

Depression and Diabetes

Breaking the Vicious Cycle

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Thanks to Dr. William Polonsky

The Depression & Diabetes Vicious Cycle

**Diabetes can increase the risk and
persistence of depression**

**Depression can make it harder to
manage diabetes**

Outline

- **What to know about diabetes**
- **The Diabetes/Depression connection**
- **Breaking the Cycle – treatment considerations**
- **Goal Setting with those with diabetes and depression**

Diabetes: Facts & Fictions

A QUIZ!!!

FACTS AND FICTIONS

1. Diabetes is the leading cause of adult blindness, amputation and kidney failure. True or false?

A. False. To a large extent, it is *poorly controlled* diabetes that is the leading cause of adult blindness, amputation and kidney failure.

**Well-controlled diabetes is the leading cause of...
nothing.**

THE TRUTH ABOUT DIABETES

2. Diabetes is not that serious, especially if you feel fine. True or false?

A. False. Diabetes IS serious, no matter how you feel.

Even if you feel fine, poor metabolic control **DRAMATICALLY** increases your risk of long-term complications:

- eyes, kidneys, legs, stomach and heart

THE TRUTH ABOUT DIABETES

3. There is nothing you can do to slow or prevent long-term diabetes complications. True or false?

A. False. You CAN slow or prevent complications.

The UKPDS showed that good metabolic control can **DRAMATICALLY** delay or prevent long-term complications and improve quality of life.

THE TRUTH ABOUT DIABETES

4. Diabetes is caused by neglecting yourself.
True or false?

A. False. Diabetes is NOT caused by neglecting yourself.

Genetics and lifestyle work together to cause diabetes. If you ain't got the genes, it ain't gonna happen.

THE TRUTH ABOUT DIABETES

5. Managing diabetes well means you must live a restrictive and deprived life. True or false?

A. False. You DON'T have to live a restrictive, deprived life.

With good diabetes care, you can feel better every day AND you will have plenty of choices.

THE TRUTH ABOUT DIABETES

6. Anyone can manage diabetes well if they just have enough willpower. True or false?

A. False. Willpower ISN'T enough.

Rather than just trying harder and harder, it is important to identify your personal diabetes-related needs (work smarter, rather than harder).

THE TRUTH ABOUT DIABETES

7. You can tell how well you are doing with your diabetes by:

- a. how well you are eating. True or false?
- b. how much medication you are taking. True or false?
- c. how you are feeling. True or false?

A. ALL are false. The best way to tell is by keeping a close eye on your clinical markers— including A1c, blood pressure and cholesterol.

WHAT IS DIABETES?

- **Blood glucose that is too high**
 - glucose is a type of sugar
 - insulin is needed to balance blood glucose
- **Two main types of diabetes**
 - Type 1, **Always** needs insulin by injection
 - Type 2 (90 - 95%), **May** need insulin by injection

WHAT HAPPENS AFTER EATING?

- Most food is broken down into glucose and other simple sugars
- Glucose is absorbed into the blood stream and used by cells for *energy*
- Cells need glucose to work



WHAT HAPPENS NEXT?



- Blood glucose levels rise after eating
- Insulin is then released from the pancreas
- Insulin, like a hotel doorman, opens the cells to glucose
- Glucose then moves from the blood stream into the hungry cells
- An open cell is a healthy cell

WHY TYPE 2 DIABETES?



- **Chronically high blood sugar levels happen because:**
 - Insulin resistance, cells are ignoring the body's insulin
 - Insulin insufficiency, pancreas is “pooping out”
- **Type 2 diabetes is MORE than just high blood sugars**

