

Supporting Expectant Moms with Diabetes

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Disclosure

- Financial Relationships
 - Employee of New Mexico State University
 - The College of Agricultural, Consumer and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research, and Extension programs.
 - At the Cooperative Extension Service, we are charged with translating research into practical application for the public.
 - <https://aces.nmsu.edu/>
 - Coordinator of the Kitchen Creations program, which receives funding from the NMDOH Diabetes Prevention & Control Program

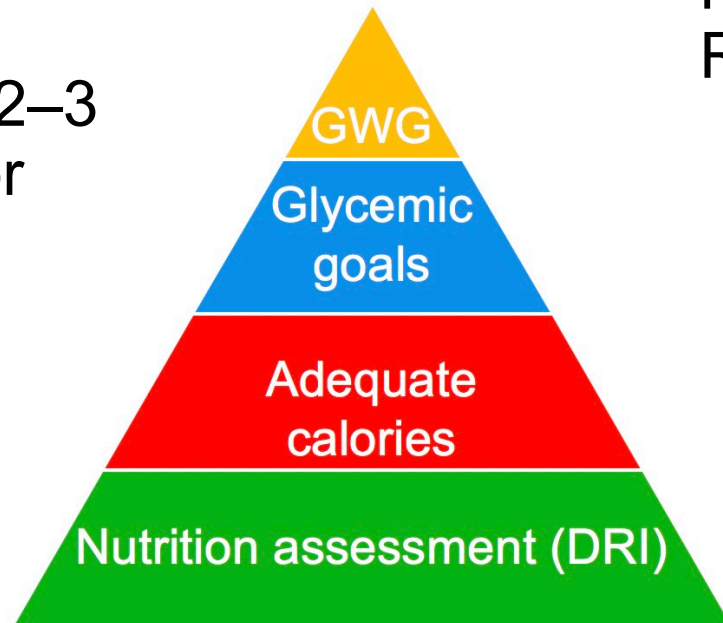
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Lifestyle Management

- 70–85% of women with gestational diabetes (GDM) can control it with lifestyle modifications alone¹
- After diagnosis, treatment starts with:
 - Medical Nutrition Therapy (MNT)
 - Physical activity
 - Weight management
- Strong evidence for each of these, independent of the others

Medical Nutrition Therapy ^{1,2}

- First MNT visit: 60–90 minutes
- Second MNT visit within one week: 30–45 min
- Third MNT visit within 2–3 weeks: 15–45 min
- Additional visits every 2–3 weeks or as needed for duration of pregnancy



Glycemic Goals:

- Fasting: < 95 mg/dL
- 1 hour postprandial: < 140 mg/dL
- 2 hours postprandial: < 120 mg/dL

Nutrition Assessment – Dietary Reference Intakes (DRI)

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

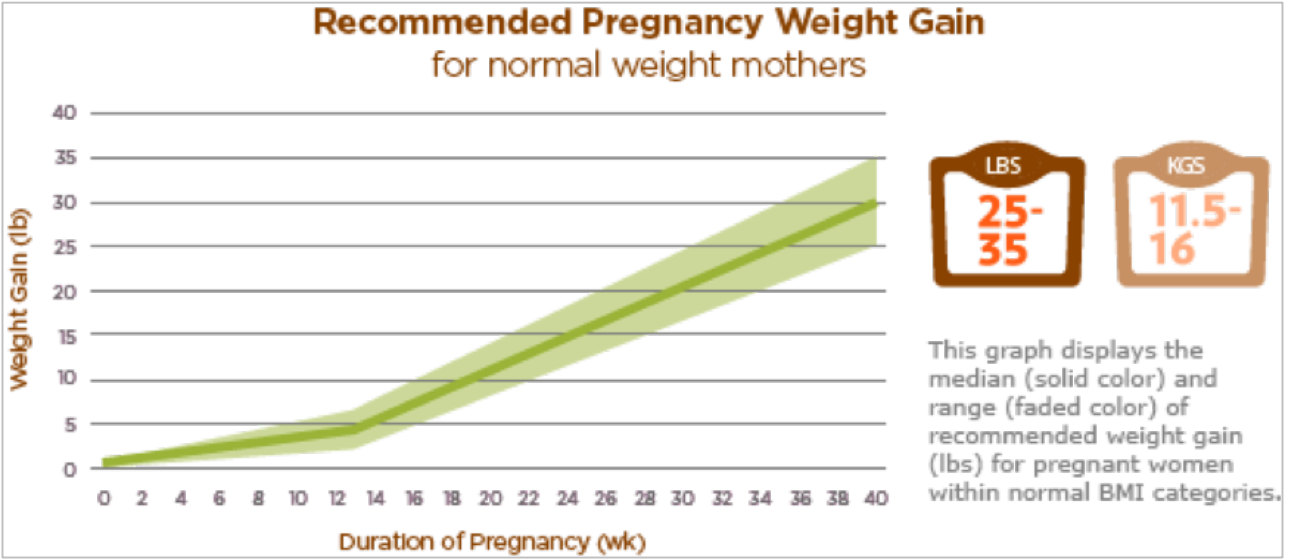
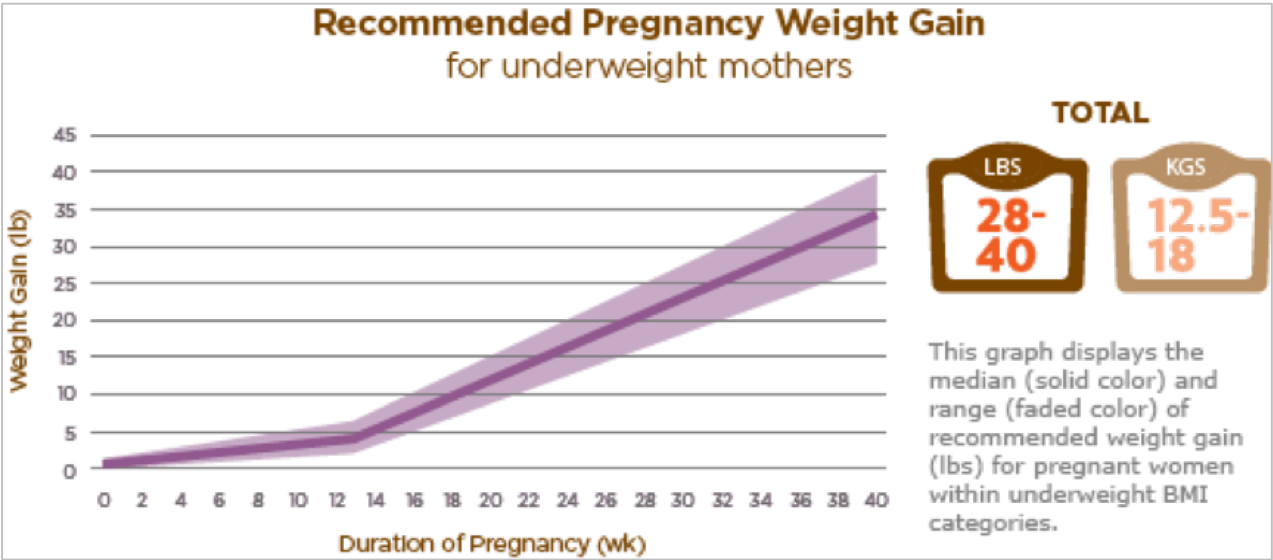
GWG Recommendations ^{3,4}

