

Lifestyle Medicine for Preventing and Managing Type 2 Diabetes

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Who is the presenter?

I am a Family Practitioner, also certified in Lifestyle Medicine and Functional Medicine.

I worked for many years in Community Health at UNM and as a consultant for the Department of Health for the Government of Catalunya, Spain.

Currently I am Directing two lifestyle medicine programs:

- **Best Life First Choice** at First Choice Community Health, a network of FQHC's for low resource residents in and around Albuquerque.
- **Lobo Lifestyle** (Co-Director) for Employees at Employee Health Clinic (also known as the "Lobo Care Clinic") at the University of New Mexico and the UNM Health Sciences Center.

Main Objectives for this Presentation

After completion of this presentation, participants will be able to:

1. Summarize the main elements of Lifestyle Medicine (LM).
2. Identify different Lifestyle Medicine practices for preventing and managing Type 2 Diabetes.
3. Deliver brief lifestyle interventions, in clinical or community settings, to improve diabetes management, assisting in closing the gap of improved quality of care.

The Burden of Type 2 Diabetes in the United States

- Over 38 million Americans have diabetes; 90–95% have T2D (2021)
- Prediabetes affects 38% of U.S. adults.
- Roughly **136 million U.S. adults** — or about **52.7%** — are living with either **Type 2 Diabetes or Prediabetes**
- T2D is largely preventable and manageable through lifestyle changes (3)

Lifestyle Medicine Defined

Lifestyle Medicine is the use of evidence based behavior change interventions as a **primary** therapeutic modality for prevention, treatment and reversal of chronic disease (ACLM).

WHAT is Lifestyle Medicine?

Board Certified Specialty by the American Board of Lifestyle Medicine

American College of Lifestyle Medicine (ACLM) is the professional organization

Founded in 2004

American Journal of Lifestyle Medicine was founded in 2007

Currently the ACLM has 13, 500 members

Focus on the “6 PILLARS”

The six pillars of lifestyle medicine

WHOLE FOOD, PLANT PREDOMINANT DIET- "Eat well"

MOVEMENT- "Move more"

MANAGING STRESS- "Stress less"

SLEEP- "Sleep better"

POSITIVE RELATIONSHIPS- "Love more"

TOXIC SUBSTANCES/HABITS- "Manage better"

Quiz: Which pillar(s) would be best to focus on with patients with Type 2 Diabetes?

Diet and Exercise (in most cases)

S.M.A.R.T. Goals

Specific: What exactly will you accomplish? “I want to walk more ”

Measurable: How will you know (or others) if you are making progress?
Can you put numbers/miles/minutes on your goal? “I’ll walk for 15 minutes 3 nights a week”

Achievable: Is it realistic? Do you have the tools, resource to accomplish it?
“I’ll do it with my partner”

Relevant: Why is this goal important to you? “It feels good to walk and get time with my partner”

Time bound: When/what date have you set for your goal; “For the next 2 weeks”.

Example:

“ I will take a walk with my partner around the park for 15 minutes, three nights a week for two weeks”.

“Dosage” of Lifestyle Medicine Interventions

Intensive Lifestyle Interventions “higher dose”

- Residential Treatment Programs: 10-30 days
- Outpatient Intensive Programs : 10 days to 18 weeks
- Daily activities
- Highly trained ancillary team
- People with severe disease where rapid changes are needed
- Most dramatic outcomes

Low to Moderate Intensity Interventions “lower dose”

- Most programs last between 3-24 weeks
- Visits with member of LM Team weekly to monthly
- People with mild to moderate disease
- Grp only, individual only, and mixed formats
- Generally, less dramatic outcomes, at least within the time frame

