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Supporting Expectant Moms with Diabetes

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Disclosure

Financial relationships:

- 1 Employee of New Mexico State University
- 1a Coordinator of the *Kitchen Creations* program, which receives funding from the NMDOH Diabetes Prevention & Control Program

I have no relevant financial relationship with any commercial interests that create a conflict of interest to affect CME content about products or services.



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Objectives

At the conclusion of this presentation, participants will be able to:

1

Discuss strategies used in managing diabetes in pregnancy

2

Develop a list of resources to use with women who have diabetes in pregnancy



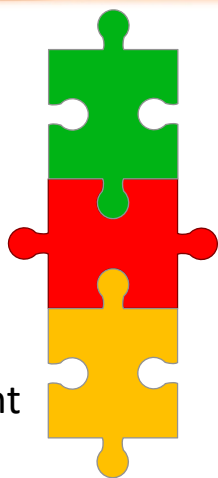
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Lifestyle management¹

MNT

Physical
activity

Weight
management



70-85% of women with gestational diabetes (GDM) can control it with lifestyle modification alone



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Medical Nutrition Therapy^{1,2}

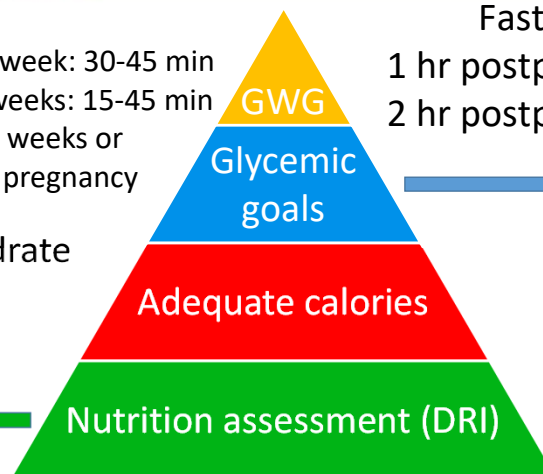
1st MNT visit: 60-90 min

2nd MNT visit within one week: 30-45 min

3rd MNT visit within 2-3 weeks: 15-45 min

Additional visits every 2-3 weeks or
as needed for duration of pregnancy

- ≥175g carbohydrate
- ≥71g protein
- 28g fiber



Fasting: <95 mg/dL
1 hr postprandial: <140 mg/dL
2 hr postprandial: <120 mg/dL



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GWG Recommendations^{3,4}

TABLE S-1 New Recommendations for Total and Rate of Weight Gain During Pregnancy, by Prepregnancy BMI

Pregpregnancy BMI	Total Weight Gain		Rates of Weight Gain* 2nd and 3rd Trimester		Twins
	Range in kg	Range in lbs	Mean (range) in kg/week	Mean (range) in lbs/week	
Underweight (< 18.5 kg/m ²)	12.5–18	28–40	0.51 (0.44–0.58)	1 (1–1.3)	50–62 lb ⁵
Normal weight (18.5–24.9 kg/m ²)	11.5–16	25–35	0.42 (0.35–0.50)	1 (0.8–1)	16.8–24.5 kg (37–54 lb)
Overweight (25.0–29.9 kg/m ²)	7–11.5 <u>2.7–6.4</u>	15–25 <u>6–14</u>	0.28 (0.23–0.33)	0.6 (0.5–0.7)	14.1–22.7 kg (31–50 lb)
Obese (≥ 30.0 kg/m ²)	5–9	11–20	0.22 (0.17–0.27)	0.5 (0.4–0.6)	11.3–19.1 kg (25–42 lb)

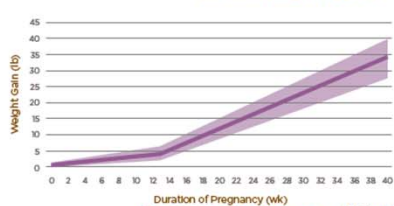
* Calculations assume a 0.5–2 kg (1.1–4.4 lbs) weight gain in the first trimester (based on Siega-Riz et al., 1994; Abrams et al., 1995; Carmichael et al., 1997).



