



Good Health by the Numbers

The Board of Trustees of the Carpenters Health and Security Plan of Western Washington is committed to improving the overall health of its plan members over time. The costs for medical care have, for many years, increased faster than wages and general inflation. The Trustees have engaged in cost containment and quality improvement strategies to combat these increases.

The Board of Trustees, along with advisors and researchers in the health care industry, believe that gradual improvement of the health status of our own plan participants is one of the remaining, workable strategies for lowering the rate of increase in our cost of health care.

A fundamental part of the effort to improve health care in our plan population is to increase health care awareness among

participants. Knowing your own health care numbers – those that measure your basic health status – is a good starting place for health awareness. If you already track your numbers, congratulations. Keep watching them for movements in the right direction.

Know Your Numbers

This issue of Carpenters Care is devoted to your health care related numbers. Knowing these numbers can improve your life or even save it. Measurements of cholesterol, blood pressure, and other factors provide a window on your health, alerting you to areas that might need attention.

Review the table below for healthy guidelines and then read further about the importance of knowing your numbers. Knowing your numbers is a critical first step in health awareness. You can focus on changes that matter most for your health. You'll make better health decisions.

6 Numbers You Should Know

Cholesterol (after fasting)	Healthy total cholesterol is considered less than 200 milligrams per deciliter (mg/dl). Within that number, your HDL or "good" cholesterol should be above 40 mg/dl for men and above 50 mg/dl for women. Your LDL or "bad" cholesterol should be below 130 mg/dl, or lower if you have other risk factors.
Triglycerides (after fasting)	Less than 150 mg/dl is considered a healthy level.
Blood Pressure	Healthy blood pressure is considered less than 120 millimeters of mercury (mm/Hg) systolic (the upper number) and less than 80 mm/Hg diastolic (the lower number).
Blood Glucose (after fasting)	An ideal level is less than 100 mg/dl.
Body Mass Index (BMI)	Healthy is considered between 18.5 and 24.9.
Waist Circumference	Women – Less than 35 inches. Men – Less than 40 inches.

The guidelines listed above are for the general population. Your ideal numbers may be higher or lower, depending on your health history and other risk factors. To determine the best target numbers for you, talk with your doctor.

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Cholesterol

One of the most important set of numbers to know is your cholesterol levels. First let's review the basics about cholesterol.

What is cholesterol?

Cholesterol is a soft, fat-like, waxy substance found in the bloodstream and in all your body's cells. Cholesterol is required to build and maintain cell membranes. It is also important in your body's production of hormones. But too much cholesterol in the bloodstream puts you at risk for coronary artery disease (which can lead to heart attack and stroke). Cholesterol comes from two sources. Your body manufactures about 75% of it and your diet provides about 25%.

So we know that cholesterol is a normal and necessary part of our body chemistry. But there are good and bad kinds of cholesterol and the overall levels of both kinds really matter.

Because cholesterol is not soluble in the water-based bloodstream, it is wrapped in a spherical case of proteins called lipoproteins, which allow it to be transported in the bloodstream. The lipoproteins come in a range of sizes (the cholesterol within the various lipoproteins is identical). The commonly measured types are larger lipoproteins called LDL (meaning low density lipoproteins) and the smaller HDL (meaning high density lipoproteins).

The good (HDL) and the bad (LDL)

LDL is often referred to as "bad" cholesterol, since higher levels of it are associated with artery disease and stroke. When too much LDL circulates in the bloodstream, it can slowly build up on the inner walls of the arteries that feed the heart and the brain. Over time it combines with other substances to form thick hard deposits on the artery walls which can lower blood flow and make the artery narrow and less flexible. When a blood clot meets a narrowed artery, a heart attack or stroke can result.

About one fourth to one third of your blood cholesterol is carried by high density lipoproteins (HDL). This type is called "good"

cholesterol, because higher levels of HDL in the blood seem to protect against heart attack. HDL is also thought to be important in transporting cholesterol away from the arteries and to the liver, where it's passed from the body. Research has shown that low levels of HDL are associated with increased risk of heart disease.