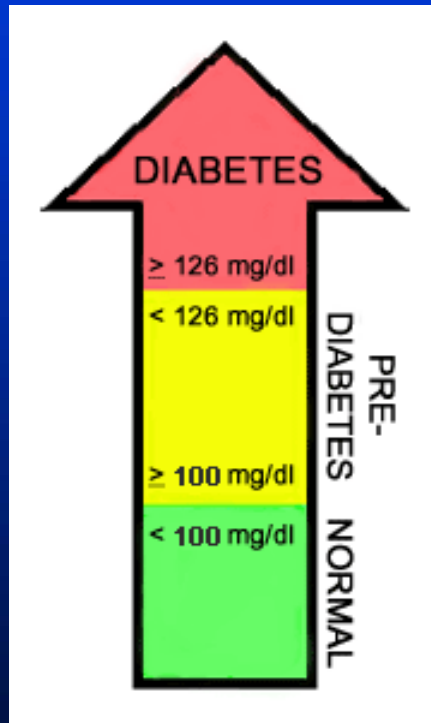
Know your ABC's

ABC's of Diabetes

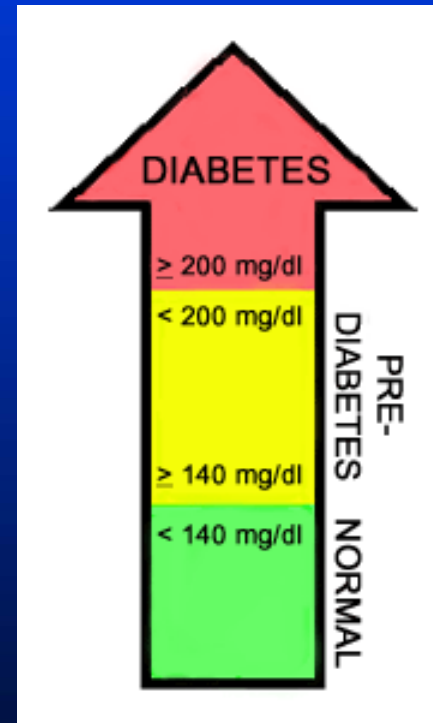
- **A1C** – usual goal <7%
- **Blood pressure**- 130/80
- **Cholesterol**- LDL <100

How do I know if I have diabetes?

FPG



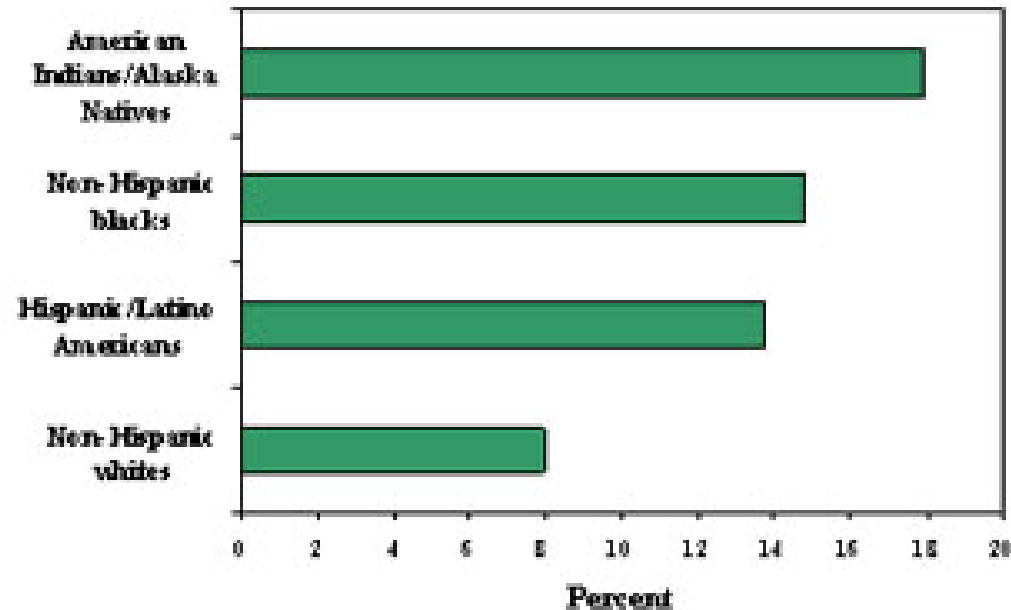
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Diabetes Prevalence

