MOUNT GENERAL MEMORIAL HOSPITAL
M I N N E A P O L I S

Name: _____ mm-dd-yyyy

YOUR DIABETES ASSESSMENT

Evaluation for Diabetes Recommended

RISK FACTORS

2 Lifestyle

1 Health History

1 Unknown

You're at risk for undiagnosed diabetes.

Only a health care professional can diagnose diabetes. A medical evaluation is needed.

- With the correct treatment and recommended lifestyle changes, many people with diabetes are able to avoid or delay health complications.
- Based on general guidelines, your body fat is a moderate risk factor. Weight management help is available if you're ready.

Knowing Your Diabetes Risk Factors

You can't always control your risk factors. Things like your age, sex, and family history of diabetes can impact your diabetes risk.

Other risk factors can be improved by making changes to daily habits and/or medication. Ten important risk factors are listed in the table.

Managing Diabetes

People with diabetes should "know their numbers" and keep them under control. This includes A1C, blood pressure, cholesterol, weight, and waist measurement.

Take Control of Your Health

Ask a health care provider how to manage your risk for developing diabetes or its complications.

Lifestyle Risk Factors	You Reported
Smoking within past year	*No*
Too much body fat	*Yes*
Low weekly physical activity	*Yes*

Health History Risk Factors	Your Risk Level
High blood pressure	*Low Risk*
Abnormal cholesterol	*Low Risk*
High blood sugar or A1C	*Low Risk*
Parent or sibling with diabetes	*Unknown Risk*
Age over 39	*No Increased Risk*
Male sex	*Not Applicable*
Diabetes during pregnancy	*High Risk*

In the United States, more than 100 million people have diabetes or prediabetes.

Of those with prediabetes, up to 90% don't know they have it.

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Results

YOUR DIABETES ASSESSMENT

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RISK FACTORS

2 Lifestyle

1 Health History

1 Unknown

What is diabetes?

Diabetes is a long-term health condition that affects how the body turns food into energy. There are 3 main types of diabetes: type 1, type 2, and gestational diabetes. High blood sugar from diabetes can damage blood vessels and the nerves that control the heart and blood vessels. That's why diabetes can cause serious health problems. There isn't a cure for diabetes yet. But staying at a healthy weight, eating healthy food, and being active can help a lot.

What is gestational diabetes?

Gestational diabetes is diabetes that happens during pregnancy. It usually goes away after the baby is born. It increases the future risk for type 2 diabetes for both mom and baby. And babies born to moms with gestational diabetes are more likely to become obese as children or teens.

What is prediabetes?

With prediabetes, blood sugar levels are high but not as high as with type 2 diabetes. Having prediabetes increases the risk for type 2 diabetes, heart disease, and stroke. The good news is that healthy daily habits may return blood sugar to the recommended level.

What are risk factors?

A risk factor is any personal characteristic that increases the chance of developing diabetes. This includes older age, high blood pressure, larger waist, overweight or obesity, and other factors. It's important for people to work with a health care provider to manage their diabetes risk.

About This Assessment

This health assessment aims to identify people who may have undiagnosed diabetes or prediabetes. For people with diabetes, unknown or uncontrolled blood sugar is noted as an important risk factor for developing complications of diabetes. The assessment also identifies independent risk factors for developing diabetes, prediabetes, or complications of diabetes.

References

• Bang H, Edwards AM, Bomback AS, et al. Development and validation of a patient self-assessment score for diabetes risk. *Ann Intern Med.* 2009;151:775-783.

• American Diabetes Association. Classification and diagnosis of diabetes: standards of medical care. Diabetes Care. 2021;44(Suppl. 1): S15–S33. https://doi.org/10.2337/dc21-S002.

• Hsu WC, Araneta MRG, Kanaya AM, Chiang JL, Fujimoto W. BMI Cut Points to Identify At-Risk Asian Americans for Type 2 Diabetes Screening. *Diabetes Care.* 2015;38:150–158. doi: https://doi.org/10.2337/dc14-2391.