The bloodstream carries both HDL and LDL. The relative amount of each is important. A higher percentage of HDL as portion of total cholesterol is better.

Triglycerides

A third component of testing for blood lipids is triglyceride levels. Triglycerides are the chemical form in which most fat exists in

Goal setting with your numbers

Once you know your numbers you can set a path to improving them. For example:

Goal #1 — Lower your total cholesterol levels.

Goal #2 — Increase the ratio of HDL to total cholesterol.

Goal #3 — Lower your triglyceride levels.

Start by recording your levels at your next physical exam. If your doctor has numbers from your last checkup, see which direction you are heading. Learn how to improve your diet and exercise habits. Gradually change your numbers for the better.

The Mayo Clinic website sponsored by the Carpenters Health and Security Plan is www.CarpentersHealth.org. Log in and click on "Monitor MY Health" to learn more about your numbers and what to do about them. Or you can pick up your copy of the *EmbodyHealth Guide to Self-Care* and turn to the chapter titled "Staying Healthy" for similar information.

food as well as the body. Calories eaten in a meal that aren't used immediately are converted to triglycerides and transported to the fat cells to be stored. High levels of triglycerides are associated with high cholesterol levels and heart disease. Also, they may indicate risk for diabetes.

High levels of triglycerides are caused by obesity, a high carbohydrate diet, smoking, and excess alcohol consumption. Lack of exercise is a major contributor as well.

Triglyceride levels are analyzed by your physician in combination with your cholesterol levels and other factors to determine your overall risk of cardiovascular disease.

Blood Pressure

Among the most important numbers you should know is your blood pressure.

What is blood pressure?

Blood pressure is the force exerted by your circulating blood on the walls of your blood vessels. Blood pressure is determined by the amount of blood your heart pumps and the resistance to blood flow in the arteries. Small or stiff arteries can increase resistance and limit blood flow. The more blood the heart pumps and the smaller or stiffer the arteries, the higher the blood pressure. In other words, your heart has to work harder to pump the same amount of blood.

What do the numbers mean?

A blood pressure reading below 120/80 is normal. The top number (120), called systolic pressure, is the amount of pressure your heart generates when pumping blood out through your arteries. The bottom number (80), known as diastolic pressure, is the amount of pressure in the arteries when the heart is at rest between beats. Recent research indicates that an ideal blood pressure may be 115/75.

High blood pressure is defined as a systolic pressure of 140 or higher, or a diastolic pressure of 90 or higher. Chronically elevated blood pressure is referred to as "hypertension." Persistent hypertension is a risk factor for strokes, heart attacks, heart failure, and is a leading cause of kidney failure.

Know your numbers. Have your blood pressure checked, along with other blood chemistry measures discussed in this article.

What to do?

If you have high blood pressure, the best strategy to lower it is to begin with lifestyle changes such as weight control, dietary changes and exercise. If, after three to six months, your blood pressure hasn't decreased, your doctor may prescribe medication. In all cases, these are some of the more obvious things you can do to help:

- **Diet.** Eat a nutritionally balanced diet emphasizing fruits and vegetables and low-fat dairy foods.

- **Salt restriction.** Salt causes the body to retain fluids and so, in many people, can cause high blood pressure. Don't add salt to food. Avoid salty foods such as cured meats, snack foods and canned or prepared foods.

- **Weight reduction.** If your body mass index (BMI) is 25 or more, lose weight. A loss of as few as 10 pounds may lower your blood pressure. In some people, weight loss alone is sufficient to avoid the need to take blood pressure medications.

- **Exercise.** Regular aerobic exercise alone seems to lower blood pressure in some people, even without weight loss.

- **Stop smoking.** Tobacco use can accelerate the process of narrowing of blood vessels in people with high blood pressure. Smoking in combination with high blood pressure greatly increases your risk of artery damage.

- **Limit alcohol consumption.** Too much alcohol – more than two drinks a day for men and one for women and lighter weight men – can increase blood pressure.

Blood Sugar or Glucose

Another number you should know is your blood sugar, or "glucose" level. Glucose is produced as the body breaks down carbohydrates and is the body's primary source of energy, powering muscles as well as the brain.