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

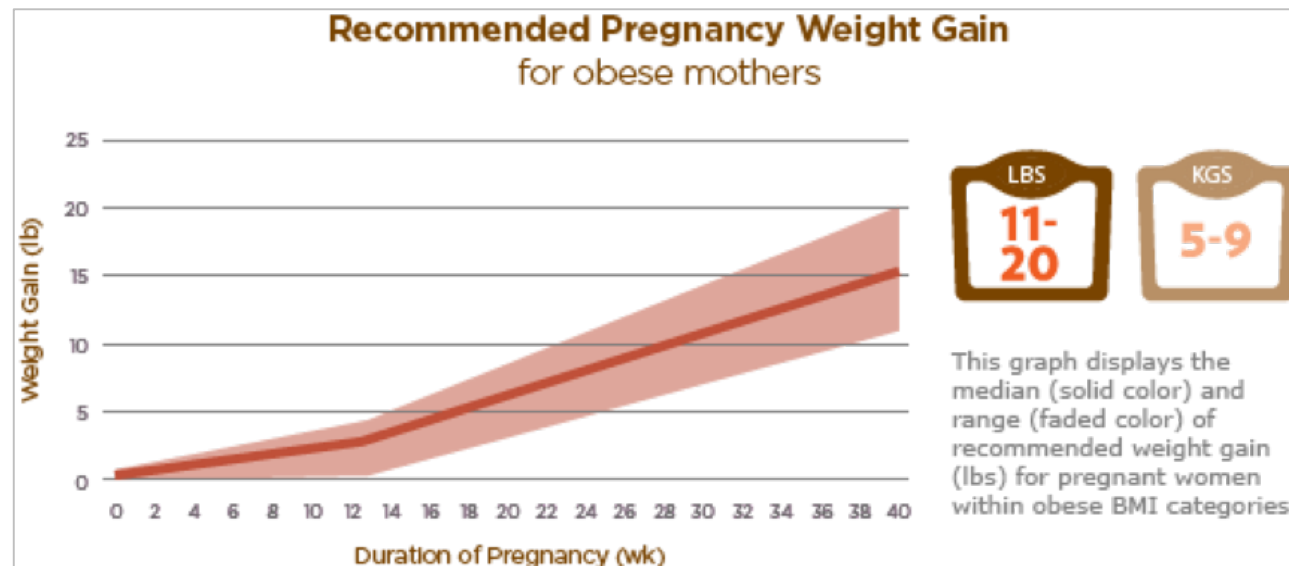
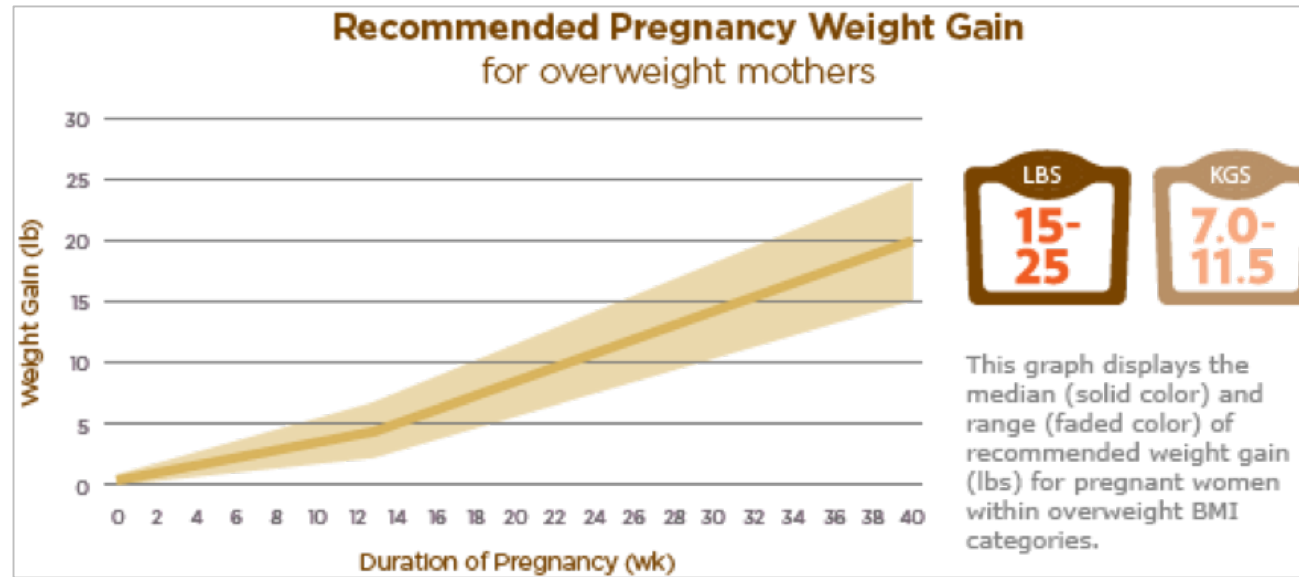
Pregpregnancy <u>BMI</u>	Total Weight Gain		Rates of Weight Gain* 2nd and 3rd Trimester		<u>Twins</u>
	Range in kg	Range in lbs	Mean (range) in kg/week	Mean (range) in lbs/week	
Underweight (< 18.5 kg/m ²)	12.5–18	28–40	0.51 (0.44–0.58)	1 (1–1.3)	50-62 lb ⁵
Normal weight (18.5–24.9 kg/m ²)	11.5–16	25–35	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](#)).