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GWG Recommendations⁶

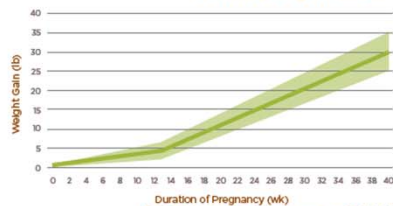
Recommended Pregnancy Weight Gain for underweight mothers



TOTAL
LBS: 28-40
KGS: 12.5-18

This graph displays the median (solid color) and range (faded color) of recommended weight gain (lbs) for pregnant women within underweight BMI categories.

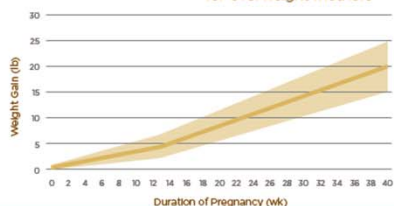
Recommended Pregnancy Weight Gain for normal weight mothers



LBS: 25-35
KGS: 11.5-16

This graph displays the median (solid color) and range (faded color) of recommended weight gain (lbs) for pregnant women within normal BMI categories.

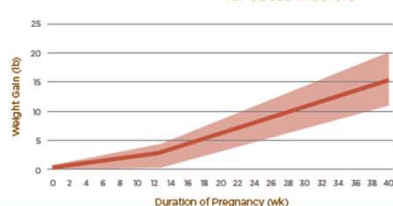
Recommended Pregnancy Weight Gain for overweight mothers



LBS: 15-25
KGS: 7.0-11.5

This graph displays the median (solid color) and range (faded color) of recommended weight gain (lbs) for pregnant women within overweight BMI categories.

Recommended Pregnancy Weight Gain for obese mothers



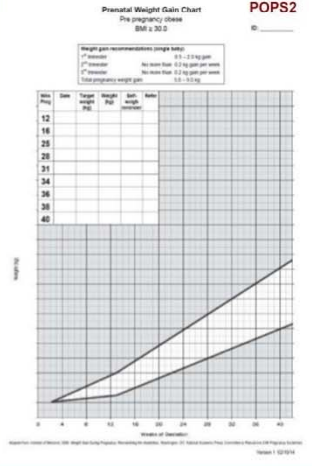
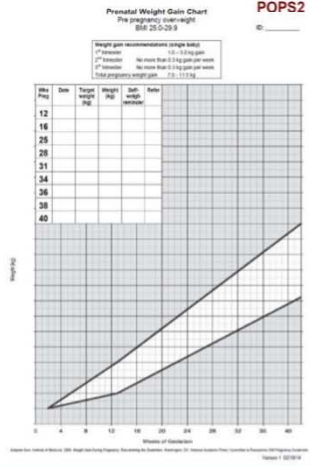
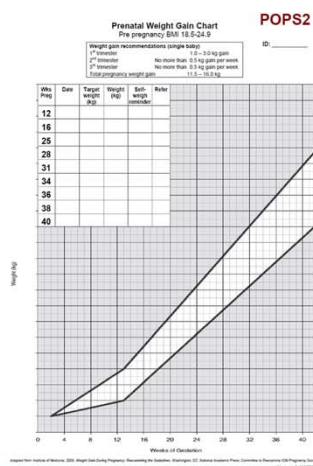
LBS: 11-20
KGS: 5-9

This graph displays the median (solid color) and range (faded color) of recommended weight gain (lbs) for pregnant women within obese BMI categories.



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GWG Recommendations



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Physical activity⁷

PAGA: ≥ 150 minutes/week moderate-intensity aerobic activity

- Walking
- Swimming
- Stationary cycling
- Low-impact aerobics
- Yoga, modified
- Pilates, modified

Safe

- Contact sports
- Activities with a high risk of falling
- Scuba diving
- Sky diving
- Hot yoga
- Hot pilates

Unsafe

If done regularly before pregnancy and provider approves:

- Running or jogging
- Strength training



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Insulin Management¹

1

- \uparrow insulin sensitivity
 - \downarrow daily insulin requirements
-
- \uparrow hypoglycemia
 - \uparrow frequent blood glucose self-monitoring