- In U.S., all ages (2005), 20.8 million or 7% of population
 - Diagnosed: 14.6 million people
 - Undiagnosed: 6.2 million people

Estimated age-adjusted total prevalence of diabetes in people aged 20 years or older, by race/ethnicity— United States, 2005



Source: For American Indians/Alaska Natives, the estimate of total prevalence was calculated using the estimate of diagnosed diabetes from the 2003 outpatient database of the Indian Health Service and the estimate of undiagnosed diabetes from the 1999–2002 National Health and Nutrition Examination Survey. For the other groups, 1999–2002 NHANES estimates of total prevalence (both diagnosed and undiagnosed) were projected to year 2005.

Prevalence Rates

American Indians:

- **Over TWICE as likely than non-hispanic whites to have diabetes (13% vs 6%).**
- **Most common in American Indians in the Southern Arizona, affecting 27%**
- **15% of those over 20 years old receiving care from Indian Health Services have diabetes**

**African Americans:
13.3% of population**

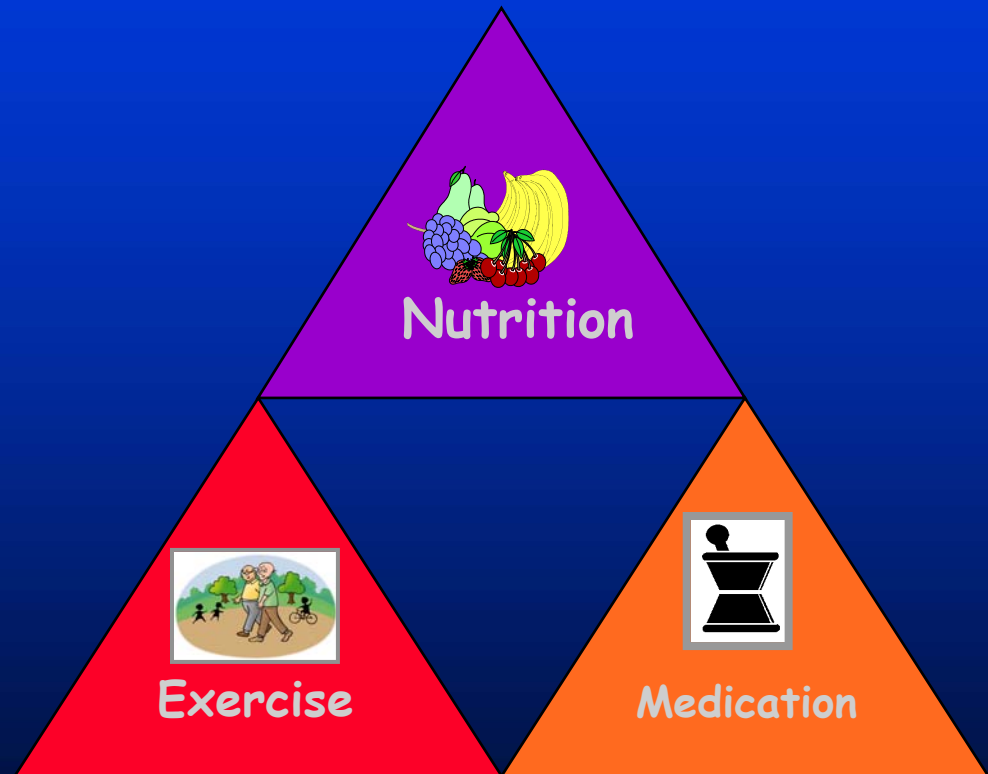
Latinos:

12% of population

**25-30% of Hispanics over 50 have
diabetes**

HOW IS DIABETES TREATED?

- **Food**
 - timing
 - amount
 - type of food
- **Exercise**
- **Medications**
 - pills
 - insulin



Beliefs about Diabetes

Hispanics & Fatalismo

BOTTOM LINE

No one is unmotivated to live a long, healthy life

But lots of obstacles arise (like straws on the camel's back)

Removing even a single straw can change everything!