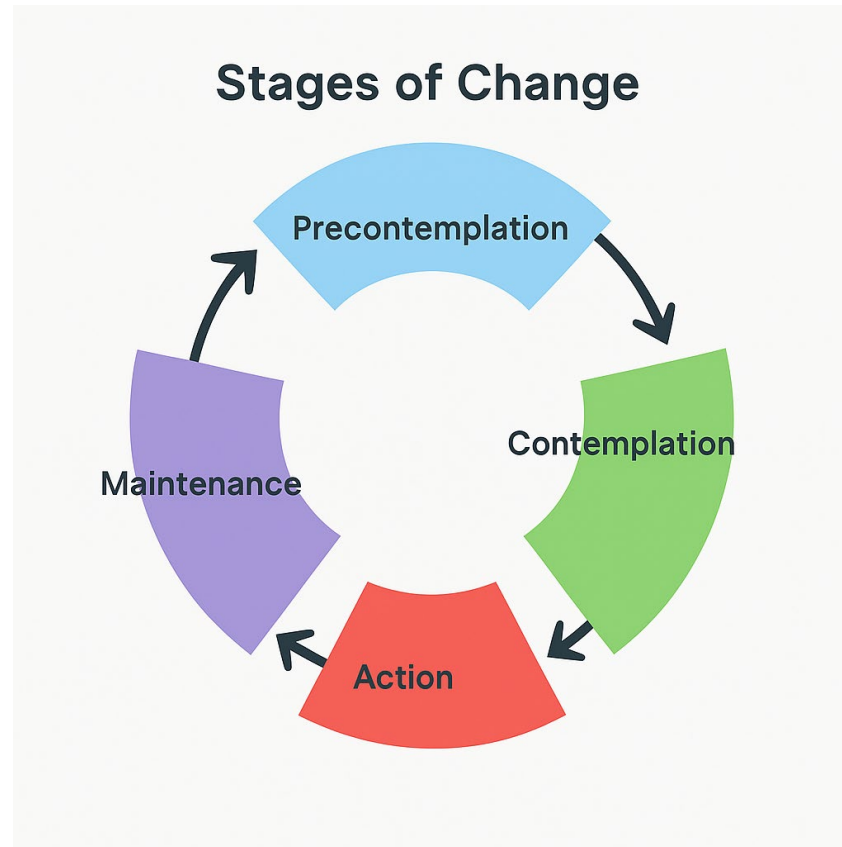
Its Not Magic

We do our best to support people to make lifestyle changes, and tools to help them on their health journey, but in the end, they still have to do it.

Key considerations for patients to participate in a clinically based lifestyle medicine program:

- Readiness to make this a priority in their life for a period of time
- Stages of Change: Patients should at least be in the Contemplation Phase to participate in a lifestyle medicine program
- “Window of Opportunity”
- Its not for everyone- patient selection is important!

Transtheoretical Model



New England Journal of Medicine

Feb 2002: Diabetes Prevention Project (CDC)

Community intervention

3234 patients with elevated fasting glucose

RCT comparing Lifestyle Intervention (LSI) vs Metformin vs placebo

Study done over 2.8 years

Intervention: Patients were linked to community based organizations, dietician, fitness trainers with the goal of a 7% reduction in weight; 150 min/wk of moderate exercise

Reduction of Incidence of T2DM compared to placebo

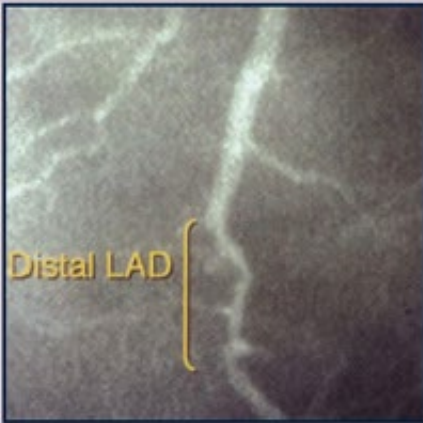
- **Lifestyle Intervention: 58%**
- **Metformin 31%**

Diadem-1 Study

- Conducted in Qatar with newly diagnosed T2D patients.
- Clinically based intervention
- Participants were provided a **low-calorie diet and instructed to do an exercise regimen** for 12 months.
- **61% achieved diabetes remission** (HbA1c < 6.5% without medication).
- Average **weight loss was 26 pounds**.
- Significant reduction in medication use and improvement in metabolic markers.