2

- \uparrow insulin resistance
-
- \uparrow insulin dose weekly/biweekly
 - $<50\%$ basal insulin
 - $>50\%$ prandial insulin



3

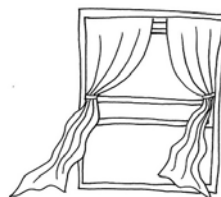
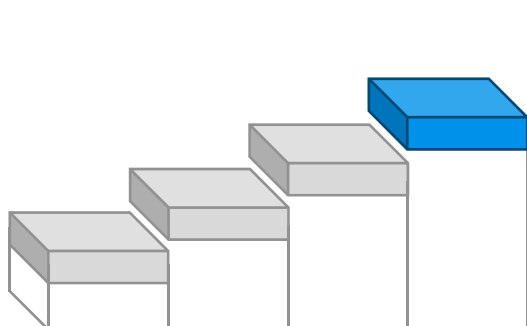
- \uparrow insulin resistance
 - Leveling off/small decrease of insulin requirements late in trimester
-
- Referral to specialized center



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Mark Twain

“Habit is habit, and not to be flung out of the window, but coaxed downstairs a step at a time.”



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How does your patient feel?⁸



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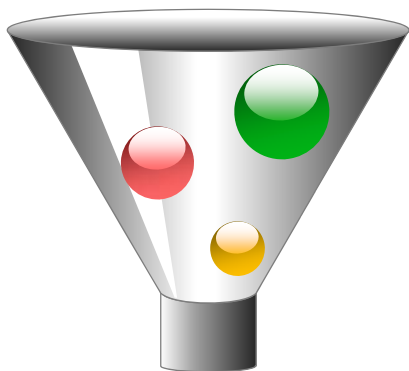
What can/can't they change?



Increasing adherence

Self-monitoring	Stress management	Goal setting	Reflective statements
Stimulus control	Social support	Open-ended questions	Summary points
Cognitive restructuring	Contingency management	Affirmations	Importance & confidence rulers

Successful counseling

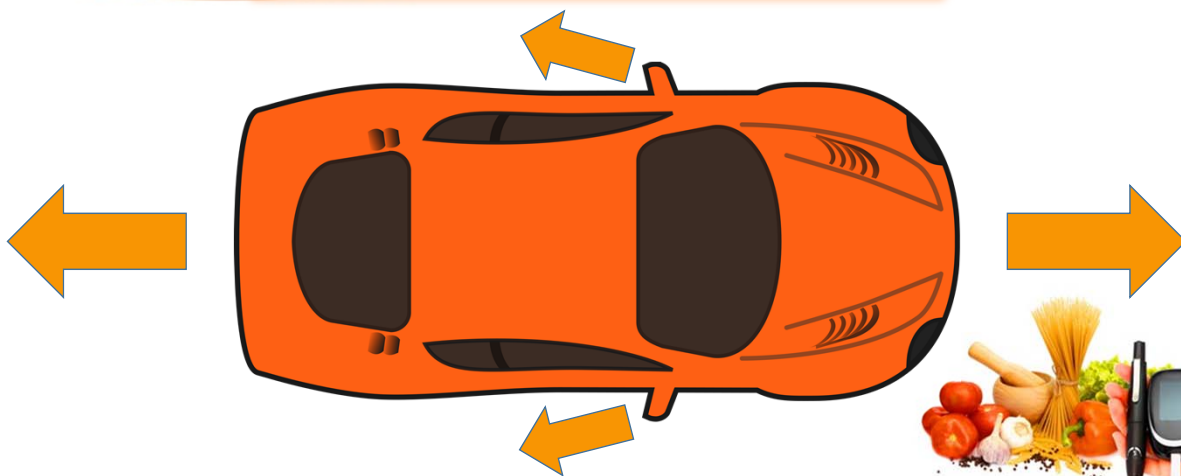


- Cognitive Behavioral Therapy (CBT)
- Motivational Interviewing (MI)
- Counselor



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Successful counseling



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- Positive reinforcement
- Promote change talk
- Must be genuine
- What does she value?
What motivates her?