GWG Recommendations ⁶



GWG Recommendations ⁶ (2)



Physical Activity ⁷

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

- **Safe**

- Walking
- Swimming
- Stationary cycling
- Low-impact aerobics
- Yoga, modified
- Pilates, modified
- If done regularly before pregnancy and provider approves:
 - Running or jogging
 - Strength training

- **Unsafe**

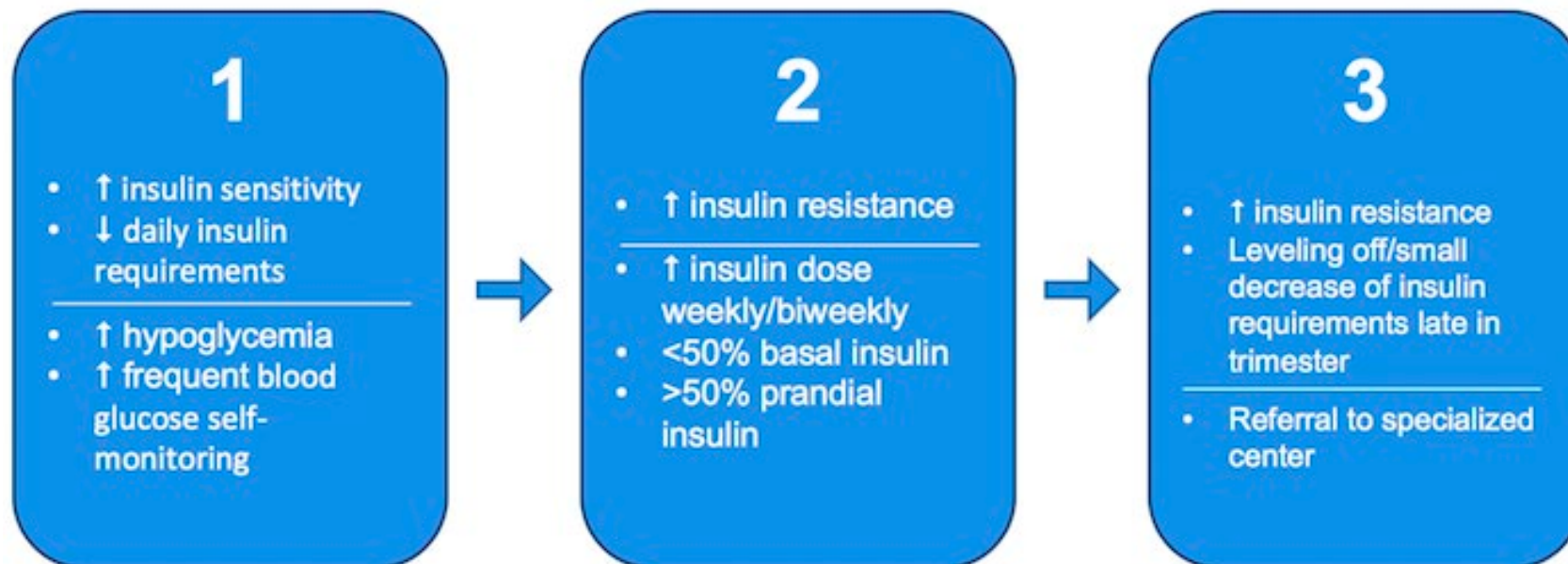
- Contact sports
- Activities with a high risk of falling
- Scuba diving
- Sky diving
- Hot yoga
- Hot Pilates

