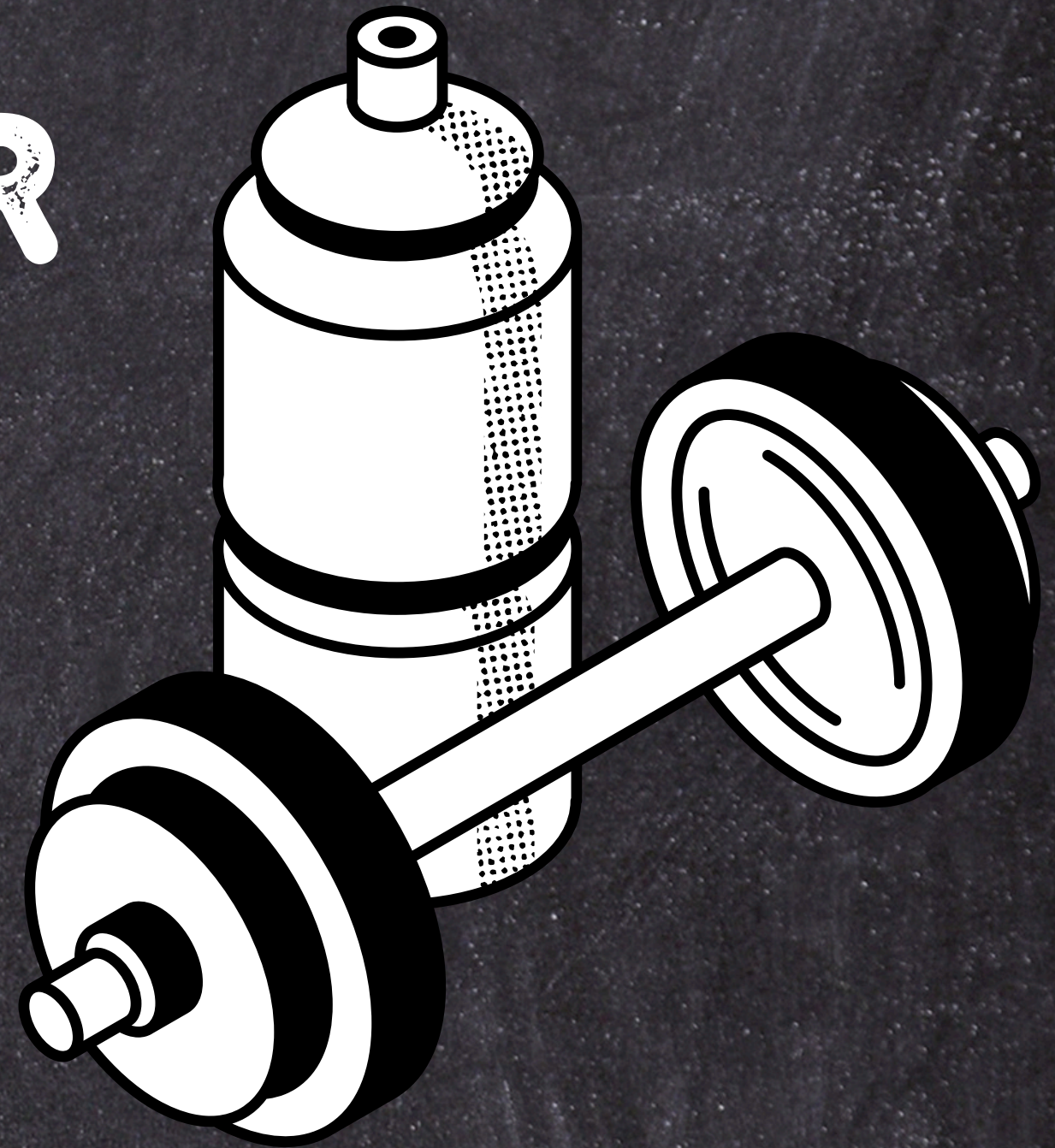


REBUILDING YOUR METABOLISM AFTER GASTRIC SLEEVE SURGERY

SHREDDED UNIVERSITY



METABOLIC DAMAGE

The term "metabolic damage" is often used to describe a situation where the body's metabolism has slowed down significantly, making it harder to lose weight or maintain a healthy weight. This slowdown typically results from prolonged periods of undereating, extreme caloric restriction, or physiological conditions that affect metabolic hormones.

