PRE-DIABETES

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Powerpoint Outline

- Types of Diabetes
- Alarming Statistics
- Complications and Risks
- Interpreting Diagnostics
  - Prevention
- National Diabetes Prevention Program
  - Lifestyle Change Programs
  - How to help
- Additional resources
Quick Review:

Diabetes is a disease in which the body either does not make or does not use insulin appropriately, causing increased levels of glucose in the blood, thereby starving the cells of their energy source.
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<th>Types of Diabetes</th>
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<td><strong>TYPE 1</strong></td>
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<tr>
<td>- Autoimmune disease</td>
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<td>- Body attacks pancreas</td>
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<td>- Beta cell destruction</td>
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<td>- Managed with insulin</td>
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<td>- No cure nor prevention</td>
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<td>- Often seen in children and teens although can occur at any age</td>
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<td>- 5% of DM population</td>
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<td><strong>TYPE 2</strong></td>
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<td>- Commonly develops later in life (after age 35) although seen earlier now</td>
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<td>- Pancreas produces insulin but it’s not enough or not used correctly. Cells get resistant</td>
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<td>- Can be managed with insulin, oral meds, lifestyle</td>
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<td>- Majority of DM cases (90-95%)</td>
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<td><strong>GDM</strong></td>
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<td>- Gestational Diabetes Mellitus</td>
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<td>- High blood glucose levels during second half of pregnancy</td>
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<td>- Possibly due to increase in insulin-blocking hormones produced by placenta</td>
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<td>- Increases r/o T2DM development (5-10% after labor 35-60% w/in 10-20 years)</td>
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Types of Diabetes

**OTHERS**
- Less than 5% of all cases
- Monogenic Diabetes Syndromes (mutation of single gene-inherited)
- Diseases of the exocrine pancreas e.g. Cystic Fibrosis
- Drug or chemical-induced diabetes
- Maturity Onset DM of the Young
- Latent Autoimmune DM in Adults

**PRE-DIABETES**
- Blood glucose levels higher than normal but not high enough to be diagnosed with DM
- Reversible with lifestyle
- Increases r/o T2DM
The Focus: Pre-Diabetes

- No clear symptoms
- 86 million people in U.S. have PDM (1 in 3 adults)
- In CA alone, 55% adults have PDM or DM
- Of these people, 9 out of 10 (90%) don’t know they have it
- Without intervention, 15-30% will develop T2DM w/in 5 yrs.
- DM currently 7th leading cause death in U.S.
- CA has greatest number of annual new cases (208,000) (from 1995-1997 to 2005-2007)
- Cost of DM is $24.5 billion in CA alone; >174 billion in U.S.
Risk of Complications

Diabetes is a serious, lifelong disease which increases risks:

- Kidney Failure *
- Stroke *DM-leading cause of complication
- Cardiovascular disease
- Heart attack
- Blindness *
- Amputations of legs, feet, toes *
- Ulcers and wounds
Risk Factors for PDM

- ≥ age 45
- Overweight or obese (BMI ≥25, ≥23 for Asians)
- Family history of DM
- African American, Hispanic/Latino, American Indian, Asian American, or Pacific Islander
- HTN (or taking medications for HTN)
- Physically inactive
- Diagnosis of GDM
- Low HDL cholesterol (<35 mg/dL) or high triglycerides (>250 mg/dL)
- History of Polycystic Ovary Syndrome (PCOS) or CVD
Diagnostics for Pre-DM

**A1C: 5.7%-6.4%**
(follows BG levels for 2-3 months-no fasting)

**Fasting Plasma Glucose: 100-125 mg/dl**
(8 hours fast before test)

**Oral Glucose Tolerance Test**
(at 2 hours: 140-199 mg/dl)
(BG before and 2 hrs post drink)
Pre-diabetes does NOT mean development of DM is inevitable

1. Decreasing body weight by 5-7% (10-15lbs for 200lb person)
2. Incorporating 150 minutes/week of moderate-intensity activity (brisk walking for 30 minutes 5x/week)

Can cut chances of developing T2DM by 58% (71% for >age 60)
Or delay onset of T2DM
How?

The National Diabetes Prevention Program (NDPP) is a partnership of public and private organizations working to reduce prevalence of PDM and T2DM.

The organizations make it easier for people with prediabetes to participate in evidence-based, affordable, and high-quality lifestyle change programs to reduce their risk of type 2 diabetes and improve their overall health.
National DPP

Partners:

- Federal agencies
- State and local health departments
- National and community organizations
- Employers
- Public and private insurers
- Health care professionals
- University community education programs
- Businesses that focus on wellness

National DPP

Goals:

- Deliver Centers for Diseases Control and Prevention (CDC)-recognized lifestyle change programs nationwide
- Ensure quality and adherence to proven standards
- Train community organizations that can run the lifestyle change program effectively
- Increase referrals to and participation in CDC-recognized lifestyle change programs
- Increase coverage by employers and public and private insurers
The key component of the NDPP is the Lifestyle Change Program:

- CDC-approved curriculum (lessons, handouts, resources)
- Lifestyle coaches, specially trained, to teach skills, motivate, and help set goals in an uplifting and supportive way
- Support groups - people working towards similar goals
- Online, in-person, or hybrid/combination programs
- 1 year long commitment (2 six-month long phases)
Lifestyle Change Programs -
Phase One (first 6 months)

Education on:

- Healthy eating without giving up favorite foods (not a fad diet)
- Physical activity - find creative ways to incorporate daily activity
- Deal with stress
- Cope with challenges (e.g. how to eat in restaurants)
- Get back on track in the event of slip-ups
Welcome to Program
Be a Fat and Calorie Detective
3 Ways to Eat Less Fat, Fewer Calories
Healthy Eating
Move those Muscles
Being Active-A Way Of Life
Tip the Calorie Balance
Take Charge of What’s Around You
Problem Solving
4 Keys to Healthy Eating Out
Talk Back to Negative Thoughts
The Slippery Slope of Lifestyle Change
Jump Start Your Activity Plan
Make Social Cues Work For You
You Can Manage Stress
Ways to Stay Motivated
Lifestyle Change Programs -
Phase Two (second 6 months)

Enhancing skills to maintain changes:

- Tracking food and physical activity
- Setting goals
- Staying motivated
- Overcoming barriers
- Continuing education

Lifestyle Change Programs - Phase Two Topics (14)

- Fats-Saturated, Unsaturated, Trans fat
- Food Preparation and Recipe Modification
- Healthy Eating-Taking it One Meal at a Time
- Healthy Eating with Variety and Balance
- More Volume, Fewer Calories
- Staying on Top of Physical Activity
- Stepping Up to Physical Activity
- Balance Your Thoughts for Long-Term Maintenance
- Handling Holidays, Vacations, Special Events
- Preventing Relapse
- Stress and Time Management

- Heart Health
- Closer Look at T2DM
- Looking Back and Looking Forward
Lifestyle Change Programs-Curricula

For more details about the CDC curricula for the programs:


Handouts for participants and teaching guides for coaches, In English and Spanish.
Lifestyle Change Programs - Structure

Program is one year:
1st 6 months: meet once/week for at least 16 sessions
Last 6 months: meet once or twice/month for at least 6 sessions

Programs are in-person, online, or combination of in-person and online. Offered in Spanish and English.

Take place at: health facilities, churches, community centers, etc.
Lifestyle Change Programs - Cost

- Average cost: $400-500/year-long program
- Cost and insurance coverage depends on program location and insurance carrier.
- Payment plans and/or discounts may be available
- More insurances are adding as benefit
- Some employers are offering it as part of wellness programs
- Advocacy continues for public and private insurances to cover
Lifestyle Change Programs - Locations

- ~1163 in-person programs across U.S.
- ~91 in CA alone
- ~55 additional online and hybrid programs

To find programs near you, use this link: https://nccd.cdc.gov/DDT_DPRP/Programs.aspx
Lifestyle Change Programs in East Bay

- Pleasant Hill: YMCA
- Fremont: Palo Alto Medical Foundation
- Dublin: Palo Alto Medical Foundation

Others in Bay Area:
- Santa Rosa: YMCA
- San Francisco: 7 different YMCAs, Diabetes Prevention Education, SF General Hospital
- San Jose: Indian Health Center of Santa Clara Valley
How You Can Help STAT: Screen/Test/Act Today™

Providers must:

● Screen and Identify patients with prediabetes
● Refer them to a NDPP Lifestyle Change Program

The AMA and the CDC have prepared a TOOLKIT for providers.

Who to Refer- Eligibility

Inclusion Criteria:

- Current age $\geq 18$ years and
- Most recent BMI $\geq 24^*$ ($\geq 22$ if Asian) and
- A positive lab test result within previous 12 months:
  - HbA1C 5.7–6.4% (LOINC code 4548-4) or
  - FPG 100–125 mg/dL (LOINC code 1558-6) or
  - OGTT 140–199 mg/dL (LOINC code 62856-0) or
- History of gestational diabetes (ICD-9: V12.21; ICD-10: Z86.32)
Who (not) to Refer- Eligibility
Exclusion Criteria:

- Current diagnosis of diabetes (ICD-9: 250.xx; ICD-10: E10.x, E11.x, E13.x and O24.x) or

- Current Insulin use

The STAT TOOLKIT

Provides 2 methods for screening and identifying patients:

1. During office visits - incorporate screening tools and diagnostic testing. Refer if applicable.

2. Generate lists of eligible patients from EHR using structured query with eligibility criteria and pursue if applicable. Repeat every 6-12 months.
The STAT TOOLKIT Contents

- Step by step instructions for how to find and refer patients with prediabetes through both methods
- Includes algorithms
- Flow charts
- Patient flyers and handouts
- Referral information and forms
- ICD 10 codes for billing
- BMI charts
- Templates for letter and phone outreach
CDC Prediabetes Screening Test

Patient Risk Assessment Test

Short Video for Patients

https://youtu.be/8LGV8tMvMaI
Video by Tamara and staff at Sutter Urgent Care
A Step Further: Offer a Program

Interested in offering a Lifestyle Program?

Follow link for details:
For More Information:


For More Information:


The End.
Thank You for Joining Us!

Please fill out an evaluation form before leaving.