Your body wants glucose levels in your bloodstream to be within a tightly controlled range. The range is controlled by two hormones produced in the pancreas, insulin and glucagon. They both respond to glucose levels in the blood, but in opposite fashions. Insulin is produced when glucose levels are high, such as after eating. Glucagon is produced when glucose levels are low, such as between meals or during exercise.

The body desires glucose levels to be maintained between 70mg/dl and 110mg/dl (mg/dl means milligrams of glucose in 100 milliliters of blood). Below 70 is termed “hypoglycemia,” or “low” blood sugar. Above 110 can be normal if you have eaten within 2 or 3 hours. Doctors typically want to measure your glucose levels after fasting, to avoid measuring during fluctuations that occur after meals.

Glucose levels that are chronically too low are rather rare. The much more common condition is levels that are too high. Consistent high levels are warnings of diabetes or pre-diabetic symptoms.

An ideal level of blood glucose after fasting is under 100mg/dl. If your test level is between 100 and 125, you have “impaired fasting glucose,” commonly known as prediabetes. Your doctor may want to retest after a few days to confirm. A fasting level of 126mg/dl or higher is consistent with Type 1 or Type 2 diabetes when accompanied by the classic signs and symptoms of diabetes – increased thirst or hunger,

The formula:

$$\text{BMI} = \text{Weight (in pounds)} \div \text{Height (in inches)}^2 \times 703 \text{ (a conversion factor)}$$

For example, if your weight is 175 pounds and your height is 5’10” (70 inches) the calculation is as follows:

$$\text{BMI} = 175 \div 4,900 \times 703 = 25.1$$

As you can see, BMI of 25.1 is in the “overweight” category in the BMI chart on the next page.

frequent urination, weight loss or blurred vision.

If your glucose levels are consistently too high, your body may be resistant to the effects of insulin, or may not be producing enough insulin to maintain normal glucose levels. This condition is commonly known as Type 2, or adult onset diabetes. Type 2 diabetes may often be preventable, but the occurrence of this condition is on the rise nationally, primarily as a result of obesity. Left uncontrolled, the consequences of Type 2 diabetes can be life threatening. You can take steps to control your risk through diet and exercise. Know your numbers. See your physician and get tested.

Body Mass Index or BMI What is BMI?

One of the most important numbers to know is your body mass index (BMI). The index was established by the National Institutes of Health in 1998 as a means of classifying overweight and obesity. BMI is a better estimate of body fat and health

risks than are standard height and weight tables or weight alone. For most people, BMI provides an accurate estimate of weight related health risks.

BMI numbers at or above 25 are considered unhealthy and are associated with higher blood fats, higher blood pressure, diabetes and an increased risk of heart disease and stroke. BMI numbers at or below 18.5 put you at low risk for weight related conditions, but may increase your risk of other health problems like anemia.

How is BMI calculated?

Body mass index uses your weight and height to estimate your percentage of body fat. The actual calculation can be done as indicated in the chart above.

To calculate your BMI, you can also use the online calculator on the CarpentersHealth.org website. Just log in and type BMI in the search window and hit search. The website contains dozens of links to weight management topics.

What does the BMI number mean?

The standard weight status categories associated with BMI ranges for adults are shown in the table below. This chart is also on page 205 of the *Mayo Clinic Guide to Self-Care* (4th Edition) and on page 207 of the *Embodiment Health Guide to Self-Care* (5th Edition).

Some cautionary notes

The BMI discussion above applies to adults. Teens' BMI uses additional factors for age and sex. The relationship between the BMI number and body fat is fairly strong, but variations exist. Since weight measures both muscle and fat,

muscular individuals may have a slightly higher BMI without being at risk for disease. Also, at the same BMI, women tend to have more body fat than men. At the same BMI, older people, on average, tend to have more body fat than younger adults. BMI is a screening tool, not a diagnostic tool. See your health care provider to assess your weight in combination with other health and lifestyle factors.

Waist Size

An easy number to keep track of is your waist size. Waist size is a potential risk factor in your overall health. If you are carrying a few extra pounds, you're not alone. Two thirds of American men are overweight or obese.