HOW GASTRIC BYPASS CONTRIBUTES

Gastric bypass surgery is designed to reduce the size of the stomach and reroute part of the digestive system, which significantly reduces food intake and calorie absorption. While this can lead to rapid weight loss, it can also cause long-term nutritional deficiencies and a suppression of metabolism due to inadequate calorie and macronutrient intake. Over time, eating too little can:

01.

Lower Resting Metabolic Rate (RMR)

Prolonged low calorie consumption can cause the body to adapt by slowing its energy expenditure.

02.

Cause Muscle Loss

With insufficient protein and calories, the body may break down muscle, which further reduces metabolic efficiency.

03.

Trigger Hormonal Dysregulation

Prolonged undernutrition can affect hormones like leptin, ghrelin, and thyroid hormones, which are crucial for metabolic health

01.

Nutritional Deficiencies Post-Surgery

Gastric bypass patients often experience deficiencies in nutrients like iodine, selenium, and iron, all of which are essential for proper thyroid function.

02.

Prolonged Undereating

Chronic caloric restriction after surgery can suppress the hypothalamic-pituitary-thyroid (HPT) axis, further lowering thyroid hormone production.

03.

Weight Loss Catch-Up Effect

After rapid initial weight loss, the body may "catch up" by slowing metabolism to prevent further energy deficits, exacerbating hypothyroidism symptoms.

CONNECTION TO HYPOTHYROIDISM

Hypothyroidism is a condition where the thyroid gland does not produce enough thyroid hormones (T3 and T4). These hormones play a critical role in regulating metabolism, energy production, and overall metabolic rate. The connection here is:



HOW TO ADDRESS THIS



Reverse Dieting

Prolonged undernutrition can affect hormones like leptin, ghGradually increasing caloric intake, starting with maintenance calories, to restore metabolic rate and support thyroid function.relin, and thyroid hormones, which are crucial for metabolic health

Strength Training

Incorporate resistance training to rebuild lean muscle mass, which can increase resting metabolic rate.

Thyroid Management

Partner with a medical professional to optimize thyroid hormone levels through medication, if necessary, and regular blood work.

Customized Nutrition

A balanced diet rich in micronutrients (iodine, selenium, zinc, B vitamins, etc.) is essential for thyroid health and metabolic recovery.

Cardio & Movement

Moderate-intensity activity like walking or cycling can support metabolism without overburdening the body.

KEY POINTS TO EMPHASIZE TO THE CLIENT

01

Her current challenges (difficulty eating and hypothyroidism) are common post-gastric bypass and can be addressed with the right strategy.

02

The focus will be on repairing her metabolism through proper nutrition, strategic exercise, and consistent thyroid monitoring.

03

Recovery from "metabolic damage" is possible, but it requires time, patience, and consistency.

04

STEP 1: ASSESSMENT AND BASELINE

1

Medical Review:

- Encourage her to consult with her endocrinologist to evaluate thyroid function (TSH, T3, T4, reverse T3) and ensure her hypothyroidism is managed with appropriate medication.
- Have her doctor check for nutritional deficiencies (vitamin D, B12, iron, selenium, iodine, and zinc) that could be contributing to her metabolic slowdown.

2

Establish a Food Journal:

- Track everything she eats for 3-7 days, including portion sizes, meal times, and hydration. This will help identify current calorie intake and macronutrient distribution.
- Include hunger, energy, and fullness cues to assess how her body responds to food.

3

Evaluate Activity Level:

- Track her steps and physical activity to assess her baseline movement and energy expenditure.

STEP 2: NUTRITIONAL APPROACH

Goal: Restore metabolic function by gradually increasing caloric intake and optimizing nutrient absorption.

1. Caloric Reintroduction (Reverse Dieting):

- If she's eating very little (e.g., 800–1000 calories/day), start by adding 50–100 calories per week until reaching her estimated maintenance calories (calculated based on body weight, activity level, and basal metabolic rate).
- Maintenance Calories Estimate: $10\text{--}12 \times \text{body weight (in pounds)}$.

2. Macronutrient Breakdown:

- If she's eating very little (e.g., 800–1000 calories/day), start by adding 50–100 calories per week until reaching her estimated maintenance calories (calculated based on body weight, activity level, and basal metabolic rate).
- Maintenance Calories Estimate: $10\text{--}12 \times \text{body weight (in pounds)}$.

3. Meal Timing and Structure:

- Encourage small, frequent meals to accommodate her reduced stomach size and avoid overwhelming her digestive system.
- Example: 4–6 meals per day with balanced macronutrients.

