**Basic Information**

* **Name**: Rachel Kim
* **Age**: 52
* **Gender**: Female
* **Medical Condition**: Type 2 Diabetes, Mild Hypertension
* **Primary Goal**: Stabilize blood sugar levels, improve overall health metrics, reduce reliance on medication.

**Previous Medical Records**

* **Doctor Visits**:
  + **2024-10-01**: Annual check-up; HbA1c at 8.2%, blood pressure at 135/90 mmHg. Adjusted diabetes medication (added Metformin 500mg twice daily).
  + **2024-07-15**: Podiatrist appointment for early signs of diabetic neuropathy; recommended custom orthotics.
  + **2024-04-10**: Nutritionist consultation; advised reducing processed carbs and increasing lean protein intake.
  + **2023-12-01**: ER visit for hypoglycemia episode; blood glucose dropped to 55 mg/dL after missed lunch and high insulin dose.
* **Medications**:
  + Metformin 500mg (twice daily).
  + Amlodipine 5mg (once daily for hypertension).
  + Atorvastatin 20mg (for cholesterol management).
* **Lab Results**:
  + **2024-10-01**:
    - HbA1c: 8.2% (elevated).
    - Fasting Blood Glucose: 165 mg/dL.
    - LDL: 130 mg/dL (elevated).
    - HDL: 40 mg/dL (low).

**Wearable Data (from Fitness Tracker):**

* **Blood Glucose Monitoring (CGM)**:
  + Daily Averages:
    - Fasting: 165 mg/dL.
    - Post-meal: Peaks at 220 mg/dL, often drops to 70-80 mg/dL after 3 hours.
* **Heart Rate**:
  + Resting: 78 bpm.
  + During Activity: Peaks at 150 bpm during brisk walking.
* **Activity Levels**:
  + Steps: 6,000 daily average.
  + Active Minutes: 40 minutes/day (below goal of 60 minutes).
  + Sedentary Time: 12 hours/day (work and leisure).
* **Sleep Patterns**:
  + Average Sleep Duration: 6.5 hours.
  + Sleep Quality: Poor (frequent waking due to nocturia).
  + REM Sleep: 1.5 hours/night.

**Health Trends:**

* Frequent energy dips mid-afternoon (2-3 PM).
* Weight gain of 5 lbs over the last 6 months.
* High fasting glucose spikes after carb-heavy dinners.

**Emergency Indicators:**

* Hypoglycemia episodes: Reported 2 instances in the last 3 months.
* High-risk scenarios: Skipping meals or missing medication doses.

**Blood Glucose Monitoring (CGM):**

* **Daily Averages**:
  + Fasting: 165 mg/dL.
  + Post-meal: Peaks at 220 mg/dL, drops to 70-80 mg/dL after 3 hours.
* **Time in Target Range (TIR)**:
  + 48% (goal: ≥70%).
  + Out-of-range instances often occur post-carb-heavy meals or with skipped snacks.
* **Hypoglycemic Events**:
  + Twice in the last month, occurring mid-afternoon.

**Heart Rate (HR):**

* **Resting HR**: 78 bpm.
* **Heart Rate Variability (HRV)**: Average 30 ms (low, indicating stress and fatigue).
* **During Activity**: Peaks at 150 bpm during brisk walking; sustained at 120 bpm for 20 minutes.
* **Abnormalities**: Reports occasional palpitations during stress.

**Caloric Burn and Metabolism:**

* **Daily Caloric Burn**:
  + Resting: 1,500 calories.
  + Activity: Additional 250 calories/day on average.
* **Estimated VO2 Max**: 25 ml/kg/min (below average for age and health conditions).

**Stress and Recovery Metrics:**

* **Stress Levels**:
  + Peaks: Afternoon work hours and evening after carb-heavy meals.
  + Recovery Time: 3-4 hours post-stress events (goal: <2 hours).
* **Breathing Rate**:
  + Average: 17 breaths/min (normal).
  + Elevated: 22 breaths/min during stress peaks.

**Health Trends:**

* **Daily Activity**:
  + Limited morning activity; most steps accumulated during evening walks.
  + Lacks structured strength training despite doctor recommendations.
* **Sleep Trends**:
  + Weekend sleep quality better due to reduced stress and longer duration.
  + Poor sleep linked to high-carb or late-night dinners.
* **Blood Sugar Trends**:
  + Morning glucose often elevated due to dawn phenomenon.
  + Evening glucose spikes after dinner if fiber intake is insufficient.

**Emergency Indicators:**

* **High-Risk Scenarios**:
  + Hypoglycemia events triggered by skipped meals or overactivity.
  + Potential for dehydration during sedentary workdays with low water intake.
* **Wearable Alerts**:
  + Low glucose alerts triggered twice in the past month.
  + Elevated heart rate alerts during stress episodes.