



# Putting the Power of Testing into Consumers' Hands

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## The Pros and Cons of Home Diagnostics and Screenings

It used to be that the vast majority diagnostic tests and preventive screenings happened only in clinics, hospitals and labs. Home pregnancy tests and finger-prick blood sugar monitoring were, for a long time, the only widely-used home diagnostic tools. But in the past decade, the number of home screening and diagnostic tools available has burgeoned.

Now, consumers can test for everything from STDs to thyroid function to sleep apnea from the comfort of their own homes. They can screen for signs of colon or prostate cancer, find out if they're positive for HIV or SARS-CoV-2 (the virus that causes COVID-19), test for food allergies, and analyze their genetic ancestry. The list goes on.

The appeal of home testing and screening from a privacy and convenience standpoint is undeniable. But are there disadvantages as well as advantages to this growing trend? Here's a deeper look.



## The Promise of Early Detection

One of the most celebrated benefits of home testing is its potential to aid in early detection of disease. When disease is diagnosed sooner rather than later, it may be easier to treat and less likely to result in complications or hospitalization. Regular screenings for cancer, heart health, diabetes and other common health issues are key, but many people don't bother to get them, whether it's because they don't have the time to go to a provider's office, they have transportation issues, they worry about the cost, or they have privacy concerns.

**Take, for example, colorectal cancer screening. Colon cancer is the third leading cause of cancer-related deaths in the United States, not including some types of skin cancer,<sup>1</sup> and early detection is key to successful treatment. But many people delay or forego colon cancer screenings altogether due to the time and preparation involved.**

Home colon cancer screening kits, many of which are available by prescription and covered by insurance, eliminate the barriers.

<sup>1</sup> Colorectal Cancer Statistics - CDC, 6/8/20



**There are different types of tests, all of which look for blood in stool, but none of them require the bowel clearing preparation required for colonoscopy, which many patients find onerous. Patients simply collect a stool sample at home, then mail it to a doctor or to a laboratory for testing.**



These home tests can have extremely high levels of accuracy. The leading FDA-approved brand, Cologuard®, can find 92% of colon cancers overall and 94% of stage I and stage II colon cancers.<sup>2</sup> This is exciting news when it comes to cancer detection and prevention.

And yet, as accurate as they are, these home test kits are still not as accurate as the traditional screening method, colonoscopies. False negatives can happen, potentially giving a people a false sense of security and even dissuading them from getting regular screenings. False positives are a possibility as well, which can lead to anxiety or unnecessary testing. Certain patients, including people with a history of polyps or a family history of colorectal cancer, for example, are advised not to use home colon cancer screening kits as a substitute for colonoscopies. These same caveats apply to almost all at-home screenings: While they are useful tools in expanding early detection, they aren't a cure-all.

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<sup>2</sup> Effective and easy screening - Cologuard website





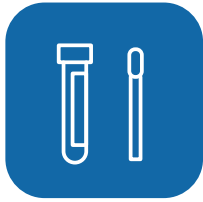
## The Drawbacks of Over-the-Counter Diagnostic Tests

With a quick online search, consumers can find dozens of diagnostic tests and screenings available for purchase without a prescription. The over-the-counter test market is big business, projected to reach \$22.2 billion by 2024.<sup>3</sup>

Because of the wide availability of non-prescription home diagnostic tests, and the convenience of using them, it may be tempting for consumers to lean on them as a substitute for a doctor's care. For individuals without insurance, or who want to avoid co-pays or deductibles, these tests may seem like an easy way to keep an eye on their health.

<sup>3</sup> Over The Counter/OTC Test Market - MarketsandMarkets Research

**But there are a few reasons why consumers should proceed with caution when using diagnostic kits without a doctor's guidance:**



### **Accuracy**

Many over-the-counter tests are not FDA-approved, so they're not as well studied or standardized as the prescription versions. They vary in accuracy and may be more likely to yield false negatives or positives. You can [check the FDA website](#) to see which over-the-counter tests are FDA-approved.



### **Understanding**

Attempting to interpret test results and their implications for health and treatment without a doctor's help may be difficult. Factors like age, family history, other health issues all need to be taken into consideration when looking at test results and considering next steps—something consumers may not have the knowledge or ability to do on their own.



### **Drug Interactions**

Medications the patient is taking can skew test results. For example, the test for C-reactive protein—an inflammation marker that can be used for detection of conditions like rheumatoid arthritis or inflammatory bowel disease—can be affected by birth control pills and non-steroidal anti-inflammatory drugs (NSAIDs) like ibuprofen and acetaminophen.<sup>4</sup>

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<sup>4</sup> C-REACTIVE PROTEIN (CRP) - The Medicine Shoppe Pharmacy

Using home screenings won't necessarily save patients a trip to their doctor's office or lab either: Take over-the-counter urinary tract infection (UTI) tests, which are widely available at pharmacies and grocery stores: These may seem like an easy way to pinpoint a very uncomfortable problem without having to venture into a provider's office. But a lab-based urine can more accurately diagnose the issue, identifying the specific type of bacteria causing the problem, so the infection can be treated most effectively.<sup>5</sup> It's for this reason that some providers won't prescribe antibiotics to a patient without an office visit and lab test.

A photograph of a middle-aged man with grey hair and black-rimmed glasses. He is holding a clear nasal swab in his mouth, looking slightly upwards and to the side. The background is a blurred indoor setting with light coming from a window.

## The Game Changer: Rapid Home COVID-19 Testing

During the first eight months of the COVID-19 pandemic, the only way to get tested was through a healthcare provider, clinic, or on-site testing provided by employers, schools, or other organizations. Now, several types of at-home tests are available, both by prescription and over-the-counter. Some are collection tests, which require that consumers send a sample of saliva or a nasal swab to a lab for testing and interpretation.

<sup>5</sup> Can I Take a Home Test for a UTI? - WebMD, 12/7/20



But it's the newer, rapid at-home tests that present the biggest leap forward for COVID-19 testing. These tests deliver a negative or positive result in minutes, much like a home pregnancy test.

The emergence of rapid home tests could have major implications for controlling the spread of disease. People who can't easily get to a COVID-19 testing site or get a prompt appointment for testing have an alternative.

**Moreover, they may not have to stay quarantined for several days while they wait for results. They can make choices about their behavior—whether to quarantine, or whether they can go to work or school or be around other family members—based on their COVID-19 status in the moment, rather than what it was several days before.**



But there are drawbacks to rapid home COVID-19 testing. These types of tests are less accurate than the ones given by providers and analyzed in laboratories, more likely to result in false negatives. This risk is compounded by the fact consumers need to do their own specimen collection, either via nasal swab or saliva. They may not do it correctly or collect enough saliva or mucous for an accurate test. False negatives can give consumers—especially those who are asymptomatic—a false sense of security, and even impact the choices they make with regard to masking and distancing, putting other people at risk.



## A Balanced Approach to Home Testing and Screening

At Tufts Health Plan, we're excited about the potential benefits of home monitoring, screening and diagnostic tests. They have the power to expand access, empower patients and improve outcomes. At the same time, we urge our members to stay in close communication with their providers when it comes to home testing, to ensure that they fully understand both the pros and cons and are making smart choices for their specific health care needs.





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## ABOUT TUFTS HEALTH PLAN

At Tufts Health Plan, we strive to set the standard for outstanding quality health care, service and value. Founded in 1979, Tufts Health Plan is nationally recognized for its commitment to providing innovative, high-quality health care coverage. The plan offers members and employers an array of health management programs, which support evidence-based approaches to health and wellness.

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