4. Focus on Micronutrients for Thyroid Health:

- Iodine and Selenium: Seafood, eggs, Brazil nuts, iodized salt.
- Zinc: Shellfish, pumpkin seeds, beef, chickpeas.
- Vitamin D and Iron: Fatty fish, fortified foods, lean red meat, spinach.

5. Supplementation (if needed):

- Work with her doctor to supplement any deficiencies (e.g., B12, D3, iron).

STEP 3: FITNESS PLAN

Goal: Rebuild lean muscle, increase metabolism, and support overall health.

1. Strength Training (3 Days/Week):

- Focus on compound movements to build muscle and improve strength (e.g., squats, deadlifts, push-ups, resistance bands).
- Start with bodyweight exercises or light weights to accommodate her current fitness level.

2. Cardio (2-3 Days/Week):

- Low to moderate-intensity cardio (e.g., walking, cycling, elliptical) for 20-30 minutes.
- Gradually increase duration and intensity to improve cardiovascular health and burn fat.

3. Daily Movement:

- Set a step goal (5,000–8,000 steps/day) to increase non-exercise activity thermogenesis (NEAT).

STEP 4: ACCOUNTABILITY AND SUPPORT

1. Weekly Check-Ins:

- Assess progress with weight trends, energy levels, and digestion. Adjust calories and macros as needed.
- Discuss non-scale victories (e.g., improved energy, strength gains) to keep her motivated.

2. Track Metrics Beyond the Scale:

- Use body composition analysis (if available) or progress photos to measure fat loss and muscle gain.

3. Peer Accountability:

- Add her to a WhatsApp or accountability group for encouragement and motivation.

4. Emphasize Patience:

- Explain that metabolic recovery takes time and consistency. Reassure her that every small step forward is progress.

STEP 5: MONITOR THYROID HEALTH

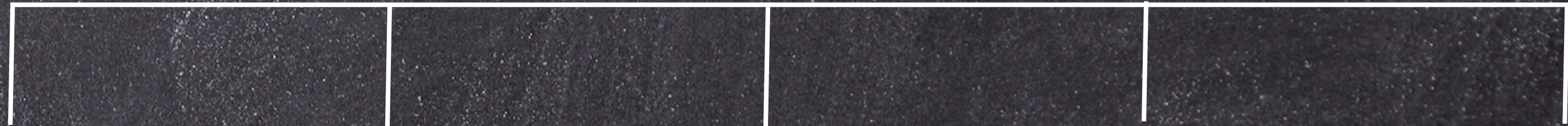
1. Regular Testing:

- Encourage her to get her thyroid levels checked every 6–8 weeks to ensure medication and diet adjustments are working.

2. Manage Stress:

- Stress can negatively impact thyroid function. Introduce mindfulness practices like yoga, meditation, or breathing exercises.

SAMPLE DAILY PLAN



Meal 1

Protein shake with almond milk, spinach, chia seeds.

Meal 2

Grilled chicken salad with olive oil, avocado, and quinoa.

Meal 3

Greek yogurt with berries and a handful of nuts.

Meal 4

Baked salmon, roasted sweet potatoes, and steamed broccoli.

Meal 5

Cottage cheese with cucumber slices or a boiled egg.

MILESTONES TO TRACK



MONTH 1-2

Improved energy, better digestion, gradual increase in caloric intake.



MONTH 3-4

Stabilized weight, improved muscle tone, and metabolic markers.



MONTH 5-6

Consistent fat loss, balanced hormones, and better overall health.

WORKOUT TEMPLATE

Goal: Rebuild muscle, support metabolism, and improve overall health.

Duration: 4 weeks, with gradual progression.

Frequency: 5 days per week (3 strength training, 2 cardio, daily mobility).

DAY 1: FULL-BODY STRENGTH (BODYWEIGHT OR RESISTANCE BAND)



Bodyweight Squats

3 sets of 12-15
reps

Modified Push-Ups

3 sets of 8-12
reps

Resistance Band Rows (or Dumbbell Rows)

3 sets of 10-12
reps

Glute Bridges

3 sets of 15 reps

Plank Hold

3 sets of 20-30
seconds

DAY 2: CARDIO & CORE



WALKING OR CYCLING

20-30 minutes at a moderate
pace



CORE CIRCUIT

- Knee Tucks (Seated) – 3 sets of 12-15 reps
- Side Plank (Knees Bent) – 2 sets of 10-15 seconds per side
- Dead Bug (Leg Lowering) – 3 sets of 10 rep

DAY 3: LOWER BODY FOCUS

01

Step-Ups (Sturdy Step)
3 sets of 10 reps per leg

02

Side-Lying Leg Raises
3 sets of 12-15 reps per
side

03

Standing Calf Raises
3 sets of 15 reps

04

Wall Sit Hold
3 sets of 15-20 seconds

DAY 4: ACTIVE RECOVERY OR MOBILITY



Yoga or gentle stretching for
20-30 minutes.