• US Preventive Services Task Force. Screening for Prediabetes and Type 2 Diabetes - US Preventive Services Task Force Recommendation Statement. JAMA. 2021;326(8):736-743. doi:10.1001/jama.2021.12531.

Lifestyle Risk Factors

Smoking makes the risk of developing diabetes higher. The more cigarettes smoked, the higher the risk.

For people who smoke, quitting today is one of the best things they can do for their overall health. A doctor can recommend programs or medication to quit smoking.

SMOKING

Current	Recommended Goal
Smoked within 30 days **High Risk**	Never smoked/Quit 1+ years **Low Risk**

Two big risk factors for diabetes are being overweight or having a large waist. Both are signs of too much body fat.

Maintaining a healthy body weight and diet can lower the risk for developing diabetes or its complications.

Goals for Asian-Americans
Asian-Americans have an increased diabetes risk at lower body weight than the rest of the general public. They also have a smaller recommended goal for waist measurement.

Your personalized goals, based on how you answered today, are shown at right.

WEIGHT

Current	Recommended Goal
164 lbs. **Moderate Risk**	Fewer than 154 lbs. **Low Risk**

For your height, 164 pounds is considered overweight. Ask your doctor to determine a healthy weight for you.

WAIST MEASUREMENT

Current	Recommended Goal
Smaller than 27.5 inches **Low Risk**	Smaller than 27.5 inches **Low Risk**

These recommended goals are for Asian-Americans.

Daily exercise and other physical activity can lower the risk of diabetes.

Regular exercise may also improve these other risk factors:

• Weight and waist size

• Blood pressure

• Cholesterol

• Blood sugar

WEEKLY PHYSICAL ACTIVITY

Current	Recommended Goal
No physical activity **High Risk**	150 min. or more (moderate)** **Low Risk**

*60 moderate + 60 vigorous = 180 min. moderate
(each minute of vigorous exercise equals two minutes of moderate)

**The goal is 150 minutes of moderate exercise or an equivalent mix of moderate and vigorous minutes.

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Health History Risk Factors

Fasting blood sugar is a blood test that is taken after you have not eaten for 12 to 14 hours. A1C is a test that shows the average blood sugar over the past 2 to 3 months.

Keeping blood sugar within the healthy range set by a doctor is vital for overall health. A doctor can help find ways to manage blood sugar levels.

BLOOD SUGAR

Current

Within recommended range
Low Risk

Recommended Goal

Under 100 mg/dL
Low Risk

High blood pressure (hypertension) is a risk factor for diabetes. People with high blood pressure should:

• Maintain a healthy body weight.

• Limit daily sodium (salt) to 2,300 mg.

• Reduce alcohol use.

• Be physically active every day.

• Talk with a doctor about starting or changing blood pressure medications.

BLOOD PRESSURE

Current

Hypertension or on meds
High Risk

Recommended Goal

No hypertension
Low Risk

You indicated that you're regularly taking medication to control blood pressure.

Abnormal cholesterol is a risk factor for diabetes. People with abnormal cholesterol levels should:

• Limit the fat in food to about 25% of total calories. Reduce serving sizes of meat, desserts and food high in fat.

• Make sure to get regular physical activity. The goal should be 30 minutes per day, 5 days a week.

• Talk with a doctor about medicine to control cholesterol.

CHOLESTEROL

Current

Within recommended ranges
Low Risk

Recommended Goal

Within recommended ranges
Low Risk

"NORMAL" CHOLESTEROL RANGES
Total cholesterol = Less than 200 mg/dL
HDL "good" cholesterol (men) = 40 mg/dL or higher
HDL "good" cholesterol (women) = 50 mg/dL or higher
LDL "bad" cholesterol = Less than 100 mg/dL
Triglycerides = less than 150 mg/dL

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Health History Risk Factors

The risk of diabetes increases with age.

Everyone over 45 years of age should have a fasting blood sugar test done at least every 3 years. Testing should begin at a younger age in people with other risk factors.

AGE

> 62 years old
> **Increased Risk**

Having a parent, brother, or sister with diabetes increases the risk of developing the condition.

However, people can still develop diabetes even if no one in their family has it.