Reversal of Coronary Disease Achieved with Plant-Based Diet

1996



1999



Coronary angiograms of the distal left anterior descending artery before (left bracket) and after (right bracket) 32 months of a plant-based diet without cholesterol-lowering medication, showing profound improvement. Used with permission from Dr. Caldwell B. Esselstyn, Jr. (Source: *Prevent and Reverse Heart Disease* by Dr. Esselstyn.)

**Lifestyle change has
the power to reverse
disease**

Applying Lifestyle Medicine for Type 2 Diabetics Out in the Community

1. Focus on Diet, Exercise
2. May bring in other pillars if necessary
3. Small steps make a difference over time

Exercise/Physical activity

Short exercise “snacks”

Diet:

More whole fruits and veggies

Less processed sugars and starches

Impact of Physical Activity

Reduced Diabetes Risk

Regular physical activity lowers Type 2 diabetes risk significantly, even with modest weekly exercise.

Greater Benefits for Inactive

Individuals less active initially experience greater diabetes risk reduction from increased physical activity.

Activity Independent of Weight Loss

Physical activity reduces diabetes risk independent of weight loss, emphasizing movement's critical role.



Exercise and Lowering Blood Sugar

- **Regular aerobic exercise** can **lower A1c by at least 0.5%**
- **Combined aerobic + resistance training** is even more effective than either alone
- A study cited by Harvard Health found that exercise lowered A1c by **0.7 percentage points**, even **without weight loss**
- Another source reports that **30–60 minutes of moderate-intensity exercise 3–4 times/week** can reduce A1c by **10–20%**

ADA Position Statement on Short Bouts of Exercise

- **Short bouts of light activity** (e.g., walking or standing) every 20–30 minutes can improve glycemic control in sedentary adults with T2D.
- **Post-meal walking for 15 minutes** reduces blood glucose spikes.

Simple Interventions for movement/exercise

- Walk around the office for 3 minutes every hour for 2 mornings a week, for two weeks
- Park the car farther away from the entrance to the super market two times a week for 2 weeks
- Take a walk with your partner at sunset around the neighborhood three evenings a week for 2 weeks
- Try following a chair Zumba video for 10 minutes once a week for two weeks

Diet Changes for Managing Type 2 Diabetes

1. Reduce processed sugars

Sodas

Sweetened drinks

Fruit Juices

Candy

2. Reduced Processed Starches

“White stuff” - Bread, potatoes, rice, tortillas, pasta

3. Increase Vegetable and Fruit intake

Whole fruits and vegetables- from the produce aisle

Reducing Processed Carbohydrates

Impact of Processed Carbohydrates

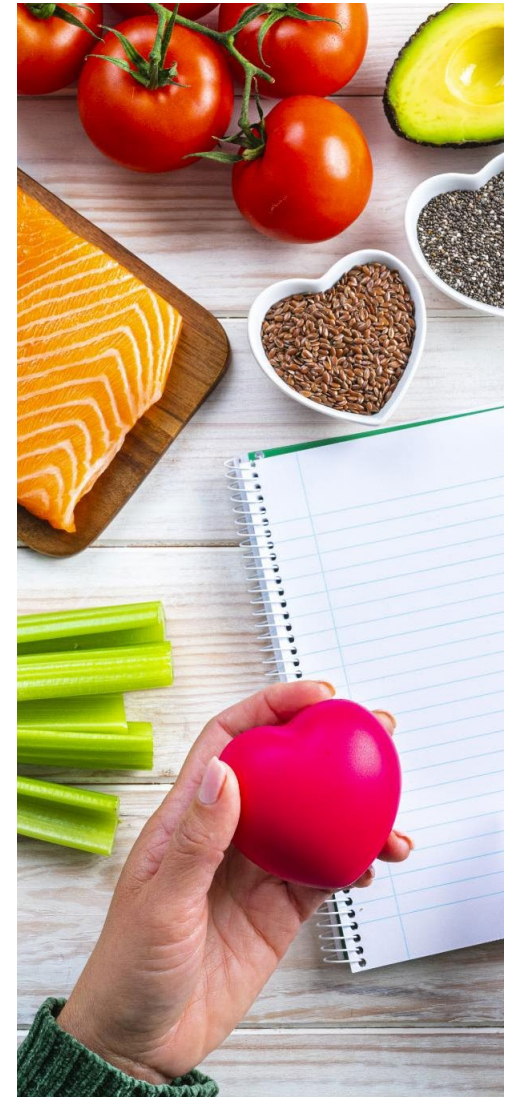
Processed carbs cause blood sugar spikes and worsen insulin resistance, complicating Type 2 diabetes management.