Example movements:

- Cat-Cow Stretch – 10 reps
- Child's Pose – Hold for 30 seconds
- Hip Flexor Stretch – Hold for 20 seconds per side

DAY 5: UPPER BODY FOCUS



Wall Push-Ups
3 sets of 10–12
reps

Overhead Press
(Resistance Band)
3 sets of 10 reps

Bicep Curls
(Resistance Band or
Dumbbell)
3 sets of 12 reps

Tricep Kickbacks
(Light Weights or
Resistance Band)
3 sets of 12 reps

Knee Plank with
Shoulder Taps
2 sets of 10 reps
per side

DAY 6: CARDIO & CORE



Walking or Recumbent Bike

25-30 minutes at a moderate
pace.



Core Circuit:

- Bird Dog – 3 sets of 8 reps per side
- Leg Raises (Seated) – 3 sets of 12-15 reps
- Standing Side Crunches – 2 sets of 15 reps per side

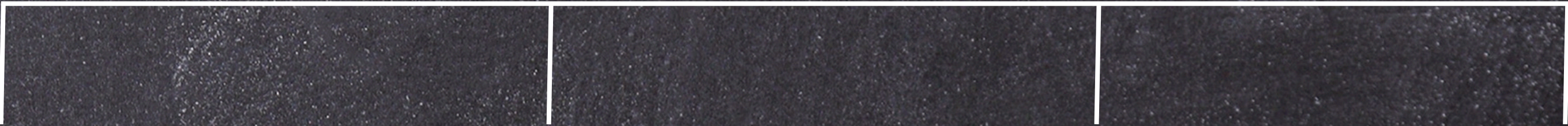
DAY 7: REST OR ACTIVE RECOVERY



- Light walking, yoga, or a day off to recover.

GROCERY SHOPPING LIST

GOAL: FOCUS ON NUTRIENT-DENSE FOODS FOR METABOLIC REPAIR AND THYROID HEALTH.



Proteins

Lean chicken breast
Turkey breast
Salmon (rich in omega-3s)
Eggs or egg whites
Greek yogurt (plain, low-fat)
Cottage cheese
Protein powder (low-carb, high-quality)

Carbohydrates

Quinoa
Brown rice
Sweet potatoes
Oats (steel-cut or rolled)
Whole-grain bread or wraps
Vegetables (broccoli, spinach, kale, zucchini, bell peppers)
Fruits (berries, apples, bananas, oranges)

Fats

Avocados
Olive oil
Nuts (almonds, walnuts)
Seeds (chia seeds, flaxseeds, sunflower seeds)
Natural peanut or almond butter

Dairy/Alternatives

Unsweetened almond milk
Low-fat milk
Cheese (moderation)

GROCERY SHOPPING LIST

GOAL: FOCUS ON NUTRIENT-DENSE FOODS FOR METABOLIC REPAIR AND THYROID HEALTH.

Snacks

Rice cakes
Baby carrots with hummus
Hard-boiled eggs
Low-sodium beef jerky

Pantry Essentials

Rice cakes
Baby carrots with hummus
Hard-boiled eggs
Low-sodium beef jerky

Supplements (if needed)

Multivitamin (with
selenium and iodine)
Vitamin D3
Fish oil or omega-3
supplement

ADDITIONAL TIPS FOR GROCERY SHOPPING:



Stick to the perimeter of the store where fresh foods are located.



Choose organic options when possible, especially for produce and protein.



Avoid processed and sugary foods to improve metabolic health.

MEAL IDEAS

BREAKFAST

01

Protein-Packed Smoothie

Ingredients: 1 scoop protein powder, unsweetened almond milk, spinach, 1/2 banana, chia seeds.

Optional: Add a small handful of frozen berries.

02

Greek Yogurt Parfait

Ingredients: Greek yogurt, a sprinkle of granola (low-sugar), fresh blueberries, and a drizzle of honey.

03

Veggie & Egg Scramble

Ingredients: 2 whole eggs + 2 egg whites, diced bell peppers, spinach, and 1/4 avocado on the side.