FAMILY HISTORY OF DIABETES

> Family history unknown
> **Unknown Risk**

Diabetes that develops during pregnancy is called gestational diabetes.

About half of all women with a history of gestational diabetes go on to develop type 2 diabetes.

DIABETES DURING PREGNANCY

> No history of gestational diabetes
> **No Increased Risk**

Type 2 diabetes is diagnosed at younger age and lower weight in men than in women.

This increase in risk for men may be due to:
• Biology
• Lifestyle
• Other important sex and gender differences

SEX

> Female
> **No Increased Risk**

NOTICE: Health assessments are based on averages from studies of large groups of people.

Your situation may be different. It is important to discuss your personal situation with your health care provider. This assessment is not intended to replace medical advice from your health care provider, but rather help you set health goals and make healthy lifestyle decisions.

To find a primary care doctor, call 1-800-555-5555 and we'll help find a doctor to fit your needs. For more information about our health services, call 1-877-555-0000 or visit www.mtgeneralmemorial.org/services.

Mt. General Memorial Clinic
5431 Lake Drive, Minneapolis MN 55401
1-877-555-0000

OUR HOSPITALS
Mt. General Memorial Hospital
2928 Fifth Ave. SW, Edina, MN 53802
(555) 555-1100

Mt. General Memorial Regional Medical Center
982 West Poplar Drive, St. Paul, MN 50013
(555) 555-2100

Mt. General Memorial Community Hospital
4110 South Virago Parkway, Rush City, MN 59545
(555) 555-3100

Mt. General Memorial North Franklinburg Hospital
890 SE 57th St., Franklinburg, MN 56782
(555) 555-4100

Mt. General Memorial Lakeport Hospital
524 SW Monarch St., Lakeport, MN 57653
(555) 555-5100

YOUR DIABETES ASSESSMENT
overallMessage

a — Ask a Doctor about Complications of Diabetes

b — Ask a Doctor about Controlling Your A1C

c — Have Your A1C Measured

d,h — Evaluation for Diabetes Recommended

e — Prediabetes High Risk

f — Gestational Diabetes High Risk

g — Increased Risk

i — More Information Needed

j — Low Risk

RISK FACTORS
riskFactorBadgeFormatter

- A1/A2
- B1/B2
- C

composite badge

D — No Reported Lifestyle or Health History Risk Factors

Composite A/B/C Badge

BADGE COLORS

For A1 & B1 use badge color **FF6600**
For A2/B2/D use badge color **2574A9**
For C use badge color **999999**

EXAMPLE

countIncreasedLifestyleFactors = 2 → 2 Lifestyle — A1
countIncreasedHealthFactors = 0 → 0 Health History — B2
countUnknownRiskFactors = 0 → 0 Unknown — C

You can find *'count**Factors'* **HERE: DIABETES Calculations --> Risk Factor Count / Status**
https://www.lucidchart.com/documents/edit/9d6e61b4-e75c-4138-b29d-eac0085280ab/19

PARTS - REPORT PAGE 1

Lifestyle Risk Factors	You Reported
Smoking within past year	No
Too much body fat	Yes
Low weekly physical activity	Yes

Health History Risk Factors	Your Risk Level
High blood pressure	Low Risk
Abnormal cholesterol	Low Risk
High blood sugar or A1C	Low Risk
Parent or sibling with diabetes	Unknown Risk
Age over 39	No Increased Risk
Male sex	Not Applicable
Diabetes during pregnancy	High Risk

Design Note: These text colors are intended to simplify scannability of the table.

if smokerRisk = 'moderate' or 'high', then show *Yes;* else, *No*

if bodyFatRisk = 'moderate' or 'high' or 'veryHigh', then show *Yes*; if 'unknown', show *Unknown*; else, *No (see link below)*

if exerciseRisk = 'moderate' or 'high', then show *Yes*; else, show *No*

bloodPressureRisk: *Low Risk / High Risk*

cholesterolRisk: *Low Risk / High Risk / Unknown Risk*

bloodSugarRisk: if = 'highA1c' OR 'highFbs_*' show *High Risk* ; if 'unknownA1c' OR 'unknownFbs', show *Unknown Risk*, if 'averageA1c' = *Controlled Risk*,: if 'lowFbs', show *Low Risk*

familyHistoryRisk: *Low Risk / High Risk / Unknown Risk*

ageRisk: *No Increased Risk / Increased Risk*

if 'sex' = female; show *Not Applicable;* else show *Increased Risk*

gestationalDiabetesRisk: *No Increased Risk / Not Applicable / Diagnosed Diabetes / High Risk*