Physical Activity (continued)

- During pregnancy and post-partum contraindications:
 - Severe anemia
 - Multiple gestation at risk of premature labor
 - Preeclampsia
 - Persistent second or third trimester bleeding
 - Hemodynamically significant heart disease

Insulin Management ¹

- Changes in insulin resistance as the pregnancy progresses that affect blood glucose management.
- Many of us are familiar with all of these recommendations and know ways to successfully meet them, so we often jump right in with “this is what you need to do” and plow through all of this information we’ve covered.



Habits...

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

- We typically agree. With clients who are not pregnant, we emphasize keeping behavior changes reasonable.
- However, you likely have less than 6 months to work with someone with GDM, who needs to start managing it immediately. We do often fling their habits out the window, which isn't always easy for the patient.

How Does Your Patient Feel?

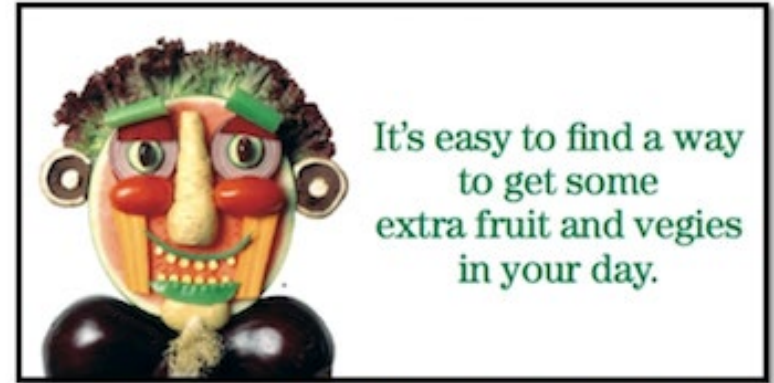
- Lifestyle changes are challenging for everyone. Pregnancy requires making changes at an accelerated pace that we would normally encourage clients to make gradually.
- We need to use evidence-based behavior change strategies.
- Watch the video of one woman's experience at

<https://www.youtube.com/watch?v=2o9bKzmWCWg>.⁸



What Can or Can't Patients Change?

- The environment influences habits, and changing habits is difficult when the environment does not change.
 - Portray unhealthy options as fun/entertaining, such as the world's highest calorie burger
 - Often less success with healthy foods



What Can or Can't We Change?

- We also have to consider our counseling environment and the things we can and can't change in it.
 - For example, what if a counselor was sitting across a desk from her patient and typing notes as they talked? How might it influence the outcome of the session?
- Invite people to share what they have done in their office environment to improve counseling sessions with patients.
- You may have limited or no control over the length of appointments.
- We are more likely to make progress if we set an agenda, especially if sessions are limited to 30 minutes or less. How can we provide client-centered counseling if we are setting the agenda ahead of time? Go over the agenda:
 - Last time we met . . .
 - These are the concerns I'd like to address today . . .
 - Will you share your concerns with me so we can add them to the agenda?



Successful Counseling

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



Praise

- We tend to spend more time paying attention to negative behaviors (others and our own, and our clients tend to also).
 - Positive reinforcement
 - Promote change talk
 - Must be genuine
 - What does she value?
 - What motivates her?
 - Listen for actions that resulted in something she values and/or motivates her.

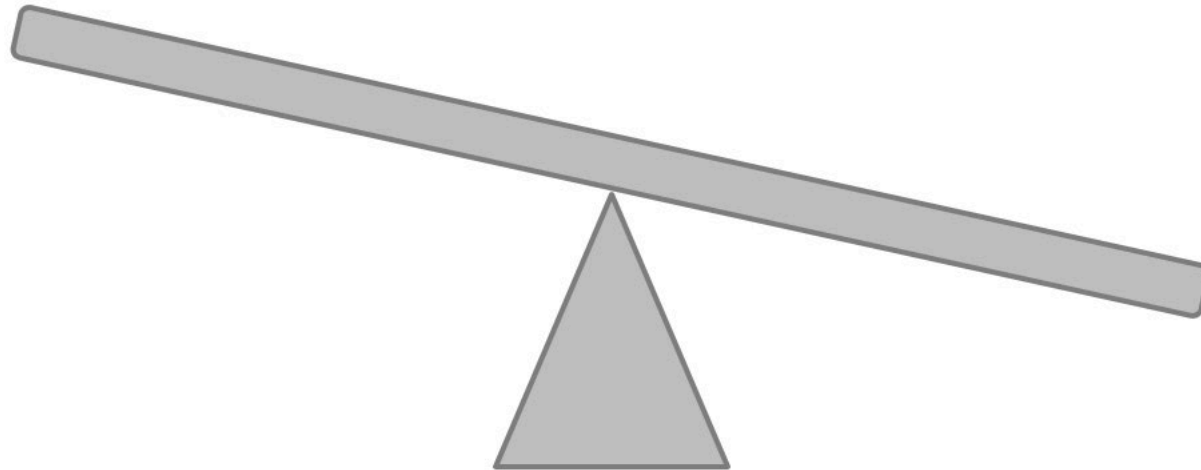
Praise (2)

