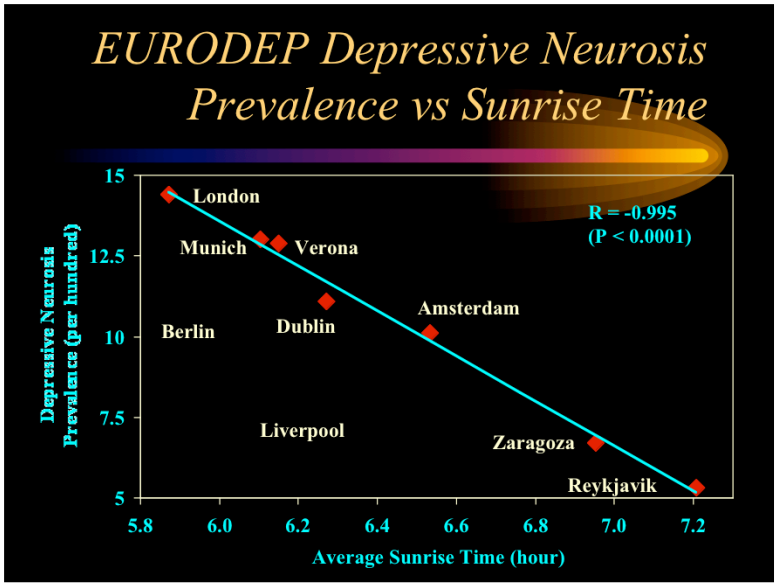
A suicide attempt of low lethality, but that failed to produce a positive situational change, is also an indication for hospitalization.

Involuntary Admission

- Based on:
  - Threats or attempts to cause bodily harm to self
  - Violent behaviour or threat of violent behaviour toward another person
  - Lack of ability to care for self
- Physician believes that:
  - Person is apparently suffering from a mental disorder that may result in serious bodily harm to self, another person or imminent serious impairment to self.



If this were the only study for which this relationship existed, it wouldn't mean much. But a study which was published this past April in the British Journal of Psychiatry, termed the EURODEP Programme, looked at the prevalence of affective disorder in the geriatric population in 9 European cities. Again, when I plotted the prevalence figures for depressive neurosis against average sunrise times, I got a Pearson correlation coefficient of -0.776.



When I take out the two outliers, Berlin and Liverpool, the regression line looks like this. The Pearson correlation coefficient now becomes -0.995, almost a perfect straight line correlation.

What determines when the sun rises for a given geographic location? The most important factor is the location of the city within its time zone: a city at the eastern edge of its time zone will have sunrise an hour earlier than a place at the western end of that time zone.

This has an important public health implication: if it were shown to be true that getting up early helps to prevent depression, then it would make sense to shift the borders of time zones, or, even easier, have daylight saving time all year round. This measure, which was applied in the U.S. during both world wars and again in 1973-74 as an energy saving measure, would cause the sun to rise 0.425 hours later on average. For the ECA study, this translates into a decrease in depression prevalence of about 2 people out of every hundred.

In the absence of such public health measures, individuals can always choose to get up earlier. This leads us to a treatment approach.

Finally, how do we go about treating depression?

The mainstay of treatment is medication. We are fortunate in having a very wide array of antidepressants to choose from, ranging from the older monoamine oxidase inhibitors which are rarely used nowadays, to the tricyclics which are now being supplanted by newer drugs, especially the so-called SSRIs, which stands for Selective Serotonin Reuptake Inhibitors. Unfortunately, although there are important differences between antidepressants in terms of side effects, it remains difficult to choose the most appropriate drug because we don't know much about which drug will suit which patient. And they all tend to take 2 to 3 weeks before they start to work; that is, if they work at all for a given patient. Antidepressants in general are effective in about 60-70% of depressed patients. Compare this to placebo which is effective in about 30-40% of cases.

Other treatment approaches are shown on the slide. I want to make a couple of points: first, I have had a fair amount of success in treating depression by getting people up out of bed early, for example at 6 am. Since many people have difficulty getting up early, ritalin taken at 6 am helps. It has few side effects, and it starts to work the same day.

Electroconvulsive treatment I consider a treatment of last resort. However, it is very safe, and can be given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