See LUCIDCHART --> **DIABETES Calculations**
https://www.lucidchart.com/documents/edit/9d6e61b4-e75c-4138-b29d-eac0085280ab/0
See LUCIDCHART --> **DIABETES Calculations --> bangDiabetesScore --> bodyFatRisk**
https://www.lucidchart.com/documents/edit/9d6e61b4-e75c-4138-b29d-eac0085280ab/21

SMOKING

Current   Recommended Goal

low AND smoker = never
| Never smoked |
| **Low Risk** |

| Never smoked/Quit 1+ years |
| **Low Risk** |

low AND smoker = former_more
| Quit smoking 1+ years |
| **Low Risk** |

moderate
| Quit smoking (less than 1 yr) |
| **Moderate Risk** |

high
| Smoked within 30 days |
| **High Risk** |

WEIGHT

Current | Recommended Goal

if ethnicity_specify_asian = 1, show weight at bmi = 23.0; else, show weight at bmi = 25.0

low

[XXX] lbs.
Low Risk

Fewer than [###] lbs.
Low Risk

moderate

[XXX] lbs.
Moderate Risk

high

[XXX] lbs.
High Risk

veryHigh

[XXX] lbs.
Very High Risk

XXX = user's 'weight' (weight variable)

Show when bmiRisk = 'low'

If [bmi = 18.5 - 24.9 AND ethnicity_specify_asian != 1]
OR
[bmi = 16.5 - 22.9 AND ethnicity_specify_asian == 1]
For your height, [XXX] is considered to be a healthy weight.

'weight'

If [bmi <18.5 AND ethnicity_specify_asian != 1]
OR
[bmi <16.5 AND ethnicity_specify_asian == 1]
For your height, [XXX] is considered underweight. Ask your doctor to determine a healthy weight for you.

Show when bmiRisk = 'moderate'
For your height, [XXX] is considered overweight. Ask your doctor to determine a healthy weight for you.

DESIGN BUG:
Add the word 'pounds' after users' weight

Show when bmiRisk = 'high' OR 'veryHigh'
For your height, [XXX] is considered obesity. Ask a health care professional about weight management options.

