Tim Landis followed a healthy, nutritious diet and exercised constantly: He rode his bike to work during the week, and went for long hikes on weekends. No one expected him to die, at age 66, of a heart attack. “It caught everybody off guard,” said his wife of 36 years, Debra. An autopsy determined that longstanding high blood pressure and cardiovascular disease contributed to his death on Jan. 2, 2018. Yet, Tim never knew he had high blood pressure. Debra said doctors repeatedly told her husband that although his readings were elevated, they still fell within the normal range. “So he was always told to avoid salt and keep his weight down. That was it,” she said. Just months before his death, the American Heart Association and the American College of Cardiology changed its high blood pressure guidelines, reducing its threshold to a level that would have labeled Tim as hypertensive. “I really believe that had these new blood pressure guidelines been in place years earlier, it’s very likely Tim would have been placed on blood pressure medicine and he might still be alive today,” Debra said. Now she and Tim’s two children spread the word whenever possible about the dangers of high blood pressure, steps that can be taken to help control it, and how the new blood pressure guidelines can potentially save the lives of thousands.

“A healthy diet and regular exercise weren’t enough. If Tim had been on blood pressure medicine, he might still be alive today. There’s just no two shakes about it.”

— Debra Landis, Tim’s wife

**Fast Facts**

- [Guidelines published in November 2017](#) redefined high blood pressure, also known as hypertension, to be a reading of ≥ 130 on top, or ≥ 80 on the bottom. The previous guideline was ≥140/90.
- That 10 mmHg (millimeters of mercury) change in blood pressure was enough to suddenly classify nearly half of all Americans as having high blood pressure.
- High blood pressure, along with high cholesterol, and smoking are key heart disease risk factors for heart disease. About half of Americans have at least one of these three risk factors.
What We Are Doing Now

Thundermist Health Center continues to employ a data-driven, whole-team approach toward improving hypertension control for its patients.

"In addition to encouraging innovation and teamwork, we put a lot of effort into giving teams the data they need to plan each patient’s care before the day starts," said Dr. David Bourassa, the center’s chief medical officer.

"We also provide a weekly all-Thundermist dashboard that helps us to shorten improvement cycles, share best practices and recognize top performers throughout the organization."

What She Did

▪ After untreated hypertension contributed to the unexpected death of her husband, Debra Landis began researching high blood pressure and its link to heart disease to learn as much as she could about both. She applied those lessons to changes she and her children have incorporated to live healthier, more active lives.

▪ Debra shares Tim’s story whenever possible. Less than two months after his death, she wrote about what happened to him in an op-ed piece for her local paper. She hopes the article will raise awareness about what is considered the new normal for blood pressure measurements.

What She Accomplished

▪ Debra’s opinion piece connected with strangers. While shopping at a home improvement store, she was helped by an employee who recognized her from the newspaper. “He told me that his wife showed him the article and made him promise to go talk to his doctor about his blood pressure,” she said.

▪ Debra and Tim’s two grown children have become more consciousness about their health. Their son has lost weight and lowered his blood pressure through modifications to his diet and physical activity routine. Debra is walking more and trying to cut out processed sugar from her diet.

▪ Debra also is encouraging people to explore their family medical history – and make sure they pass along any details about health concerns to the next generation. She is spreading the word that healthy eating and regular exercises aren’t always enough to curb hypertension. “Sometimes, there may be a genetic link so you need to talk to your healthcare provider about it.”

What She Learned

▪ As many as half of all heart attacks, like the one Tim suffered, may occur without any classic warning signs such as chest pain, shortness of breath, rapid heart rate, or cold sweats.

▪ Speak up if something appears unusual. About four to five months before he died, Tim put on more than 10 pounds around his waistline and his face became puffy. Debra later learned those were all symptoms of his body retaining fluids because of poor circulation. “But we didn’t know that at the time. We just thought, ‘oh you know, he’s getting a little older.’”

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Blood Pressure Categories

<table>
<thead>
<tr>
<th>Blood Pressure Category</th>
<th>Systolic mm Hg (upper number)</th>
<th>Diastolic mm Hg (lower number)</th>
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<tbody>
<tr>
<td>Normal</td>
<td>Less than 120 and Less than 80</td>
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<tr>
<td>Elevated</td>
<td>120 – 129 and Less than 80</td>
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<tr>
<td>High Blood Pressure (Hypertension) Stage 1</td>
<td>130 – 139 or 90 – 89</td>
<td></td>
</tr>
<tr>
<td>High Blood Pressure (Hypertension) Stage 2</td>
<td>140 or Higher or 90 or Higher</td>
<td></td>
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<tr>
<td>Hypertensive Crisis (consult your doctor immediately)</td>
<td>Higher than 180 and/or Higher than 120</td>
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