Nourished by Science

Evidence-Based Nutrition For Chronic Disease Prevention

The Insulin Resistance Syndrome

This document provides information about a cluster of chronic disease risk factors, the *insulin resistance syndrome*.

The insulin resistance syndrome overlaps with the metabolic syndrome. However, in contrast to the metabolic syndrome, the insulin resistance syndrome is not a diagnosed medical condition. The concept of the insulin resistance syndrome was developed by Nourished by Science, and its suggested use is to track the degree to which cardiometabolic risk factors deviate from the optimal range. However, this is not a validated diagnostic tool, and should not be used for diagnostic purposes.

For each risk factor, the optimal level that is associated with the lowest chronic disease risk is shown in the green portion of each bar. The orange portion of each bar indicates a modestly increased risk. And the red portion of each bar shows the level associated with a substantial increase in chronic disease risk.

Epidemiological data suggest that the risk of chronic diseases such as type 2 diabetes, cardiovascular disease, chronic kidney disease, liver disease, and several types of cancer will be elevated the most if several or all factors are in the orange or red portions of each bar, and if the deviation from the optimal range is more substantial and persists over a longer period of time.

Please note that separate graphics are provided for men vs. women and for Caucasian (white) race vs. non-white race because the cut-offs for waist circumference and HDL-cholesterol differ by gender and race.

For more information on the insulin resistance syndrome: https://nourishedbyscience.com/insulin-resistance-syndrome

Please note that this document is intended to summarize scientific information about the relationship between risk biomarkers and chronic disease risks. It should not be used for self-diagnosis, or as a rationale to independently terminate or change a prescription medication regimen. It also does not constitute medical or dietary advice. We strongly recommend that any concerns and questions are discussed with a qualified healthcare professional, such as a physician or registered dietitian.