Obstacles to Good Self-Care

- Poor social support
- Functional health literacy
- Unachievable self-care plans
- Harmful health beliefs
- Lack of access to care
- Lack of knowledge/skill
- Common environmental barriers
- **DEPRESSION**

What is Depression?

- Is both a biological and psychological condition**
- Involves changes in neurotransmitters**
- Exact cause is unknown, but involves a complex interaction of genetic factors and life experiences**
- Affects thinking, feelings, and behavior and can affect the body's functioning**

Symptoms of Major Depression

Major Depression: for a period of at least 2 weeks:

- Persistent sadness, irritability, or “empty” mood
- A loss of pleasure or interest in things you used to enjoy
- Decreased energy, fatigue and feeling “slowed down”
- Difficulty concentrating and making decisions
- Feelings of worthlessness, inappropriate guilt, or helplessness
- Insomnia, early-morning awakening, or oversleeping
- Changes in appetite
- Nervousness or restlessness
- Recurrent thoughts of death or suicide

Six Things To Know

1. **PREVALENCE.** Depression is widespread among patients with diabetes.
2. **DEPRESSION IMPACTS DIABETES MANAGEMENT.** Depression negatively influences self-care, medical morbidity, risk of fatal and non-fatal MI's, sudden death, development of complications, hospitalization rates, and health care costs.

Six Things To Know

3. DIABETES IMPACTS DEPRESSION.

Both biological and psychosocial elements of the diseases may exacerbate depression.

4. IDENTIFYING DEPRESSION. It is relatively easy to screen for depression in diabetes and to address the issue with patients.

Six Things To Know

5. **TREATING DEPRESSION.** Effective treatments have been demonstrated. More effective treatment may require attention to illness-related distress.

6. **STRATEGIES AND REFERRALS.** Attending to depression in patients with is worth the effort. There are some simple strategies for helping your patients with depression.

1. Depression is highly prevalent in co-morbid chronic illness

In recently published study (Moussavi et al, 2007), The World Health Organization surveyed 245,404 people in 60 countries:

- **1-year prevalence rate for depression alone was 3.2%**
- **Whereas, with one or more chronic physical diseases 9.3% to 23% had depression**

Diabetes and Depression

- People with diabetes are nearly twice as likely to develop depression than those who do not have chronic illness (20.5% vs 11.4%)
- The course of depression in diabetes may be longer and more severe
- More likely to develop relapses

Risk Factors

- **Presence of multiple complications**
- **Financial stress**
- **Less than a high school education**
- **Being single**
- **Female**
- **Same risk for both Type 1 and Type 2**

Why is it especially important to recognize depression in those with medical illness?

The 2007 study by the World Health Organization (Moussavi, et al) found that:

- After adjusting for socioeconomic factors and chronic physical disease, depression had the largest effect on worsening mean health scores compared to other chronic conditions**
- Consistently across countries and demographic variables, those with depression and comorbid chronic disease had the worse health scores of all disease states.**

2. Depression affects Diabetes

- **Associated with less glycemic control (A1c 1.8 – 3.3 higher in those depression)**
- **Associated with factors linked to poor control:**
 - **Physical inactivity**
 - **Smoking**
 - **Obesity**
 - **Less diabetes knowledge**

2. Depression affects Diabetes

- **Poor adherence to self-care behaviors**
 - Diet higher in fat and carbohydrate
 - Less likely to monitor BG
 - More likely to skip medications

- **Increases Cardiac Risk Factors**

- **People with a history of depression are 2X as likely to later have an MI (heart attack)**
- **Depression after an MI is an important predictor of mortality**

2. Depression affects Diabetes

- **Increases risk of complications**
 - **Over a 10 year period, those with depression had a three times higher incidence of coronary artery disease and retinopathy**

2. Depression is associated with:

- **Decreased quality of life: depression increases the distress experienced, and increases impairment in functioning**
- **Decreased medical adherence (compliance)**
 - poor self-care
 - not taking medications/treatment,
 - poor diet (high carb, high fat)
 - poor medical follow-up