Avoid Outcomes

- Weight
- Glycemia

Reinforce Efforts

- Diet
- Activity
- Monitoring



Praise (3)

- 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 (4)

- What would you praise Tina about?

Day	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

- O** = Open-ended questions
- A** = Affirmations
- R** = Reflective listening
- S** = Summary points

Resist the righting reflex!

OARS (2)

- **O:** Invite others to tell their story in their own words (avoid leading questions).
 - How can I help you with . . . ?
 - When would you be most likely to . . . ?
 - What have you tried before to make a change?
 - Help me understand . . .
- **A:** Statements (or gestures) that recognize client strengths and acknowledge behaviors that lead in the direction of positive change. Remind them of good things achieved (behaviors they have changed since first being diagnosed). Build her confidence in her ability to change.
- **R:** Builds trust and fosters motivation to change.
 - So you feel . . .
 - It sounds like you . . .
 - You're wondering if . . .
 - This skill usually requires a lot of practice but helps to avoid breakdowns in communication. Highlight change talk.
- **S:** A form of reflective listening. Helpful at transition points and to get back on track. Start with a statement to summarize:
 - Let me see if I understand so far. . .
 - Here is what I heard; tell me if I've missed anything.
 - Highlight change talk. Acknowledge ambivalence (On the one hand . . . On the other hand." Include info from your knowledge/other sources. End with an invitation: "Is there anything you want to add or correct?"

OARS (3)

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.”

OARS (4)

- 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.”

OARS (5)

- 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.**”

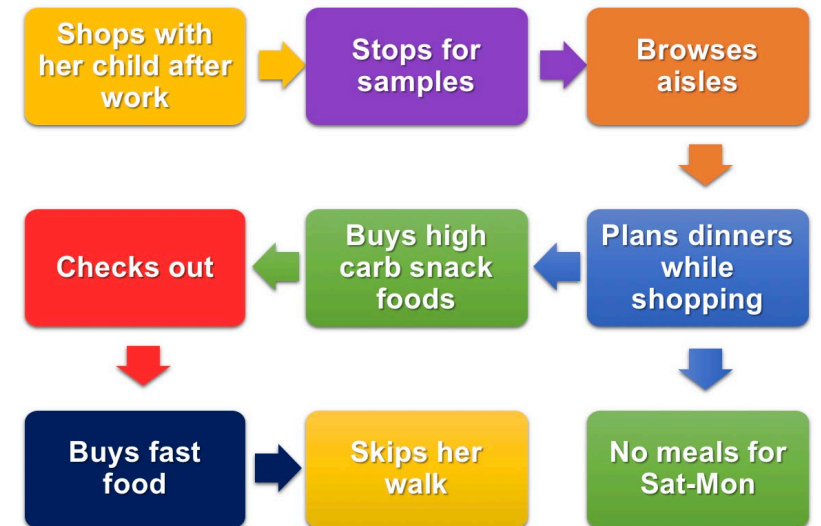
OARS (6)

- 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?**”

If your summary points are correct, it’s often appropriate to move into goal setting. Before helping someone set goals around behavior change, it may be helpful to ask what she is currently doing.

Eating and Grocery Shopping Patterns

- Tina says she wants to be better about planning their meals and keeping healthy foods in the house. You ask her to share how she is currently handling meal planning and grocery shopping. This is what she shares:
 - **Shops with child after work** on Tuesdays.
 - **Stops for samples:** She and her daughter are hungry at this time and head to the bakery for samples. There are always small samples, and she hasn't eaten for awhile so she doesn't see any harm in this.
 - **Browses aisles:** As she does, she gets ideas for dinners and puts those foods in her cart until she has enough for at least four meals to get them to the weekend.
 - **Buys high-carb snack foods:** Her daughter asks for favorite snack foods (chips, fruit snacks, animal crackers). Her mom understands liking those foods and doesn't want to deprive her daughter of them, though she finds it hard to resist eating some of these foods at times.
 - **Checks out:** By time they check out, Tina is tired and starving (as is her daughter) and she knows her husband is also and will be home soon.
 - **Fast food:** She picks up fast food on the way home.
 - **Skips her walk:** She is too exhausted that night to go for her usual walk.
- You may notice she buys enough meals to get to the weekend. You point this out and ask what she does Saturday through Monday.
 - Saturday they eat out. Sunday they get together with friends and family, usually potluck style. They often have leftovers and eat them for dinner on Monday, or if she didn't get fast food on Tuesday, they still have one meal left and eat that. Otherwise, they pick up something up.