*Avoid
outcomes*

Glycemic #s

Reinforce efforts

Activity

Monitoring

Showing up



Praise

Tina has GDM and is in the second trimester of her pregnancy. She has not been prescribed medication but was asked to test her blood glucose levels in the morning (fasting) and two hours after each meal and to bring her log to each appointment. She did not bring her log to her first appointment and confessed that she often forgets to test anyway.

Praise

	Fasting	2 hours after breakfast	2 hours after lunch	2 hours after dinner	Notes
Monday	109		122	115	
Tuesday		106		152	Missed walk after dinner
Wednesday	126	121	131	120	
Thursday	113	128	179	247	Sick
Friday	159			150	Sick
Saturday	127				
Sunday	119	121		140	

OARS

Resist the righting reflex!

O

Open-ended questions

A

Affirmations

R

Reflective listening

S

Summary points



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OARS

When asked what concerns she wanted to add to the agenda, Tina said she wants to talk about how to control her blood sugars. You begin addressing her concern with:

“What do you think will help you achieve the blood sugars you want?”

Tina: “I don’t know. Walking seems to work pretty well, but sometimes my sugars are still high. I know you taught me about how to eat healthy, but it feels like too much to take on. Taking time to walk is already a challenge. I don’t know how to fit in the meal changes.”



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OARS

Counselor reflects: “I think what you are saying is that you can’t see a way to find time to address the changes needed to improve your eating. Is that correct?”

Tina: “Yes, I guess it is, but I know it’s important for my baby. I just feel overwhelmed by all that I have to do.”



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OARS

Counselor: “What are the things that you would like to see change with your eating?”

Tina: “Well, I know I need to watch my carbs, but the foods I’m used to eating are usually high in carbs. I need to plan meals that have low-carb foods, too. I would also like to eat out less.”



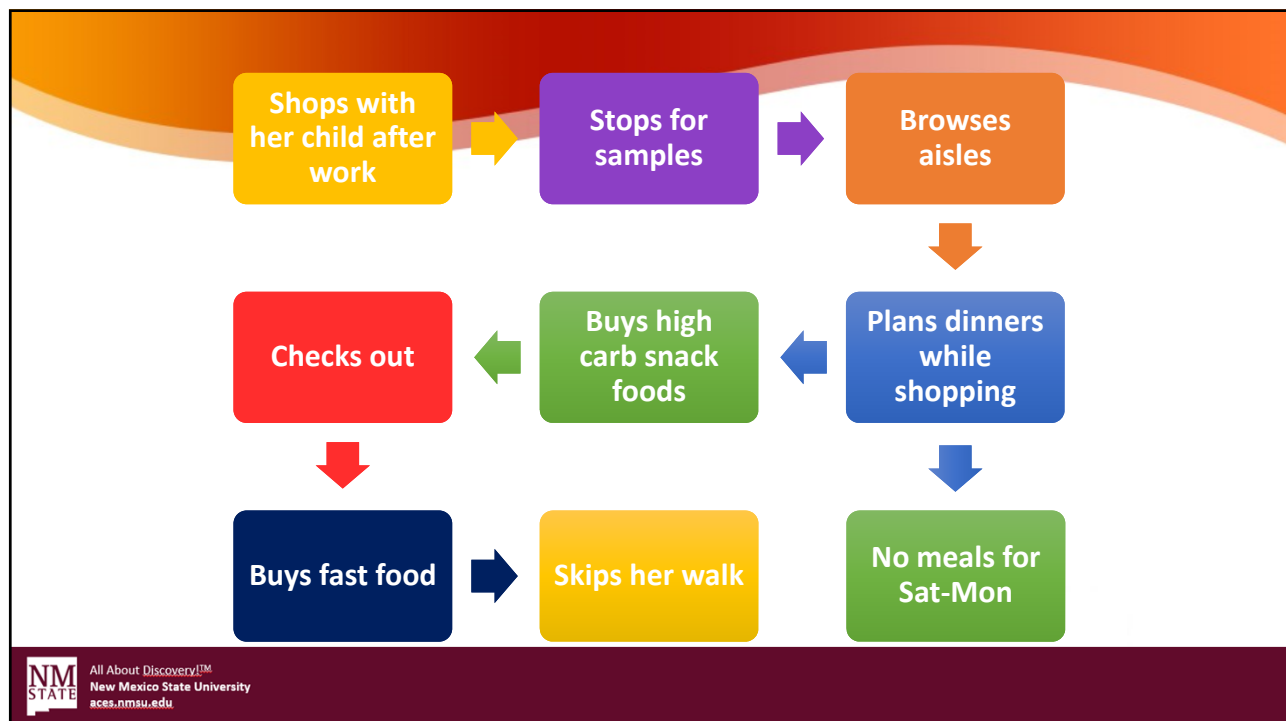
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OARS