04

Overnight Oats

Ingredients: Rolled oats, almond milk, chia seeds, cinnamon, and 1/4 cup diced apples.

Prep the night before for an easy grab-and-go breakfast.

MEAL IDEAS

LUNCH

01

Grilled Chicken Salad

Ingredients: Grilled chicken breast, mixed greens, cherry tomatoes, cucumber, avocado, olive oil, and balsamic vinegar dressing.

02

Turkey Wrap

Ingredients: Whole-grain wrap, sliced turkey, hummus, spinach, shredded carrots, and a slice of cheese.

03

Quinoa Bowl

Ingredients: Quinoa, roasted sweet potatoes, steamed broccoli, grilled salmon, and a drizzle of tahini sauce.

04

Egg Salad Lettuce Wraps

Ingredients: Hard-boiled eggs mashed with a little Greek yogurt and mustard, served in romaine lettuce leaves.

MEAL IDEAS

DINNER

01

Salmon with Roasted Vegetables

Ingredients: Baked salmon with olive oil, roasted zucchini, bell peppers, and a small baked sweet potato.

02

Turkey-Stuffed Bell Peppers

Ingredients: Ground turkey mixed with cooked quinoa, diced tomatoes, and spices, baked in halved bell peppers.

03

Chicken Stir- Fry

Ingredients: Diced chicken breast, broccoli, carrots, snap peas, and a splash of low-sodium soy sauce over brown rice.

04

Zucchini Noodles with Turkey Meatballs

Ingredients: Zucchini spirals (zoodles), turkey meatballs, and marinara sauce.

SNACKS

Hrd-Boiled Egg & Baby Carrots

Rice Cake with Hummus and Cucumber Slices

Apple Slices with Natural
Almond Butter

Cottage Cheese with a Sprinkle
of Cinnamon and Chia Seeds

PRE/POST-WORKOUT MEALS

Pre-Workout

- A small banana with a handful of almonds.

Post-Workout

- Protein shake with almond milk and a slice of whole-grain toast with avocado.

DESSERT IDEAS

01

Frozen Greek Yogurt Bites

Scoop Greek yogurt into an ice cube tray, top with berries, and freeze.

02

Dark Chocolate & Almonds

A square of dark chocolate with 5-6 almonds for a satisfying treat.

03

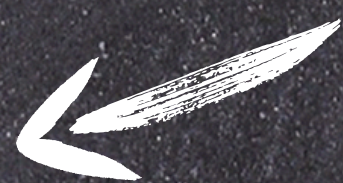
Chia Pudding

Ingredients: Almond milk, chia seeds, a dash of vanilla extract, and cinnamon. Let sit overnight in the fridge.

MEAL PREP TIPS

Day:	Breakfast	Lunch	Dinner	Dinner
Monday	Smoothie	Grilled Chicken Salad	Salmon w/ Veggies	Apple & Almond Butter
Tuesday	Veggie & Egg Scramble	Turkey Wrap	Quinoa Bowl	Cottage Cheese & Berries
Wednesday	Overnight Oats	Egg Salad Lettuce Wraps	Turkey-Stuffed Peppers	Hard-Boiled Egg & Carrots
Thursday	Greek Yogurt Parfait	Chicken Stir-Fry	Zucchini Noodles & Meatballs	Rice Cake w/ Hummus
Friday	Smoothie	Quinoa Bowl	Salmon w/ Sweet Potato	Apple & Almond Butter
Saturday	Veggie & Egg Scramble	Turkey Wrap	Grilled Chicken Salad	Dark Chocolate & Almonds
Sunday	Overnight Oats	Egg Salad Lettuce Wraps	Chicken Stir-Fry	Chia Pudding

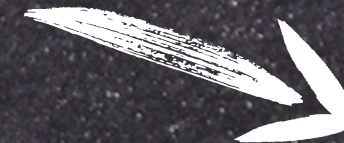
MEAL PREP TIPS



Cook in Batches: Grill multiple chicken breasts, roast a large tray of veggies, and cook quinoa or brown rice for the week.



Use Containers: Pre-portion meals in airtight containers for easy grab-and-go options.



Freeze Extras: Prepare meals like turkey-stuffed peppers or zoodles in advance and freeze for later.

BREAKFAST RECIPES

1. Protein-Packed Smoothie

Ingredients:

- 1 scoop protein powder (25g protein)
- 1 cup unsweetened almond milk
- 1/2 banana
- 1 cup spinach
- 1 tsp chia seeds
- Ice cubes (optional)

Directions:

- Blend all ingredients until smooth.
- Portion Size: ~200 calories, 25g protein, 10g carbs, 5g fat.