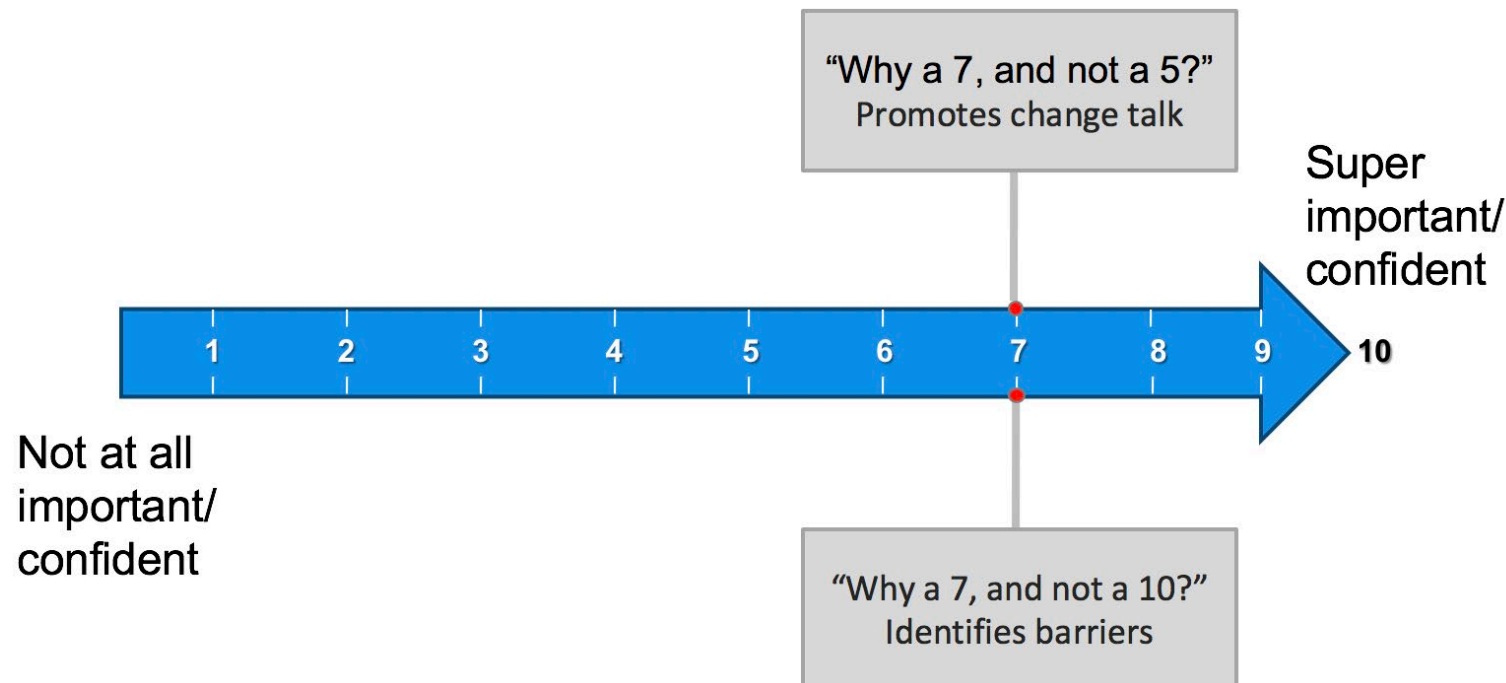


Stimulus Control

- Identify triggers associated with non-adherence
 - Triggers can be identified on food/exercise records or patient interview forms
 - Help her address the issue before it happens
- People don't live in isolation—find out the effect of their environment, family, and friends
- Create safe spaces

