



# The Keys to the Heart: How Consistent Monitoring Impacts Long-Term Heart Health

Presented by MobileHelp

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Heart disease remains the most prevalent – and costly – cause of death and chronic illness in America, claiming the lives of more than 2,200 Americans each day, or one every 40 seconds. And with the direct and indirect costs of cardiovascular diseases and stroke approaching \$316.6 billion per year, healthcare providers and patients alike are consistently looking for better ways to treat and manage long-term heart health.

The quest to identify the best Health IT tools available in the marketplace can be daunting. For example, today someone with a pre-hypertension diagnosis can buy any number of different consumer wearables to track their activity level, choose from dozens of different apps to track their blood pressure, and utilize other technologies such as smart pill boxes to manage their medications.

In the scenario above, a person would need an activity tracking wearable (and corresponding app), a blood pressure monitor (and corresponding app), and a smart pill box (and corresponding app). All of which becomes time consuming to manage.

That said, well-rounded solutions exist for people to utilize, and which are derived from technology solutions that have proven their long-term health management mettle over the past two decades.

## Telehealth: Tapping into the Tried-and-True

One form of traditional technology that continues to evolve in the care of heart-related chronic illness is telehealth or telemonitoring. The general idea behind this tried-and-true format is that consistent monitoring of basic vital signs – those telling markers of overall health – improves long-term management of chronic illness.

As mobile devices have proliferated and grown in capability, there are now more opportunities than ever for use of telehealth technologies. Special applications have been created for mobile devices to allow for significantly easier reporting of information from patients to care providers – and vice versa.

Patients are now able to embrace telehealth in ways previously unavailable.

## Technology Proven Effective for Use with Heart Conditions

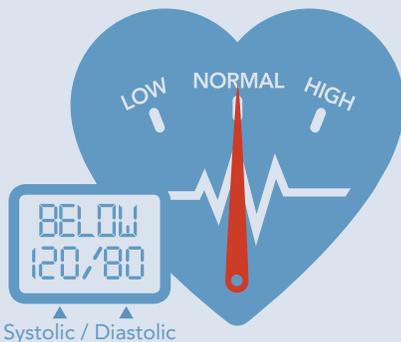
Telehealth, or the ability to keep consistent track of vital signs, monitor other health issues and relay that information to care providers, is particularly important for use with patients who have heart conditions. In fact, numerous studies indicate a well-designed remote patient monitoring program can reduce hospitalizations due to heart failure by 50 percent.<sup>1</sup>

According to a study by Bask<sup>2</sup>, 30 percent of survey respondents with heart conditions use some form of technology to manage their heart health. The top three devices include heart rate monitors and/or Pacemakers (28 percent), smart phone apps (eight percent) and fitness trackers (five percent).

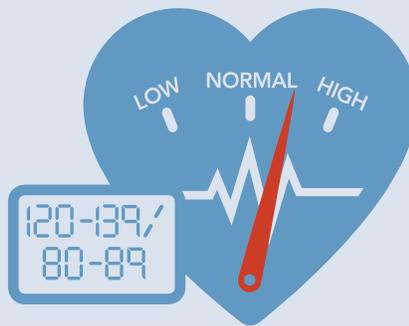
## One of the best known indicators of heart health for the average person is blood pressure, which is easy to monitor at home.

The recent article “The Keys to Heart Health”<sup>5</sup> reports that many people don’t understand what blood pressure and its ranges mean: “Blood pressure consists of two numbers. Your **systolic** pressure measures the pressure of blood against artery walls when the heart pumps blood out during a heartbeat, while the **diastolic** pressure measures the same pressure between heartbeats, when the heart fills with blood.”

### Normal Blood Pressure



### Pre-Hypertension



### Hypertension (High Blood Pressure)



## DID YOU KNOW?

One in three adults in the U.S. -- about 74 million people -- has high blood pressure or pre-hypertension.

**48%**

Between 1996 and 2006, the number of deaths from high blood pressure rose by more than 48%.

A [study in Spain](#)<sup>3</sup> compared adults diagnosed with heart failure or chronic lung disease who used personal digital assistants (PDAs) for daily logging of various health information to those who did not use PDAs. Researchers discovered daily remote monitoring of symptoms reduced both hospital readmission rates and length of hospital stays. For every four patients monitored, the hospital avoided one readmission.

Another study<sup>4</sup>, which focused on the [use of telehealth](#) for self-management of chronic obstructive pulmonary disease (COPD) exacerbations and the general promotion of a

healthy lifestyle, yielded extremely positive results. In the study, COPD patients were assigned to either an intervention group (which involved nine months of telehealth programming) or a control group (usual care). The study found statistically better clinical results for the group that used telehealth programming in its treatment.