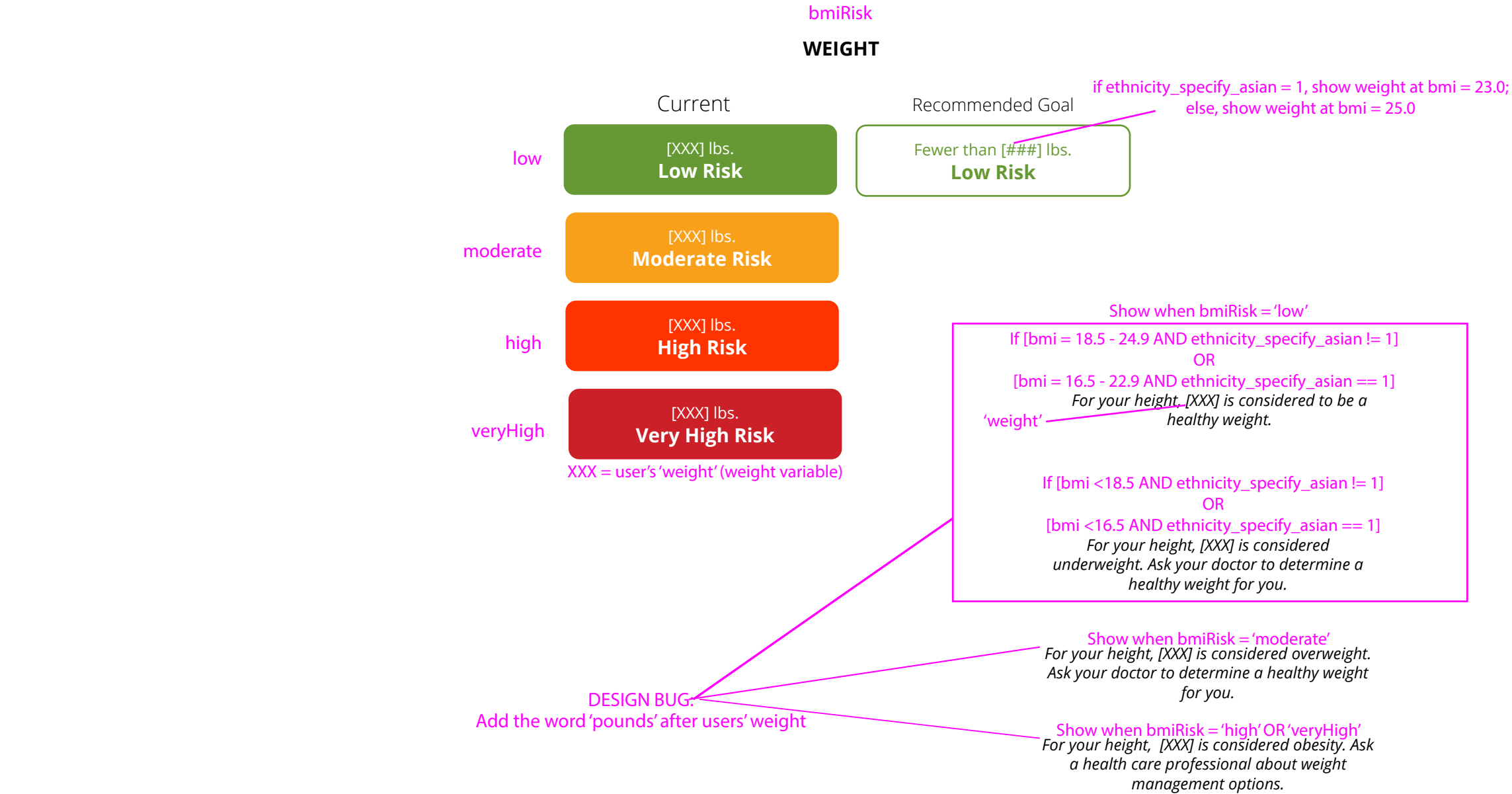See LUCIDCHART --> **DIABETES Calculations --> bmiRisk**
https://www.lucidchart.com/documents/edit/9d6e61b4-e75c-4138-b29d-eac0085280ab/7

WAIST MEASUREMENT

Current   Recommended Goal

healthy

Smaller than [X] inches
Low Risk

Smaller than [X] inches
Low Risk

X = waistLimit*_plus0

X = waistLimit*_plus0

increased

[waistLimit*_plus1] inches
Moderate Risk

large

[waistLimit*_plus2] inches
High Risk

veryLarge

Larger than [Y] inches
Very High Risk

Y = waistLimit*_plus3

unknown

Measurement unknown
Unknown Risk

These recommended goals are for Asian-Americans.

When ethnicity_specifiy_asian = 1

WEEKLY PHYSICAL ACTIVITY

Current | Recommended Goal

low

Equal to ## min. (moderate)*
Low Risk

150 min. or more (moderate)**
Low Risk

moderate

Equal to ## min. (moderate)*
Moderate Risk

high

No physical activity
High Risk

= exerciseModerateEquivalent

DYNAMIC SUB MESSAGE

weeklyExercise_moderate   *weeklyExercise_vigorous*   *exerciseModerateEquivalent*
*## moderate + ## vigorous = ## min. moderate
(each minute of vigorous exercise equals two minutes of moderate)

bloodSugarRisk

BLOOD SUGAR

	Current	Recommended Goal
low_fbs	Within recommended range **Low Risk**	Under 100 mg/dL **Low Risk**
high_fbs_meds	Taking medication to control **High Risk**	
high_fbs_blood_sugar	Outside recommended range **High Risk**	
unknown_fbs	Unknown blood sugar **Unknown Risk**	

You indicated that you're regularly taking medication to control blood sugar.