2. Depression is associated with (continued):

- **Decreased immunological functioning:**
 - decreases in all measures of lymphocyte function
 - higher number of circulating white blood cells
 - lowered natural killer cell activity

(Herbert & Cohen, 1993)

2. Depression is associated with (continued):

Increased functional disability

- poorer physical, psychosocial, and role functioning, and an increased number of disability days

major depression - 4.78 times greater

- minor depression - 1.55 times greater

(Broadhead et al, 1990)

Depression is associated with (continued):

- Increased medical utilization**
 - increased office visits**
 - extra procedures**
 - increased overall utilization**
 - an increased annual medical cost**

(Henk et al, 1996)
- Longer hospital stays** **(Saravary et al, 1991)**

2. Depression is associated with (continued):

- **Increased medical morbidity
(suffering)**
 - increased medical symptoms
 - more distress
 - increased pain

(Lustman et al, 1986)

2. Depression is associated with (continued):

Increased mortality:

- **Following an MI: independent risk factor for mortality at 6 months. At least equivalent to medical risk factors (i.e. history of previous MI)**

(Frasure-Smith, Lesperance, & Talajic, 1993)

- **For depressed outpatients, death due to cardiovascular disease is more than doubled**

(Rabins, Harvis, Koven, 1985)

- **Diabetes & Depression -**

Followed people after 8 years and found:

-Having diabetes or depression independently increased risk of mortality,

-BUT the two together increased risk 2.5X those without either illness

(Zhang et al, 2005)

Diabetes & Depression: A Dangerous Combination

Followed people after 8 years and found:

- Having diabetes or depression
independently increased risk of mortality,**
- BUT the two together increased risk 2.5X
those without either illness**

3. Diabetes Impacts Depression

Think how discouraging it is to fail at something you really wanted to do. Then consider what it must feel like to have diabetes and be failing at something you never, ever, wanted to do in the first place.”

-- J.W. Hoover, 1988

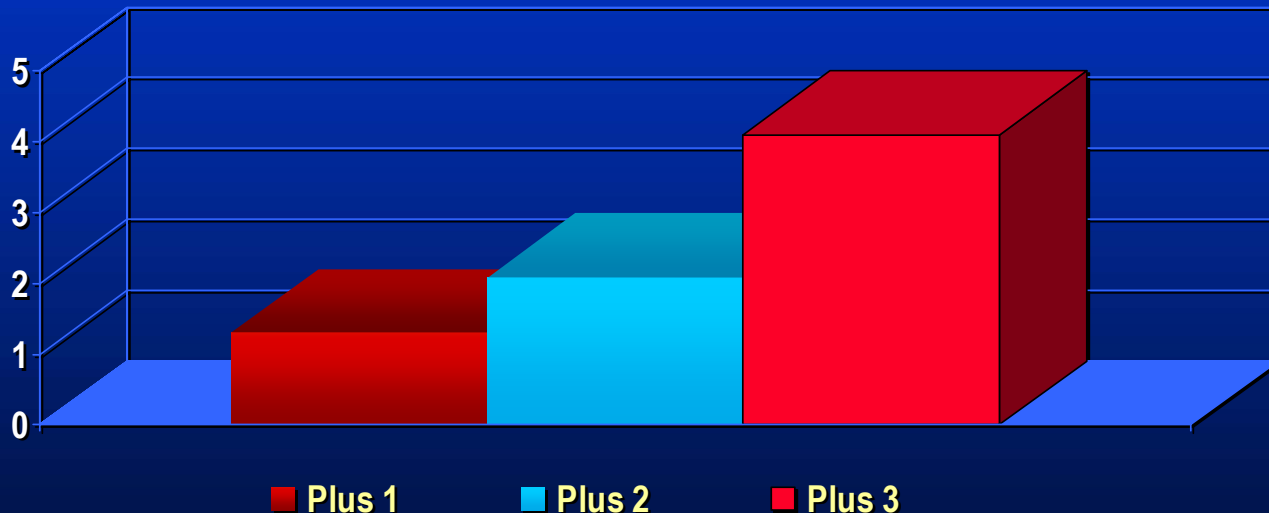
3. Diabetes Impacts Depression

- CVD-linked neurovascular changes
- Genetic influences
- Elevated blood glucose levels
- Psychosocial burden
- **Illness burden**
 - **Long-term complications, chronic pain and co-morbid disease**

Influence of Diabetes and Comorbid Disease

HTN, CAD, chronic arthritis, stroke, COPD, and ESRD; n = 1794

Major Depression, Adjusted Odds



Egede, 2005

4. Why is Depression Often Overlooked or Not Diagnosed?

The diagnosis of depression is missed 50% of the time in primary care settings.

