

Test Case Planning

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1. Use Case 1 - Personalized Calorie & Macro Budget

Test Case ID	TC01 - Successful Goal Calculation
Test Objective	The verification system calculates calorie & macro budget when all inputs are valid.
Preconditions	The user is logged in and on the “Calorie Goals” page.
Test steps	<ol style="list-style-type: none">1. Enter age = 25, weight = 160lb, height = 5.7ft, activity = Moderate, sex = M.2. Select goal: Lose Weight.3. Click Calculate.
Input Values	<ul style="list-style-type: none">• age = 25• Weight = 160 lb• Height = 5.7 ft• Activity = Moderate• Sex = M
Expected results	<ul style="list-style-type: none">• The system calculates calorie targets using a valid formula (BR01).• Macro distribution follows guidelines (BR02).• Results screen displays: daily calories, protein/carbs/fat targets.• No error messages appear.

Test Case ID	TC02 - Partial Update
Test Objective	Verify system recalculates using new data + previous saved data.
Preconditions	User already has a saved profile: Age 25, Weight 160lb, Height 5.7ft, Activity Moderate.
Test steps	<ol style="list-style-type: none"> 1. Update weight only → change to 180lb. 2. Click Save & Recalculate.
Input Values	<ul style="list-style-type: none"> • Weight = 180lb
Expected results	<ul style="list-style-type: none"> • System uses new weight and previous age, height, and activity. • Recalculates calorie & macro budget. • Displays updated targets. • Confirmation: “Goals updated using saved profile data.”

Test Case ID	TC03 - Missing field
Test Objective	The Verify system handles incomplete input with defaults.
Preconditions	The user is logged in and on the “Calorie Goals” page.
Test steps	<ol style="list-style-type: none"> 1. Enter age = 40, weight = 160lb, height = 5.7ft. 2. Skip activity level. 3. Select goal: Maintain Weight. 4. Click Calculate.
Input Values	<ul style="list-style-type: none"> ● age = 40 ● Weight = 160lb ● Height = 5.7ft ● Goal = Maintain Weight
Expected results	<ul style="list-style-type: none"> ● The system uses a <i>default</i> or estimated activity level. ● Generates a new calorie goal. ● Inline message appears: “Using default activity level. Complete your profile for more accurate results.”

Test Case ID	TC04 - Invalid Data
Test Objective	Verify the system stops and alerts users when invalid inputs are provided.
Preconditions	User is logged in and on “Calorie Goals” page
Test steps	<ol style="list-style-type: none"> 1. Enter age = 7 (below 10). 2. Enter weight = 35lb (below 45). 3. Leave height blank. 4. Click Calculate.
Input Values	<ul style="list-style-type: none"> • Age = 7 • Weight = 35lb
Expected results	<ul style="list-style-type: none"> • System detects invalid / missing values. • An error message appears: “Please correct invalid fields: age, weight, height.” • No calorie target is calculated. • User cannot proceed until fields are corrected.