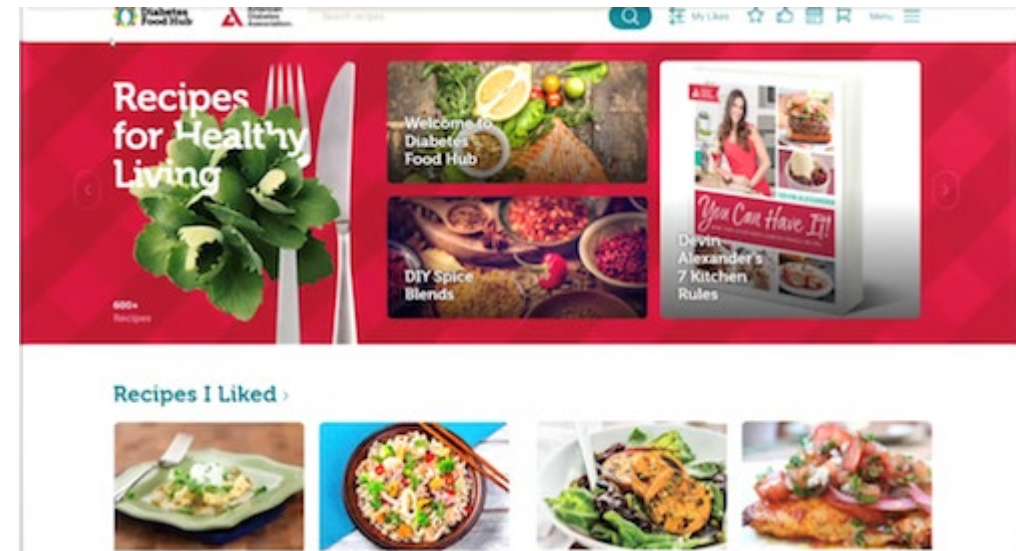
Goal-Setting and MI Rulers

- SMART Goals
 - Specific, Measurable, Achievable, Relevant, Timely
- Importance ruler
 - “On a scale of 1–10, how important is it for you to make changes to your eating?”
- Confidence ruler
 - “On a scale of 1–10, how confident are you that you will plan at least five healthy meals each week before shopping?”



American Diabetes Association: Diabetes Food Hub

- <https://www.diabetesfoodhub.org>
- Learn more about the Diabetes Food Hub by watching the video at the following link:
 - <https://youtu.be/pSdmxem1188>



Food and Nutrition Resources

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



Preparing Freezer Meals At Home

- Saves money
- Incorporates family favorites
- Allows control over ingredients
- Allows control the amount and portion sizes
- Provides knowledge of nutritional info
- 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

Some foods just don't freeze well, like mayonnaise, cream sauces, or foods with high water content like lettuce. They are still safe to eat, but you lose quality. Canned foods and eggs still in the shell should not be frozen. But most other foods can be frozen.

Have I Convinced You Yet?

- Prepare to different stages of completion
- Freezing ingredients that have been prepared for quick use in meals cuts down on the time it takes each night to prepare dinner.
 - Brown large batches 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:

Slow Cooker Chipotle Burritos

- **Ingredients:**

- 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 a one-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.

Burrito Recipe: 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.
- Can be used for a variety of other dishes such as:
 - Salads, soups, casseroles, enchiladas, tacos

Three Cheese Lasagna Roll-ups

Ingredients:

- 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

Three Cheese Lasagna Roll-ups (continued)

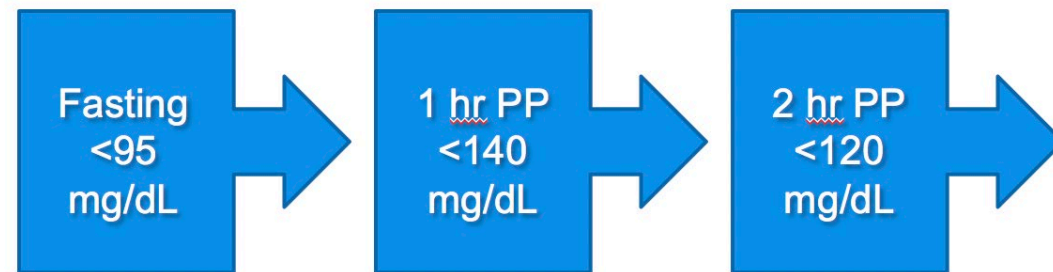
- This is another example of easy meal preparation.
 - These roll ups can be made in advance and frozen. Put them in the fridge the day before eating them. While the rollups are heating with your favorite sauce, you can put together a salad and have dinner on the table in about 30 minutes.
- This is a great choice for a freezer meal because each rollup can be wrapped individually.
 - When ready to serve, take out what you need for the number of people you are serving.

Self-monitoring

- Has consistently been shown to increase positive behavior changes
- Increases awareness
- Can provide important information
- Can help with patients who are stuck