All symptoms used to make the diagnosis potentially overlap with symptoms of: medical illness, treatments, hospital environment, delirium and other cognitive disorders, stress, and loss.

Pseudo-empathy - depression as expected reaction to medical illness. This is the “Of course she’s depressed, she has _____”

Limited Appointment Time

Uncomfortable – not your area of training

Afraid of opening a “can of worms”

Ethnicity and Depression: Diagnostic Issues

- **Slightly Higher Prevalence Rates reported among minority groups (Cooper et al, 2003)**
 - Hispanics: 10.3%
 - African Americans: 9.7%
 - Whites: 8.3%
- **Underdiagnosed and receive less care: May present more “somatic” complaints, may have more mistrust of healthcare providers, more stigma of mental health issues**

(Sirey et al, 1999; Bhui et al, 2001; Van Hoorhees et al, 2005; Miranda & Cooper, 2004)

4. Screening for Depression: Patient Health Questionnaire (PHQ-9)

- **Simple Screener using DSM-IV criteria**
- **Helps determine level of severity**
- **Gives “data” of severity for follow-up**
- **Allows you to start a conversation about depression**

(ALSO – Spanish version)

The Two Cardinal Symptoms

“During the past month, have you often:

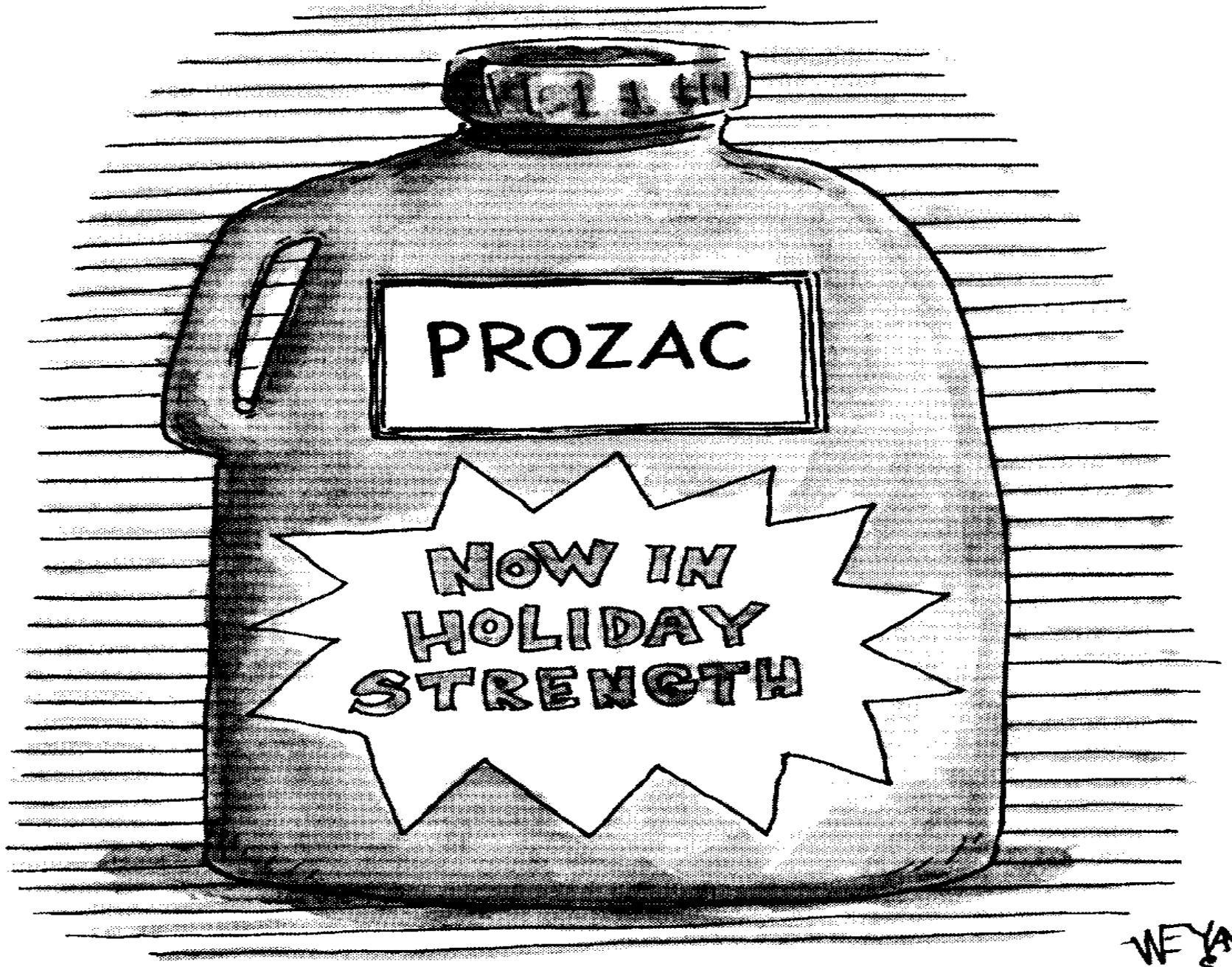
- been bothered by feeling down, depressed or hopeless? (or irritable)**