Counselor: “Here is what I’ve heard so far. You have made positive changes in your physical activity and think eating healthier is the next step you should take. On one hand, you’re concerned about the time that will take, but on the other hand, it’s important to you because you want the best for your baby. You want to plan low-carb foods into your meals and eat out less. Is there anything you want to add or correct?”



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Stimulus control

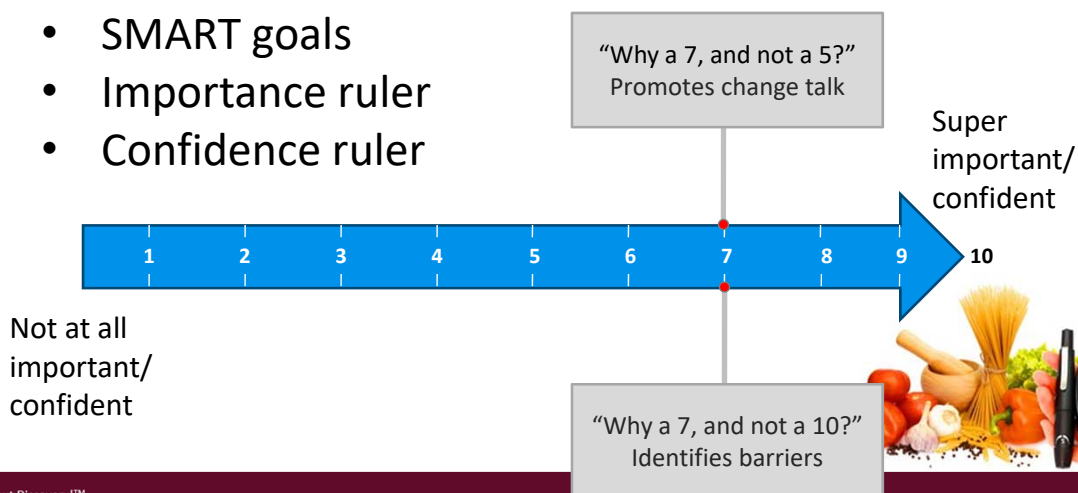
- Identify triggers associated with non-adherence
 - Help her address the issue before it happens
- People don't live in isolation
- Create safe spaces



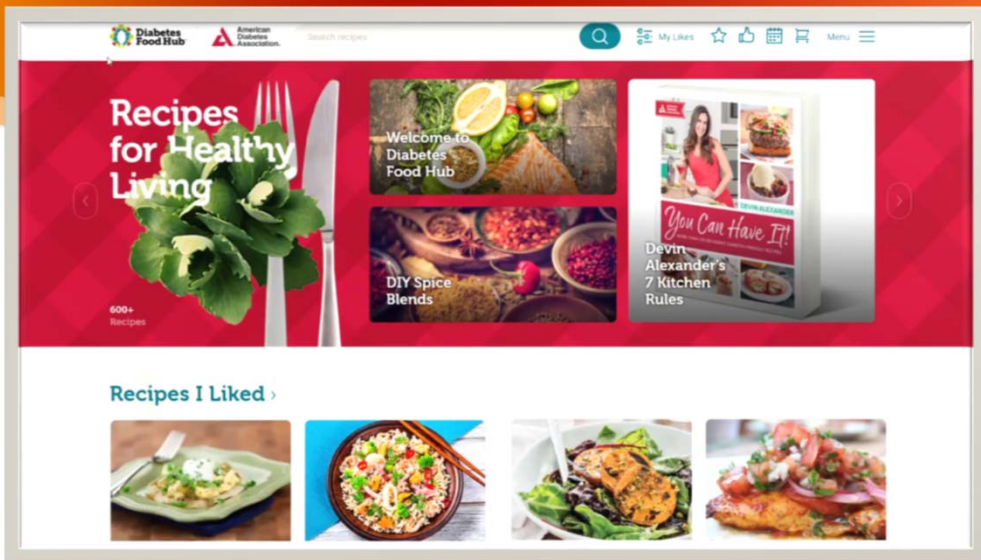
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Goal setting & MI rulers

