## **Scenario 1**

## Meal IOB = .60

## Correction IOB = 0

## Current BG > Target BG

## Current BG < Correct Above

*View Calculations screen, layout template*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**Correction Bolus** 0.00 U

BG = 170, Target BG = 120

Correct Above = 175

Correction Factor = 50

(170-120) / 50 0.00 U Since the Current BG < Correct Above Correction Bolus = 0

**Meal IOB adjustment**

Meal IOB = 0.60 U

0.00 U – 0.60 U 0.00 U Since it’s negative it’s considered as 0 value

**Correction IOB adjustment**

Correction IOB = 0.00 U

0.00 - 0.00 U = 0.0 U Since Correction Bolus and Correction IOD are zero 0

**Meal Bolus** 3.10 U

Carbs = 47 g, IC Ratio = 15 g/U

47 / 15 3.10 U

**Correction IOB adjustment**

Remaining correction IOB = 0.00 U

3.10 U – 0.00 U = 3.10 U

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**Calculated Bolus 3.10 U**

## 

## **Scenario 2**

## Meal IOB = .60

## Correction IOB = .60

## Current BG > Target BG

## Current BG > Correct Above

*View Calculations screen, layout template*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**Correction Bolus** 0.00 U

BG = 170, Target BG = 120

Correct Above = 160

Correction Factor = 50

(170-120) / 50 1.00 U

**Meal IOB adjustment**

Meal IOB = 0.60 U

1.00 U – 0.60 U 0.40 U

**Correction IOB adjustment**

Correction IOB = 0.60 U

0.40 - 0.60 U 0.0 U ( -0.20 still exist but not shown in the UI)

**Meal Bolus** 2.90 U

Carbs = 47 g, IC Ratio = 15 g/U

47 / 15 3.10 U

**Correction IOB adjustment**

Remaining correction IOB = 0.20 U

3.10 U – 0.20 U = 2.90 U

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**Calculated Bolus 2.90 U**

## **Scenario 3**

## Meal IOB = .60

## Correction IOB = .60

## Current BG = N/A (BG reading not taken by the user)

*View Calculations screen, layout template*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**Correction Bolus** 0.00 U

BG = N/A, Target BG = 120

Correct Above = 160

Correction Factor = 50

**Meal IOB adjustment**

Meal IOB = 0.60 U

N/A no BG reading

**Correction IOB adjustment**

Correction IOB = 0.60 U

N/A no BG reading

**Meal Bolus** 3.10 U

Carbs = 47 g, IC Ratio = 15 g/U

47 / 15 3.10 U

**Correction IOB adjustment**

IOB is subtracted from the bolus only when BG is known

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**Calculated Bolus 3.10 U**

## **Scenario 4**

## Meal IOB = .60

## Correction IOB = .60

## Current BG < Target BG

## Current BG > Minimum BG for calculation 70

## Reverse correction is ON

*View Calculations screen, layout template*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**Correction Bolus -**0.60 U

BG = 90, Target BG = 120

Correction Factor = 50

(90 – 120) /50 = -0.6 U

**Meal IOB adjustment**

Meal IOB = 0.60 U

N/A Correction Bolus <= 0 U

**Correction IOB adjustment**

Correction IOB = 0.60 U

N/A Correction Bolus is <=0 U

**Meal Bolus** 2.50 U

Carbs = 47 g, IC Ratio = 15 g/U

47 / 15 3.10 U

**Correction IOB adjustment**

3.10 – 0.60 = 2.50

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**Calculated Bolus 1.90 U**

## **Scenario 5**

## Meal IOB = .60

## Correction IOB = .60

## Current BG < Target BG

## Current BG > Minimum BG for calculation 70

## Reverse correction is ON

*View Calculations screen, layout template*

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**Correction Bolus -**0.40 U

BG = 100, Target BG = 120

Correction Factor = 50

Correct Above 130

(100 – 120) /50 = -0.4 U

**Meal IOB adjustment**

Meal IOB = 0.60 U

N/A Correction Bolus <= 0

**Correction IOB adjustment**

Correction IOB = 0.60 U

N/A Correction Bolus is <=0 U

**Meal Bolus** 0.00 U

Carbs = 0 g, IC Ratio = 15 g/U

0 / 15 0.0 U

**Correction IOB adjustment**

0 – 0.60 0.0 U

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**Calculated Bolus 0.00 U**

## **Scenario 6**

## Meal IOB = .60

## Correction IOB = .60

## Current BG < Target BG

## Current BG < Minimum BG for calculation 70 (Based on the minimum BG setting)

## Reverse correction is ON

Bolus Calculator is turned OFF because we the BG is too low so we shouldn’t deliver any more insulin to the body

## **Scenario 7**

## Meal IOB = .60

## Correction IOB = .60

## Current BG > Target BG

## Current BG > Maximum BG for calculation 600

## Reverse correction is ON

Bolus Calculator is turned OFF because we the BG is too high so we shouldn’t deliver any insulin to the body

## **Scenario 8**

## Meal IOB = .60

## Correction IOB = .60

## Current BG > Target BG

## Current BG > Minimum BG for calculation 70

## Reverse correction is ON

Time since Bolus calculator is turned ON < DIA

Bolus Calculator is turned OFF because we need to wait for the duration of insulin action need to expire.