Problems with overweight are magnified when the weight accumulates around your belly. While women often put on extra pounds in the hips, thighs, and legs, men are much more likely to put on belly fat.

Although the link between belly fat and health is not entirely clear, experts do know that people with a lot of belly fat are at higher risk of health problems than are people who accumulate fat in other areas. For most men, the risk factors for heart disease and other diseases increase with a waist size over 40 inches. For women, risk factors increase with a waist size over 35 inches.

Our bodies are designed to store fat for release during times when there is not enough food. But when we put on weight and never have those lean times, fat cells begin to release fat molecules into the blood at a higher rate. This affects normal metabolism and the way the body uses insulin. These metabolic changes can worsen or increase your risk of health problems including diabetes, high blood pressure, abnormal blood lipids (cholesterol), some cancers, and insulin resistance.

When you lose fat through exercise and improved eating habits, you improve your metabolism. This reduces your risk of health problems – and may improve existing health problems.

Body Mass Index (BMI)												
	Healthy		Overweight					Obese				
BMI	19	24	25	26	27	28	29	30	35	40	45	50
Height	Weight in Pounds											
4'10"	91	115	119	124	129	134	138	143	167	191	215	239
4'11"	94	119	124	128	133	138	143	148	173	198	222	247
5'0"	97	123	128	133	138	143	148	153	179	204	230	255
5'1"	100	127	132	137	143	148	153	158	185	211	238	264
5'2"	104	131	136	142	147	153	158	164	191	218	246	273
5'3"	107	135	141	146	152	158	163	169	197	225	254	282
5'4"	110	140	145	151	157	163	169	174	204	232	262	291
5'5"	114	144	150	156	162	168	174	180	210	240	270	300
5'6"	118	148	155	161	167	173	179	186	216	247	278	309
5'7"	121	153	159	166	172	178	185	191	223	255	287	319
5'8"	125	158	164	171	177	184	190	197	230	262	295	328
5'9"	128	162	169	176	182	189	196	203	236	270	304	338
5'10"	132	167	174	181	188	195	202	209	243	278	313	348
5'11"	136	172	179	186	193	200	208	215	250	286	322	358
6'0"	140	177	184	191	199	206	213	221	258	294	331	368
6'1"	144	182	189	197	204	212	219	227	265	302	340	378
6'2"	148	186	194	202	210	218	225	233	272	311	350	389
6'3"	152	192	200	208	216	224	232	240	279	319	359	399
6'4"	156	197	205	213	221	230	238	246	287	328	369	410

The Role of Tobacco In Health Matters

If you are still smoking or using smokeless tobacco, this health risk factor by itself outweighs the other blood chemistry and weight factors discussed in this Carpenters Care issue.

The Board of Trustees for the Carpenters Health and Security Plan is committed to promoting and investing in improved health

for all plan members. The health plan sponsors an effective quit smoking program called Quit For Life. The Quit For Life program was developed based on studies conducted by the National Cancer Institute and deals with quitting both in terms of behavior change and chemical dependency.

Since it started nine years ago, over 2,000 carpenters and spouses have enrolled. It's not easy to quit. If you have tried and failed, enroll again. You can get started with a single phone call.

**Free & Clear
Quit For Life Program
1 866 QUIT 4 LIFE
(866 784 8454)
(877) 777 6534 TTY**

Quit For Life counselors are available seven days a week. Spanish speaking counselors are available. Get free of tobacco.

Trust Office Closures

Thursday, November 27, 2008 - Thanksgiving Day
Friday, November 28, 2008 - Day After Thanksgiving
Wednesday, December 24, 2008 - Last Working Day
Before Christmas
Thursday, December 25, 2008 - Christmas Day
Thursday, January 1, 2009 - New Year's Day

Trust Office Hours

**8:00 am - 5:00 pm
Monday - Friday**

**(206) 441-6514
Seattle Area**

**(800) 552-0635
Nationwide**

www.ctww.org

**Carpenters
Care **

Carpenters Trusts of
Western Washington
PO Box 1929
Seattle, WA 98111-1929

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