OR

- had little interest or pleasure in doing things?”**

5. Depression is TREATABLE!

**You can help break the vicious
circle**



PROZAC

NOW IN
HOLIDAY
STRENGTH

WEYANT

Importance of Treatment

- **People who get treatment for co-occurring depression often experience: improvement in their overall medical condition and a better quality of life.**
- **More than 80 percent of people with depression can be treated successfully with medication, psychotherapy or a combination of both.**
- **Early diagnosis and treatment can reduce patient discomfort and morbidity, and can also reduce the costs associated with misdiagnosis.**

Ethnicity and Depression: Treatment Issues

- Hispanics are *less* likely to find antidepressant medication acceptable, and *more* likely to find counseling acceptable than white persons.
- African Americans are less likely than white persons to find antidepressant medication acceptable.
- Racial and ethnic differences in beliefs about treatment modalities were found, but did not explain differences in the acceptability of depression treatment.
- Clinicians should consider patients' cultural and social context when negotiating treatment decisions for depression.

(Cooper et al, 2003)

Treating Depression

- **Pharmacotherapy- 50% will need to try another antidepressant (consider psychiatry after few attempts, suicidality, co-occurring anxiety disorder or substance abuse issues)**
- **Psychotherapy**
 - **Cognitive Behavioral Therapy (CBT)**
 - **Problem-Solving Therapy**

Treating Depression

- **EXERCISE!**

In recently published study (Blumenthal, 2007) regular aerobic exercise (30 minutes 3 times a week) was as effective as Setraline in remitting symptoms of MDD.



6. Strategies for Helping Your Depressed Patients with Diabetes

1) Educate them about depression

- Depressive disorders can make one feel exhausted, worthless, helpless, and hopeless. Makes concentration, follow thru and decision-making difficult.**
- Makes some people feel like giving up. It is important to realize that these negative views are part of the depression and typically do not accurately reflect the actual circumstances AND are TREATABLE.**

2) Negotiate Treatment

- **Recommend “standard of care” for the person’s depression level**
- **Ask “What are you willing to try?”**
- **Encourage a time-limited “experiment”**
- **Use community resources**
- **Follow-up**

3) Provide referrals!