- SMART goals
- Importance ruler
- Confidence ruler



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ADA Diabetes Food Hub: <https://www.diabetesfoodhub.org/>

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University of Nebraska-Lincoln food and nutrition resources:
<https://food.unl.edu/free-food-nutrition-fitness-and-food-safety-educational-powerpoints-and-handouts>

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Preparing Freezer Meals At Home

- 1. Saves money
- 2. Incorporates family favorites
- 3. Allows control over ingredients
- 4. Allows control the amount and portion sizes
- 5. Provides knowledge of nutritional info
- 6. Saves time

Don't Be Intimidated

- Start small
- Get comfortable with the idea
- Cook things you know your family likes
- Try a few dishes
- Build on your skills
- Not everything has to be a casserole

What Can You Freeze?

- Answer: almost anything
- Beware of cream sauces, mayo
- Raw meat vs. cooked meat
- Quality ingredients
- Baked Goods

<https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education>

Have I convinced you yet?

- Prepare to different stages of completion
 - Brown large batch of ground beef and freeze in one pound servings for quick meals
 - Chop several onions and freeze in one cup servings
 - Making meatloaf? Make an extra and freeze it.
 - Double a favorite recipe and freeze one

Recipe Demonstration Slow Cooker Chipotle Burritos

- 2 lbs. boneless, skinless chicken breasts
- 1 16 oz. jar of salsa
- 1 teaspoon chili powder
- 1 teaspoon dried oregano
- 1 onion, chopped
- 1 canned chipotle pepper in adobo sauce*, chopped
- 1 can black beans, drained and rinsed
- 1 can whole kernel corn
- Flour or corn tortillas
- Optional toppings: pico de gallo, shredded lettuce, sour cream, shredded cheese, black olives, avocado, etc.

DIRECTIONS:

- Place chicken in a 3 or 4-quart crock pot. Combine the salsa, chili powder, oregano, chipotle pepper, corn and beans. Stir for a few seconds until well mixed and pour over meat. Cover and cook on low for 6-8 hours. Shred meat with 2 forks. Serve on tortillas with toppings of your choice.

FREEZING DIRECTIONS:

- Place chicken in gallon freezer bag. Combine the salsa, chili powder, oregano, and chipotle pepper. Blend for a few seconds until well mixed and pour over meat. Add beans and corn. Seal and place flat in freezer. When ready to use, place bag in refrigerator to thaw. After ingredients have thawed, place in crockpot and follow directions above.

*Since this recipe only uses 1 chipotle pepper, I like to freeze the remaining peppers from the can in ice cube trays (1 pepper per cube). Once frozen, I store them in a zip-top bag in the freezer and use as needed in recipes.

Easy Preparation

- When ready to prepare, thaw night before in refrigerator.
- Throw in the slow cooker the next morning on low.
- Shred when you get home and serve with tortillas, sour cream, and cheese.
- Can freeze the rest for later use also.

Three Cheese Lasagna Roll-ups

- 20 lasagna noodles, whole
 - 32 ounces ricotta cheese
 - 2 large eggs
 - 1 cup shredded Parmesan cheese
 - ½ teaspoon salt
 - 1 teaspoon pepper
 - ½ cup fresh spinach, chopped
 - 1 tablespoon fresh basil, minced
 - 1-2 cups mozzarella cheese, grated*
 - Pasta sauce*
- * Indicates ingredient won't be used until cooking time
- Makes 20 rollups

What would you like to try?