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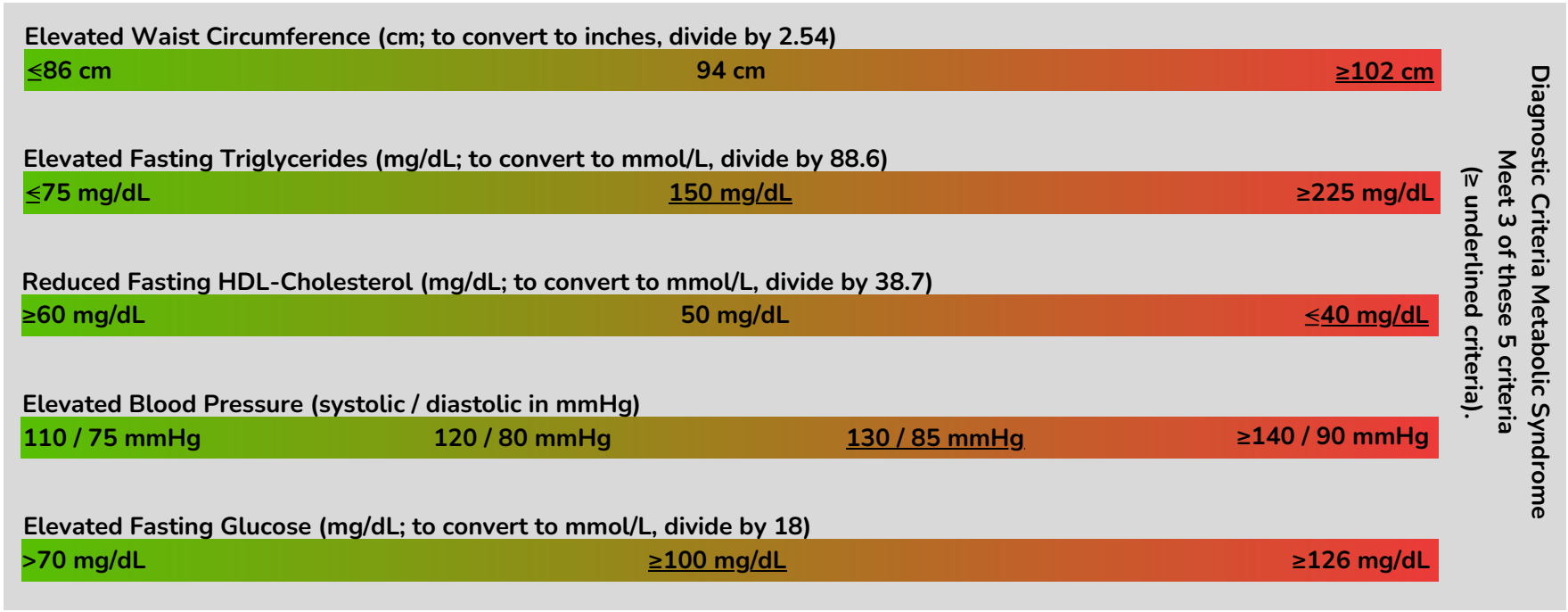
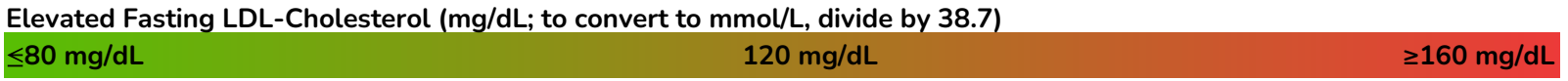
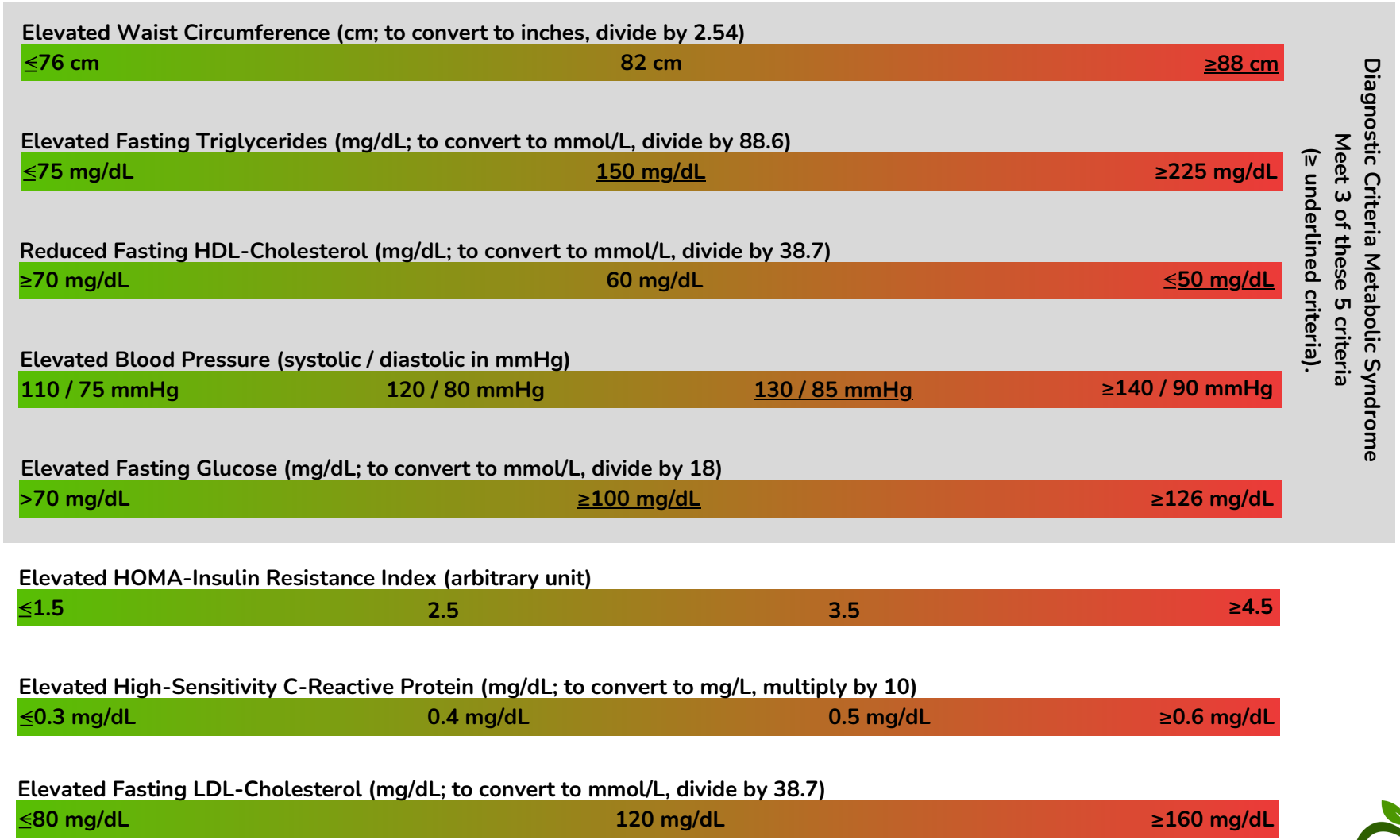
Components of the Insulin Resistance Syndrome - White Men