Pregnancy Blood Glucose Targets ¹

- 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

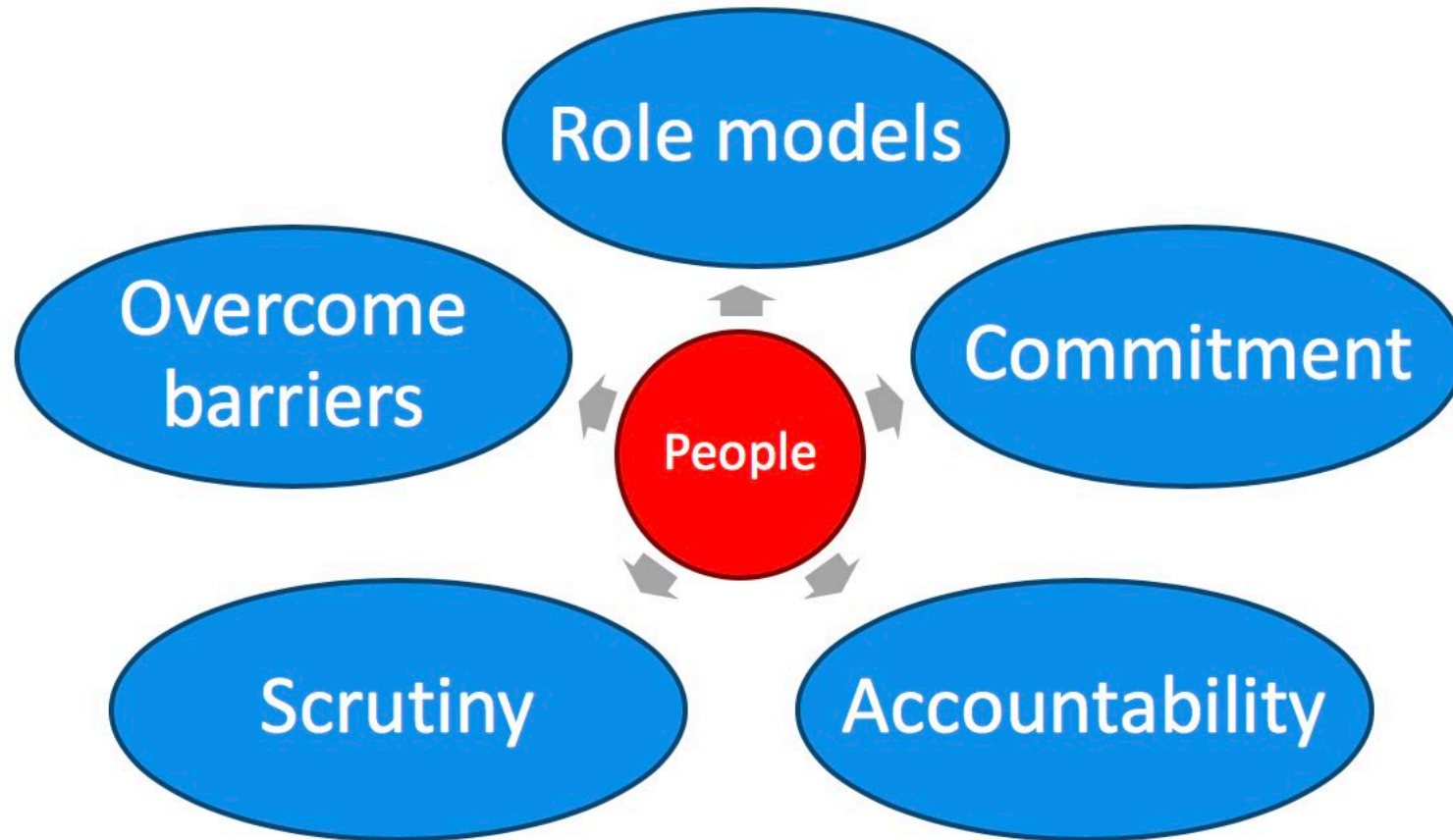


Resources

Website/App	Food Intake	Physical Activity	Weight	Social Support
MyFitnessPal	Yes	Yes	Yes	Yes
Lose It!	Yes	Yes	Yes	Yes
FatSecret	Yes	Yes	Yes	Yes
Cron-o-meter	Yes	Yes	Yes	
SparkPeople	Yes	Yes	Yes	Yes

- <https://www.healthline.com/nutrition/5-best-calorie-counters>
- <https://www.healthline.com/health/diabetes/top-iphone-android-apps>

Social Support



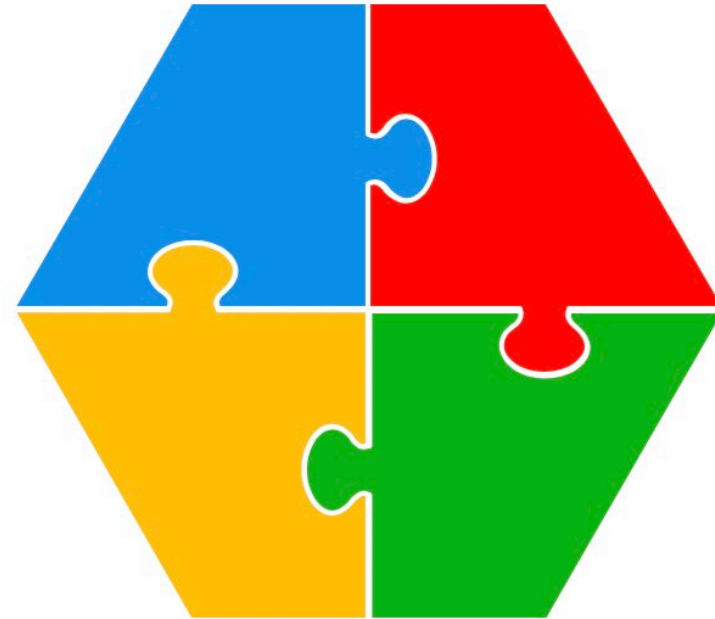
Is That It? ⁸

- Too often, pregnant women receive all of these support services, and then they have their baby, their blood glucose levels improve very quickly, and we don't see them again until the next time they are pregnant or they have been diagnosed with diabetes.
- Does this woman sound like she would like help even after her baby is born?
- I'm betting she did not share this with her provider. We won't know unless we ask patients how important it is to them to continue to receive help with lifestyle changes after delivery.
- Recommend/refer for continued services.



Lowering DM Risk ¹

- Postpartum weight loss, then weight maintenance
- Metformin
- < 240 minutes moderate-intensity aerobic exercise/week
- Healthy eating patterns



References

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Questions

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