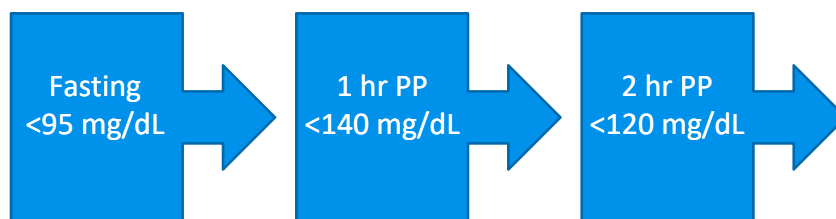
Self-monitoring

- Consistently been shown to increase positive behavior changes
- Increases awareness
- Can provide important information
- Can help with patients that are stuck



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Pregnancy blood glucose targets¹



Women with mild GDM who meet glucose goals after a week of MNT may perform self-monitoring of blood glucose every other day instead of daily



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Resources

Website/App	Food intake	Physical activity	Weight	Social support
MyFitnessPal	✓	✓	✓	✓
Lose It!	✓	✓	✓	✓
FatSecret	✓	✓	✓	✓
Cron-o-meter	✓	✓	✓	
SparkPeople	✓	✓	✓	✓

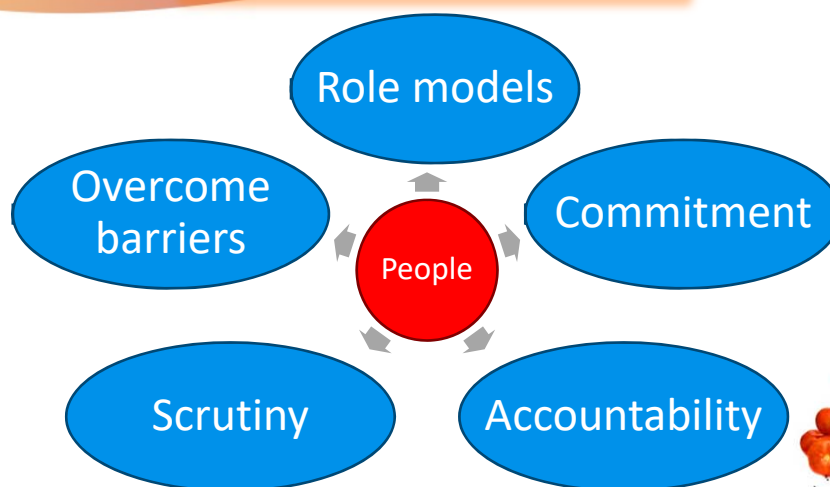
<https://www.healthline.com/nutrition/5-best-calorie-counters>

<https://www.healthline.com/health/diabetes/top-iphone-android-apps>



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Social support



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Is that it?⁸

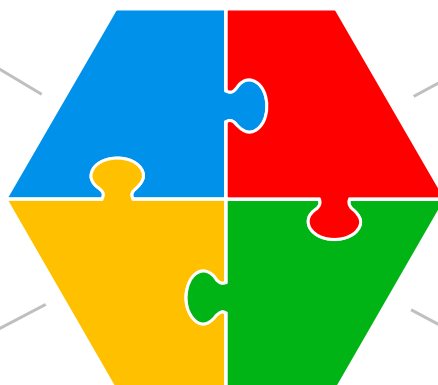


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Lowering DM risk¹

Postpartum
weight loss,
then weight
maintenance

Metformin



<240 minutes
moderate-
intensity aerobic
exercise/week

Healthy eating
patterns



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7. Physical activity and exercise during pregnancy and the postpartum period. Committee Opinion No. 650. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2015;126:e135–42. Available at: <https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Physical-Activity-and-Exercise-During-Pregnancy-and-the-Postpartum-Period>.
8. <https://www.youtube.com/watch?v=2o9bKzmWCWg>

Questions

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Motivational Interviewing and CBT: Combining Strategies for Maximum Effectiveness by Naar & Safren