# MORNING CONSULT®

# ARTIFICIAL INTELLIGENCE IN HEALTHCARE & WEARABLE TECHNOLOGY

Survey Results for Advanced Medical Technology Association

## JUNE 2023

# KEY FINDINGS

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1. **Four-in-five (81%) adults say medical devices have an impact on the health and well-being of people today, down slightly from March 2023.** Three-in-four adults say research universities (76%), the medical device industry (76%), and hospital systems (76%) are responsible for advancements in today's healthcare system, down slightly from March 2023.

2. **Awareness of AI does not translate to the knowledgeability of AI.** Half (48%) of adults say they have seen, read, or heard some or a lot about artificial intelligence in the healthcare industry, but fewer adults (36%) say they feel knowledgeable about the role of artificial intelligence in healthcare.

3. **Adults' perspectives on the use of artificial intelligence in healthcare are mixed.** While a plurality (44%) of adults say artificial intelligence has a mostly positive impact on the healthcare industry, a quarter of adults say they feel skeptical (26%), uncertain (25%), and hopeful (24%) about the use of artificial intelligence in healthcare.

4. **Nearly all current wearable health monitor users say they are satisfied (95%) with their monitor.** A majority of current health monitor users say they use their monitor(s) to track physical activity (73%) and to monitor their heart rate (65%).

5. **Adults say ease of use (58%) and affordability (57%) would be very important if they were looking to purchase a wearable health monitor.**

TRACKING: MEDICAL TECHNOLOGY

ARTIFICIAL INTELLIGENCE IN HEALTHCARE

WEARABLE HEALTH MONITORS
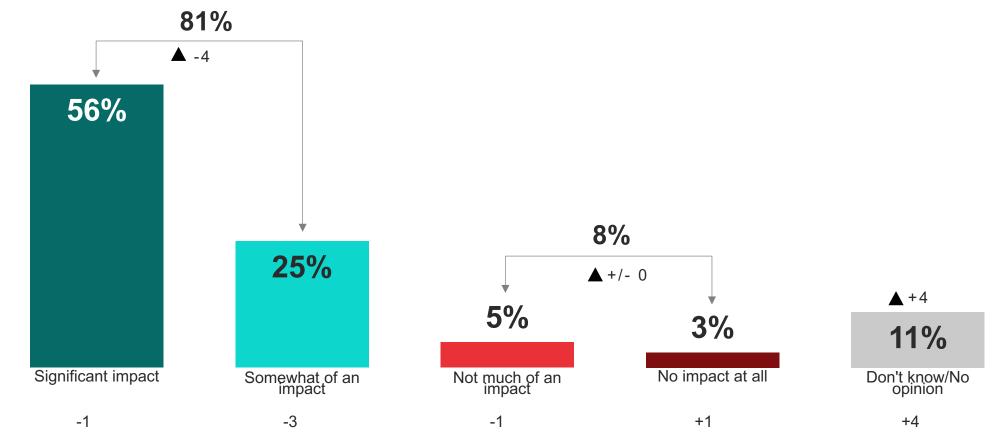
# Four-in-five (81%) adults say medical devices have an impact on the health and well-being of people today, down slightly from March 2023.
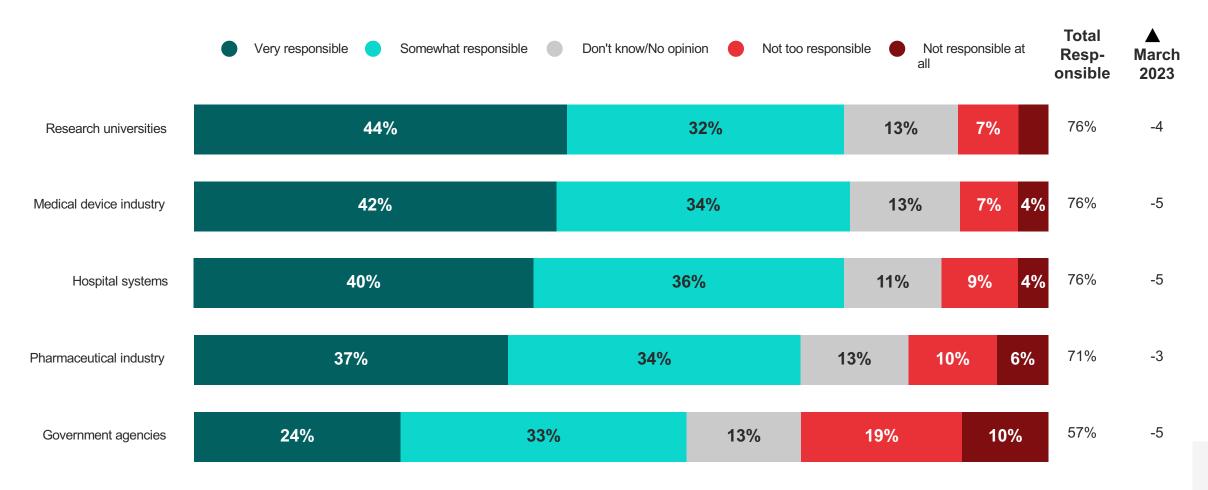
As you may know, medical technology can be defined as the technologies that diagnose, treat and/or improve a person's health and wellbeing. Medical devices specifically achieve their purpose by a physical or mechanical action. Medical technology and devices encompass the basics, including tongue depressors and bandages, to the complex, including pacemakers and MRI machines. Based on what you know, how significant of an impact do medical devices have on the health and well being of people today?