### Advanced Technology Makes Consistent Monitoring Easier Than Ever

Numerous studies (including those previously mentioned) indicate that the best results for heart patients can be attained through the use of telehealth technology. One option for



According to experts at A&D Medical, one of the medical industry's premier blood pressure monitor suppliers, there are numerous options available for at-home monitoring for consumers who want to track and analyze their own blood pressure data.

But once home with the blood pressure monitor, ensuring that data points are as accurate as possible remains a challenge. To ensure the highest levels of accuracy, A&D Medical's on-staff researchers recommend the following:

- Go to the bathroom first.
- Don't smoke, exercise, or consume anything for at least 30 minutes beforehand.
- Sit quietly for 5-10 minutes before the reading. Keep your legs uncrossed, your feet flat on the floor and your back straight.
- If you are wearing a shirt or top made of thin cloth, pull the sleeve up so that the cuff goes around your bare arm. If you are wearing something more bulky, such as a sweater or sweatshirt, pulling it up on your arm can disrupt the blood flow, so it is better to simply take it off.
- Rest your arm on a table so that the cuff is at heart level.
- Remain quiet during the test.
- To ensure consistency, measure two times a day - in the morning and in the evening is best - and at the same time each day. Consider setting an alarm or using an app to remind you to take your readings.
- Keep track of your daily readings, to ensure they remain consistent over time.
- While keeping track of BP readings on paper is effective (and easy), many people forget to bring their paper copies to the doctor's office. If possible, look for a blood pressure monitor that automatically sends data to a corresponding app on a smartphone, which makes it easy and convenient to share information with family members and healthcare providers.

consumers who want to monitor and manage their own vital signs is a new telehealth solution from FDA-listed MobileHelp, called MobileVitals, which leverages the strength of the company's medical alert system (to provide access to emergency help when needed).

MobileVitals gives consumers a simple way to manage their health by incorporating the benefits of a traditional telehealth system, allowing them to measure and monitor their vital sign information, but without the clinical involvement of a healthcare provider. The system also provides other aspects of health management, such as activity tracking and medication reminders.

People with heart-related issues – or concerns around heart health – can take their blood pressure (as well as other vital signs such as weight and blood oxygen levels), which is then automatically transferred to an online portal called MobileHelp Connect. All health information is stored for easy access in the MobileHelp Connect account, where it can be viewed in customized graph format.

And anyone who is provided with the login information for the person's MobileHelp Connect account can sign in, including close relatives who might live far away but want to stay up-to-date on their loved one's vital signs and overall condition. Regular reminders ensure patients always remember to take their vital signs at the same time each day, which ensures long-term consistency and better health results.

The technology has already seen a great deal of success in clinical pilot programs, decreasing the frequency of hospitalizations among patients.

## The Future Looks Bright

With the development of telehealth systems like MobileVitals and a continued focus on delivering outstanding care to patients who are not physically on-site at hospitals, the future certainly looks bright for the healthcare industry and monitoring capabilities for people with heart conditions.

Get plenty of exercise—at least 150 minutes a week that earns a slight sweat.



Take preventative action to avoid diabetes: get regular blood sugar tests and reduce processed carbs.



Plan to lower your alcohol intake.



Stop smoking.

# 10 Tips *for* **HEART HEALTH**



Aim for an average of seven hours of sleep per night for healthier arteries.



Cut out saturated fats (too much can clog arteries).



If you lose weight, do it the slow-and-steady way: take in fewer calories than you burn.



Boost heart-healthy nutrition with more fruits and vegetables in your daily diet.



Manage your stress by incorporating a hobby that helps you relax, such as meditation or yoga.



If you have a family history of high blood pressure (or you are simply concerned about blood pressure levels), purchase a blood pressure monitor so you can track it on a daily basis.

<sup>1</sup>Klersy C, De Silvestri A, Gabutti G, Regoli F, Auricchio A. A Meta-Analysis of Remote Monitoring of Heart Failure Patients. *J Am Coll Cardiol*. 2009;54(18):1683-1694. doi:10.1016/j.jacc.2009.08.017.

<sup>2</sup>iTOK, Heart Health Technology Survey, February 2015

<sup>3</sup>Lesende, I., Cairo, M., Orruño, E., Romo, M., Bayón, J., Reviriego, E., Abad, R., Bilbao, A., Vergara, I., Larrañaga, J., & Asua, J. 2011 Jun 27. Telemonitoring patients with chronic diseases in primary care. Conjunction of a randomized controlled trial (TELBIL study) with a realistic clinical application of Information and Communication Technology (ICT) in primary care. *International Journal of Integrated Care*. [Online] 11:6

<sup>4</sup>Tabak, Monique et al. "A Telehealth Program for Self-Management of COPD Exacerbations and Promotion of an Active Lifestyle: A Pilot Randomized Controlled Trial." *International Journal of Chronic Obstructive Pulmonary Disease* 9 (2014): 935–944. PMC. Web. 26 Feb. 2016.

<sup>5</sup>Shaw, Gina "The Keys to Heart Health." WebMD, Web. March 22, 2010.



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