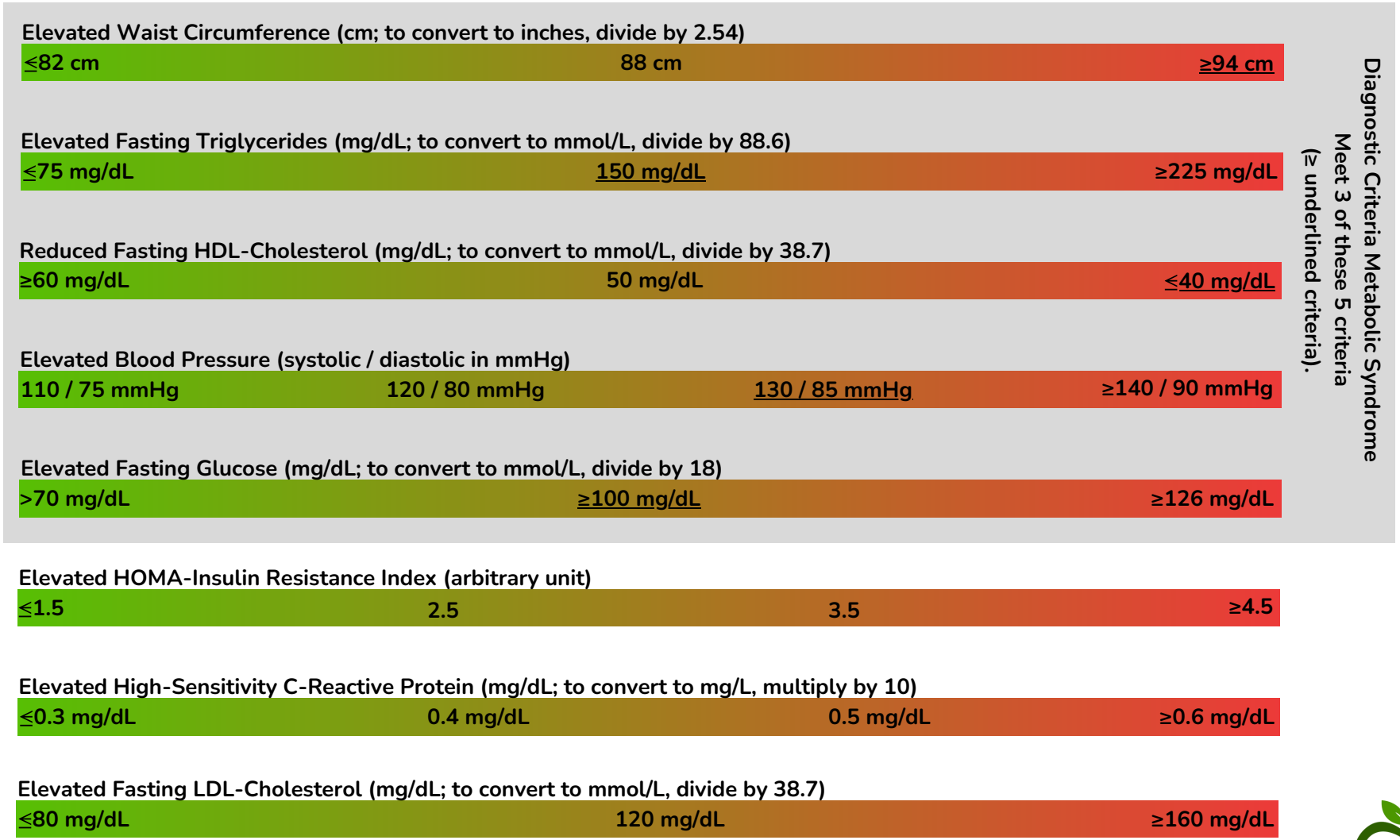




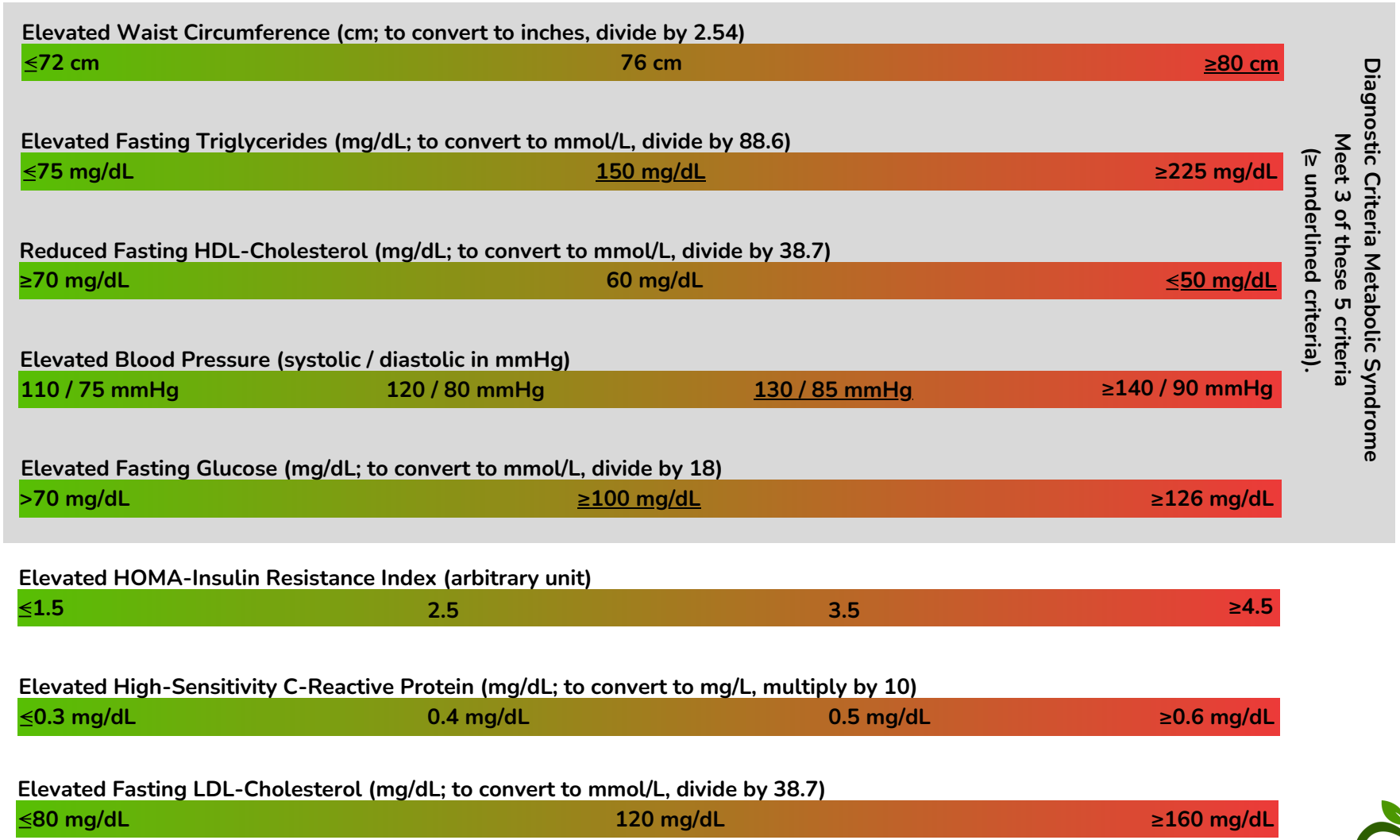
Components of the Insulin Resistance Syndrome - White Women



Components of the Insulin Resistance Syndrome - Non-White Men



Components of the Insulin Resistance Syndrome - Non-White Women



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INSTRUCTIONS:

- All blood draws for the laboratory tests should be conducted after an overnight fast of at least 12 hours.
- An acute illness in the past week or major surgery in the past four weeks may invalidate some of these tests. Make sure to have blood drawn when you are healthy, have not been acutely sick in the past week (not even a cold), and have not had surgery in the past four weeks.
- For an explanation on how to calculate HOMA-IR: https://nourishedbyscience.com/measuring-insulin-resistance/

DISCLAIMERS:

- The information included in this document is a summary of the scientific evidence demonstrating that elevated waist circumference, elevated fasting triglycerides, elevated blood pressure, elevated fasting glucose, an elevated homeostasis model assessment (HOMA) index of insulin resistance, elevated fasting high-sensitivity C-reactive protein, and elevated fasting low-density lipoprotein (LDL) cholesterol as well as low concentrations of high-density lipoprotein (HDL) cholesterol are associated with an increased risk for a variety of chronic diseases. The literature has been interpreted with care, and relevant citations are available from our website at https://nourishedbyscience.com/insulin-resistance-syndrome.
- We provide this document with the understanding that Nourished by Science or its staff cannot assume any responsibility for the correctness or completeness of the information provided herein.
- Please note that our choice of risk factors to include as well as our definition of optimal/low risk, intermediate risk, and elevated risk is subject to interpretation. Other experts and clinicians may decide to include other risk factors, and may define these ranges for low/intermediate/elevated risk differently.
- The document is intended to provide information as to the degree to which different levels of each risk factor are associated with an increased risk of chronic disease. It is not a validated tool for the diagnosis of medical conditions or the assessment of disease risks, does not permit self-diagnosis, and does not constitute medical or dietary advice.
- We strongly recommend that any concerns and questions are discussed with a qualified healthcare professional, such as a physician or registered dietitian.
- We also specifically recommend using the information only to guide and inform discussions of chronic disease risk with a physician, and in no case to use the information as rationale to terminate or change a prescription medication regimen.