

GLUCOSE TOLERANCE TESTS

Test Code	Test Description	Definition
FBS	Glucose, Fasting	Patient is fasting
GLU-PP	Glucose, Post-Prandial	Provider specifies what patient may eat and when collection is to occur after eating, prior to this draw. No reference range is provided.
GLU	Glucose, Random	Random glucose. Although flagged using fasting glucose reference range, random non-fasting glucose may exceed this range
GLU2H	Glucose, 2 Hr Post Glucola (no fasting sample required)	Fasting Patient is given 75 g oral glucose (Glucola) and is drawn at 2 hours post-Glucola only
CS GTADA (careset)	Glucose Tolerance – Fasting and 2 Hr sample	Patient is drawn fasting, then given 75 g oral glucose (Glucola). Pt is drawn at 2 hours; the 2 hour sample is interpreted per ADA guidelines; serum is acceptable.
CS GTT2HR CS GTT3HR (careset)	Glucose Tolerance – extended – 2 Hr and 3 Hr	Patient is drawn fasting, then given 75 g oral glucose (Glucola). Patient is drawn at hourly intervals for the duration of the specified tolerance. This tolerance must be ordered as described in later section. Physician determines the duration of the test.

- The cutoff for fasting hyperglycemia has been lowered to 99 mg/dL per ADA revised guidelines.
- Random glucose values of $>$ or $=$ 200 mg/dL are diagnostic of Diabetes Mellitus (DM). Random glucose values of $<$ 200 mg/dL do not rule out DM.

GLUCOSE TOLERANCE TEST FOR NON-PREGNANT ADULTS

PATIENT PREPARATION: The test should be performed on patients who are otherwise healthy and ambulatory (not hospitalized). Ideally the test should be performed in the morning after at least three days of unrestricted physical activity and diet adequate in carbohydrate intake (at least 150 g daily carbohydrate). The adult subject should fast at least eight (8) hours immediately prior to the start of the tolerance test. Water is permitted during this fasting period. During the test, the subject should remain seated (or minimal activity) and not smoke or consume caffeine containing beverages.

TEST DOSE: Administer a 75 g dose of glucose.

PROCEDURE: Obtain a fasting blood specimen from the patient. Administer the dose. Have the patient drink the dose within a five-minute interval. Collect blood specimens at the indicated times within +/- 10 minutes. Centrifuge the blood specimen within 45 minutes after drawing and determine the plasma glucose.

INDICATIONS FOR TESTING: Glucose levels are used to diagnose and manage diabetes mellitus and other carbohydrate metabolism disorders.

INTERPRETATION OF ORAL GTT RESULTS: Interpretation of OGTT for Non-pregnant Adults and Children per 2004 ADA Guidelines:

	Fasting	2 Hour Post-Dose
Reference Range	70 – 99 mg/dL	<140 mg/dL
Diagnostic of Diabetes Mellitus (DM)	>= 126 mg/dL	>= 200 mg/dL
Impaired Fasting Glucose	100 – 125 mg/dL	
Impaired Glucose Tolerance		140 – 199 mg/dL

GLUCOSE TOLERANCE TEST FOR CHILDREN (Under 12 years of age)

PATIENT PREPARATION: The test should be performed on patients who are otherwise healthy and ambulatory (not hospitalized). Ideally the test should be performed in the morning after at least three days of unrestricted physical activity and diet adequate in carbohydrate intake (at least 150 g daily carbohydrate). The subject should fast at least 8 hours immediately prior to the start of the tolerance test. Water is permitted during this fasting period. During the test, the subject should remain seated (or minimal activity) and not smoke or consume caffeine-containing beverages.

TEST DOSE: Administer the dose using a dose of 1.75 g/kg, according to the chart below, using a maximum dose of 75 g (225 mL). Other dosages may be specified by the pediatrician.

PEDIATRIC PATIENTS: Fractional Volume of glucose tolerance beverage to be given to a Child under 12 Years of Age, dosing at 1.75 g/kg.

All Volumes Based on 100 g/300 mL Bottle.

Weight Amount	Weight Amount	Weight Amount
14 lbs use 33 mL	16 lbs use 38 mL	18 lbs use 43 mL
20 lbs use 48 mL	22 lbs use 52 mL	24 lbs use 57 mL



26 lbs use 62 mL	28 lbs use 67 mL	30 lbs use 71 mL
32 lbs use 76 mL	34 lbs use 81 mL	36 lbs use 86 mL
38 lbs use 90 mL	40 lbs use 95 mL	42 lbs use 100 mL
44 lbs use 105 mL	46 lbs use 110 mL	48 lbs use 114 mL
50 lbs use 119 mL	52 lbs use 124 mL	54 lbs use 129 mL
56 lbs use 133 mL	58 lbs use 138 mL	60 lbs use 143 mL
62 lbs use 148 mL	64 lbs use 152 mL	66 lbs use 157 mL
68 lbs use 162 mL	70 lbs use 167 mL	72 lbs use 171 mL
74 lbs use 176 mL	76 lbs use 181 mL	78 lbs use 186 mL
80 lbs use 191 mL	82 lbs use 195 mL	84 lbs use 200 mL
86 lbs use 205 mL	88 lbs use 210 mL	90 lbs use 214 mL
92 lbs use 219 mL	94 lbs use 224 mL	96 lbs use 225 mL

For all weights of 96 lbs or more, give a dose of 75 g (225 mL).

All Volumes Based on 75 g/296 mL Bottle.

Weight Amount	Weight Amount	Weight Amount
14 lbs use 44 mL	16 lbs use 50 mL	18 lbs use 56 mL
20 lbs use 63 mL	22 lbs use 69 mL	24 lbs use 75 mL
26 lbs use 81 mL	28 lbs use 88 mL	30 lbs use 94 mL
32 lbs use 100 mL	34 lbs use 107 mL	36 lbs use 113 mL
38 lbs use 119 mL	40 lbs use 125 mL	42 lbs use 132 mL
44 lbs use 138 mL	46 lbs use 144 mL	48 lbs use 150 mL
50 lbs use 157 mL	52 lbs use 163 mL	54 lbs use 169 mL
56 lbs use 175 mL	58 lbs use 182 mL	60 lbs use 188 mL
62 lbs use 194 mL	64 lbs use 200 mL	66 lbs use 207 mL
68 lbs use 213 mL	70 lbs use 219 mL	72 lbs use 226 mL



74 lbs use 232 mL

76 lbs use 238 mL

78 lbs use 244 mL

80 lbs use 251 mL

82 lbs use 257 mL

84 lbs use 263 mL

86 lbs use 269 mL

88 lbs use 276 mL

90 lbs use 282 mL

92 lbs use 288 mL

94 lbs use 294 mL

96 lbs use 296 mL

For all weights of 96 lbs or more, give a dose of 75 g (296 mL).

TEST CODE: Unless specified otherwise by the physician, the standard length of the tolerance is two hours. The test code is GTADA.

PROCEDURE: Same as adults.