	Current	Recommended Goal
high_a1c	Type 1 or type 2 diabetes **Uncontrolled Blood Sugar**	Type 1 or type 2 diabetes **Controlled Blood Sugar**
unknown_a1c	Type 1 or type 2 diabetes **Unknown A1C**	
average_a1c	Type 1 or type 2 diabetes **Controlled Blood Sugar**	

BLOOD PRESSURE

Current | Recommended Goal

No hypertension
Low Risk

No hypertension
Low Risk

Hypertension or on meds
High Risk

You indicated that you're regularly taking
medication to control blood pressure.

CHOLESTEROL

	Current	Recommended Goal
low	Within recommended ranges **Low Risk**	Within recommended ranges **Low Risk**
high	Outside recommended or on meds **High Risk**	
unknown	Cholesterol unknown **Unknown Risk**	

You indicated that you're regularly taking medication to control cholesterol.

When medications_cholesterol ='1'

ageRisk

AGE

low
[XX] years old
No Increased Risk

high
[XX] years old
Increased Risk

XX = 'age'
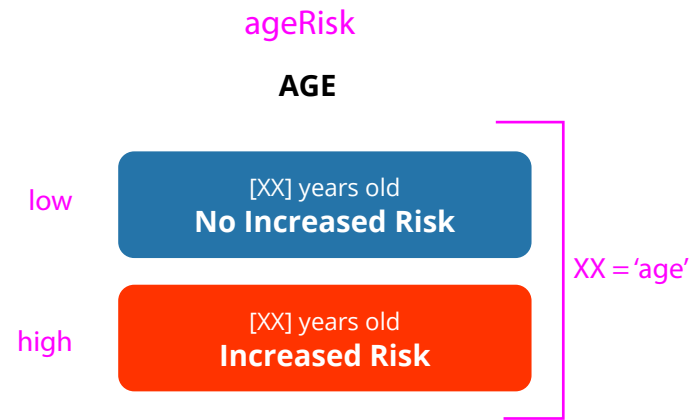
FAMILY HISTORY OF DIABETES

low

No family history of diabetes
Low Risk

high

Family history of diabetes
High Risk

unknown

Family history unknown
Unknown Risk

gestationalDiabetesRisk

DIABETES DURING PREGNANCY

low | No history of gestational diabetes
No Increased Risk

'na' AND sex = male | **Not Applicable**

'na' AND sex = female | **Existing Diabetes Diagnosis**

high | History of gestational diabetes
High Risk

sex
SEX

female

Female
No Increased Risk

male

Male
Increased Risk

RESULT MESSAGING & CALCULATIONS

MESSAGING

https://www.lucidchart.com/documents/edit/ea447216-4792-4b49-b575-1532bae3c55e

CALCULATIONS

https://www.lucidchart.com/documents/edit/9d6e61b4-e75c-4138-b29d-eac0085280ab/0

DATA DICTIONARY

https://www.dropbox.com/s/rwnjjzvq89b4qe0/v3%20diabetes%20risk%20data%20dictionary%20-%20DOC-00314.xlsx

FUTURE ENHANCEMENTS VERSION:
https://www.dropbox.com/s/9latd8gmy833o5d/EVADIAB-299%20diabetes%20risk%20v3%20data%20dictionary%20-%20DOC-00314.xlsx

Risk Palette

All Reports

Non-ADA

ADA

Text/Charts Label		Non-ADA	ADA
High to Severe	CD2026	CC0000	F08D8C
Increased to High	E72329	FF3300	F4BBA2
Moderate to Increased	804028	FF6600	FFCC99
Mild/Moderate	AA5D00	F9A01B	F2DA8F
Low to Mild	448700	669933	DCEBBF
Reduced to Low	114C2A	406325	ACDBCB
Average	2574A9	2574A9	98CDEE
Unknown	777777	999999	E1E1E1