Local Resources

- **Crisis line for Maricopa County, (602) 222-9444 or 1-800-631-1314**
- **Banner Health has resources and support groups, they have a 24 hr. helpline 1-800-254-HELP (4357).**
- **Community information and referral line that has a listing of all the social services available in AZ: 602-263-8856.**

Other resources

-National Institute of Mental Health
Information Resources and Inquiries Branch
Depression brochures: 1-800-421-4211
Website: <http://www.nimh.nih.gov>

-National Foundation for Depressive Illness, Inc.
1-212-268-4260; 1-800-239-1265
Website: <http://www.depression.org>

-National Mental Health Association
1-703-684-7722; 1-800-969-6642
Website: <http://www.nmha.org>

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PROGRAMS

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AND LINKSYOUR STORIES
ABOUT LIFE
WITH DIABETESLATEST
& RECENT

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addressing

Real-life aspects of Diabetes



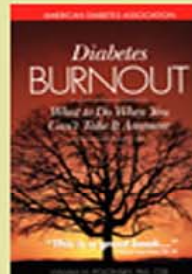
Welcome to the **Behavioral Diabetes Institute (BDI)**, the world's first organization dedicated to tackling the unmet psychological needs of people with diabetes. The BDI offers an array of evidence-based clinical programs, all designed to help people overcome the emotional and behavioral obstacles to living well with diabetes. The BDI, a non-profit corporation, is committed to:

- helping people master the unique challenges of diabetes
- conducting behavioral research in diabetes
- providing health care providers with the specialty behavioral training necessary for managing diabetes effectively.

The programs at BDI are designed to help participants develop a more hopeful outlook on life and greater confidence and control over diabetes.

STRESSED OUT
BY DIABETES?

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[Diabetes Burnout](#)

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"This book is uplifting, refreshing, direct, humorous too! It's like I wrote the book for me..."
[...read](#)

"I would recommend this book to anyone and everyone who had read it the beginning of my diabetes, which..."

4) Help them set a small, specific, and realistic goal for moving forward

- **Set realistic goals in light of the depression and help patients assume a reasonable amount of responsibility.**
- **Help break large tasks into small ones, set some priorities, and remind them do what they can as they can.**
- **Expect mood to improve gradually, not immediately. Feeling better takes time.**

Successful Goal Setting

- Collaborate with client to set *specific* goals
- Make first steps SMALL!
- Actions to take (not stop)
- Think about:

WHAT are you going to do?

WHERE are you going to do it?

WHEN are you going to do it?

WHY are you bothering?

- Consider OBSTACLES & problem solve
- How will you measure success?
- Can you get support for goals?

HELP person think about what small changes will get the most “BANG FOR YOUR BUCK”

Diabetes-Related Goals

The Problem: So Much to Do!

- Eat more fruits and vegetables
- Limit sweets and saturated fat
- Eat 3 meals a day
- Eat at the same times each day
- Be more physically active
- Check blood glucose
- Take your medications on time, every day
- Have an eye exam
- Check your feet every day
- Quit smoking
- And on and on and on...

BACK ON TRACK FEEDBACK

Name: _____

FID #: _____

The tests	Usual goals <i>Your score should be:</i>	Your results	How am I doing	
			At or better than goal	Not yet at goal
A1c	7.0% or less			
Blood Pressure	130/80 or less			
LDL	100 or less			

Diabetes Goals: BANG for your BUCK

- **Quit Smoking**
- **Getting on effective medication and taking them regularly!**
- **Know your ABCs**
- **Exercise**
- **Diabetes Education**

Depression-Related Goals

Depression Goals

- Physician's assessment
- Referral to Psychiatry and/or psychotherapy
- Exercise
- A small goal for improving blood sugars
- pleasurable activities
- getting support

Let's Practice!



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addressing
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"This book is uplifting, refreshing, direct, humorous too! It's like I wrote the book for me...read"

"I would recommend"

Behavioral Diabetes Institute

- . Interested in upcoming programs?**
- . Your questions**
- . Your stories**

Contact us at: info@behavioraldiabetes.org

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To learn more about our programs for
patients and providers:

www.behavioraldiabetes.org