Benefits of Carbohydrate Restriction

Restricting carbs improves blood glucose, lowers A1c, and reduces insulin needs rapidly.

Replacing Ultra-Processed Foods

Switching to whole, nutrient-dense foods lowers diabetes risk by up to 18% and supports health.



Adding Fruits and Vegetables to the diet

Eat Vegetables First at Meals

- Eating **non-starchy vegetables** (e.g., broccoli, zucchini, leafy greens) **before carbs** can slow digestion and reduce post-meal glucose spikes.
- This strategy works by slowing gastric emptying and carbohydrate absorption.
- Even **changing the order of food intake** can make a measurable difference
- .

Simple Interventions for Diet

Decrease processed sugars and carbohydrates

- Drink 1 can less of soda a day for two days a week, for the next 2 weeks
- Order a salad instead of a side of fries 2 lunches a week for the next 2 weeks

Add More Fruits and Veggies

- Add a whole vegetable (broccoli or green beans) to a lunch or dinner for one meal a week for two weeks
- Have carrots sticks for a snack instead of chips one day a week for two weeks

What would be a persuasive way to encourage a patient to try one of these simple interventions?

Tell them to try it and notice
how it makes them feel

Case Study: Jose

Jose, a 61 yo Hispanic male with T2DM with a HbA1C of 10.2

Took a My Chronic Disease class at First Choice, learned to manage his disease better through regular checking of his blood sugar levels, reducing his processed carbohydrate intake, and doing an hour of exercise with his family three times a week

HbA1C went down to 7.2% after 3 months

Then joined the lifestyle program and his A1C has stayed stable at 6.1% for the past year.

No longer taking any medication

How can success be
measured beyond clinical
outcomes?

Other outcomes that can lead to improved health and lower health care costs

Improved sense of well-being

Increased self-efficacy

Increased sense of purpose

Improved ratings of self health

Changes in lifestyle habits

And many other benefits

Resources: Lifestyle Medicine and Type 2 Diabetes

1. American College of Lifestyle Medicine website:
<https://www.lifestylemedicine.org>
2. Book: **Undo It! How Simple Lifestyle Changes Can Reverse Most Chronic Diseases**, by Anne Ornish and Dean Ornish
3. Book: **Feel Better in Five: Your Daily Plan to Feel Better for Life**, by Dr. Rangan Chatterjee
4. American Diabetes Association:
<https://professional.diabetes.org/clinical-support/nutrition-wellness>
5. Center for Disease Control (CDC):
<https://www.cdc.gov/diabetes/healthy-eating/index.html>

More Resources: Diet

1. Low carb approach to managing T2DM- www.dietdoctor.com
2. Plant Based approach to managing T2DM- www.nutritionstudies.org
3. Ecclectic recipes to manage T2DM- www.eatingwell.org
4. Local Farmer's Markets – <http://.farmersmarketsnm.org>
5. Full Plate living – www.fullplateliving.org
6. Chair Zumba Video:
<https://www.youtube.com/watch?v=N2J0qIRzxFI>

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