2. Veggie & Egg Scramble

Ingredients:

- **2 whole eggs + 2 egg whites**
- **1/2 cup diced bell peppers**
- **1 cup spinach**
- **1/4 avocado (sliced)**

Directions:

- **Sauté bell peppers and spinach in a non-stick pan with a light spray of olive oil.**
- **Add whisked eggs and scramble until cooked.**
- **Serve with sliced avocado.**

Portion Size: ~300 calories, 20g protein, 10g carbs, 18g fat.

LUNCH RECIPES

1. Grilled Chicken Salad

- **Ingredients:**
 - **4 oz grilled chicken breast**
 - **2 cups mixed greens**
 - **1/4 cup cherry tomatoes**
 - **1/4 cucumber (sliced)**
 - **1/4 avocado (sliced)**
 - **1 tbsp olive oil**
 - **1 tbsp balsamic vinegar**
- **Directions:**
 - **Toss all ingredients in a large bowl. Top with olive oil and balsamic dressing.**
- **Portion Size: ~350 calories, 35g protein, 10g carbs, 18g fat.**

2. Quinoa Bowl

- **Ingredients:**
 - **1/2 cup cooked quinoa**
 - **3 oz grilled salmon**
 - **1/2 cup roasted sweet potato cubes**
 - **1 cup steamed broccoli**
 - **1 tsp tahini for drizzle**
- **Directions:**
 - **Combine cooked quinoa, salmon, sweet potato, and broccoli in a bowl. Drizzle tahini on top.**
- **Portion Size: ~400 calories, 30g protein, 35g carbs, 12g fat.**

DINNER RECIPES

1. Salmon with Roasted Vegetables

Salmon with Roasted Vegetables

- **Ingredients:**
- **4 oz salmon fillet**
- **1 cup zucchini (sliced)**
- **1/2 cup bell peppers (sliced)**
- **1/2 small sweet potato**
- **1 tsp olive oil**

Directions:

- **Roast salmon and veggies at 375°F for 15-20 minutes.**
Drizzle olive oil over veggies before roasting.
- **Portion Size: ~350 calories, 30g protein, 15g carbs, 18g fat.**

2. Turkey-Stuffed Bell Peppers

Ingredients:

- **2 bell peppers (halved and seeded)**
- **4 oz ground turkey**
- **1/4 cup cooked quinoa**
- **1/4 cup diced tomatoes**
- **1 tsp garlic powder**

Directions:

- **Sauté ground turkey with garlic powder and tomatoes. Stir in cooked quinoa.**
- **Stuff turkey mixture into bell pepper halves. Bake at 375°F for 20 minutes.**
- **Portion Size: ~300 calories, 28g protein, 15g carbs, 8g fat.**

SNACKS RECIPES

Apple Slices with Almond Butter

Ingredients:

- 1 medium apple
- 1 tbsp natural almond butter

Directions:

- Slice the apple and dip in almond butter.
- Portion Size: ~150 calories, 2g protein, 20g carbs, 7g fat.

2. Cottage Cheese Bowl

Ingredients:

- 1/2 cup low-fat cottage cheese
- 1 tsp chia seeds
- Sprinkle of cinnamon

Directions:

- Mix chia seeds and cinnamon into cottage cheese.
- Portion Size: ~120 calories, 12g protein, 5g carbs, 4g fat.

PRE/POST-WORKOUT RECIPES

Pre-Workout: Banana Almond Boost

Ingredients:

- 1/2 banana
- 5 almonds

Directions:

- Eat banana slices with almonds 30 minutes before the workout.
- Portion Size: ~100 calories, 1g protein, 15g carbs, 5g fat.

Post-Workout: Protein Toast

Ingredients:

- 1 slice whole-grain toast
- 1/2 avocado (smashed)
- 1 scoop protein powder mixed with water or almond milk

Directions:

- Top toast with avocado, eat alongside the protein shake.
- Portion Size: ~250 calories, 25g protein, 20g carbs, 10g fat.

MEAL PREP TIPS

01

Batch Cooking

Grill several portions of chicken and roast a large tray of sweet potatoes and vegetables to save time.

02

Portion Out

Use meal prep containers to divide meals into appropriate portion sizes.

03

Freezer Meals

Turkey-stuffed peppers and quinoa bowls freeze well and can be reheated.



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