**81%**

▲ -4

**56%**

**25%**

**8%**

▲ +/- 0

▲ +4

**5%**

**3%**

**11%**

Significant impact

Somewhat of an impact

Not much of an impact

No impact at all

Don't know/No opinion

▲

March 2023

-1

-3

-1

+1

+4

4

## Three-in-four adults say research universities (76%), the medical device industry (76%), and hospital systems (76%) are responsible for advancements in today's healthcare system, down slightly from March 2023.

Based on what you know, how responsible are each of the following, if at all, for advancements in today's healthcare system?

● Very responsible   ● Somewhat responsible   ● Don't know/No opinion   ● Not too responsible   ● Not responsible at all

| | Very responsible | Somewhat responsible | Don't know/No opinion | Not too responsible | Not responsible at all | Total Responsible | ▲ March 2023 |
|---|---|---|---|---|---|---|---|
| Research universities | 44% | 32% | 13% | 7% | | 76% | -4 |
| Medical device industry | 42% | 34% | 13% | 7% | 4% | 76% | -5 |
| Hospital systems | 40% | 36% | 11% | 9% | 4% | 76% | -5 |
| Pharmaceutical industry | 37% | 34% | 13% | 10% | 6% | 71% | -3 |
| Government agencies | 24% | 33% | 13% | 19% | 10% | 57% | -5 |

TRACKING: MEDICAL TECHNOLOGY

ARTIFICIAL INTELLIGENCE IN HEALTHCARE

WEARABLE HEALTH MONITORS

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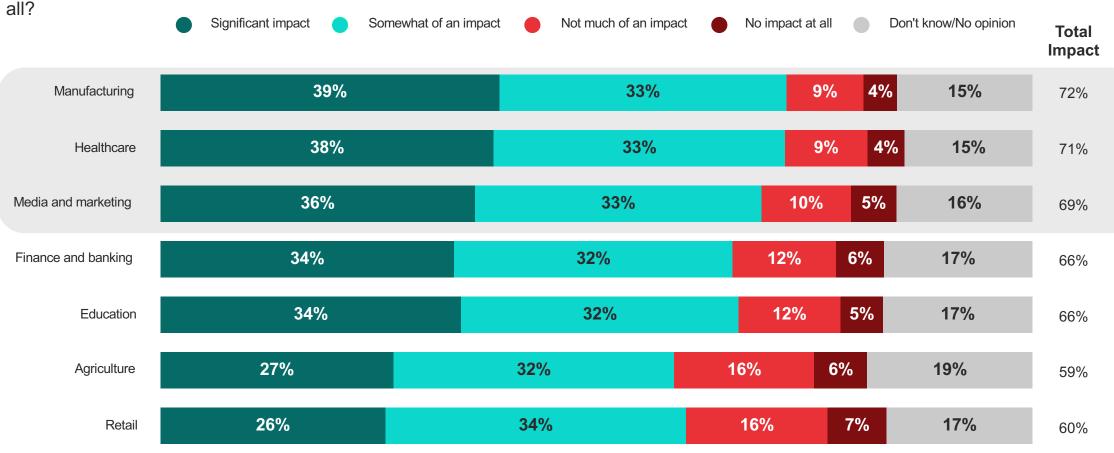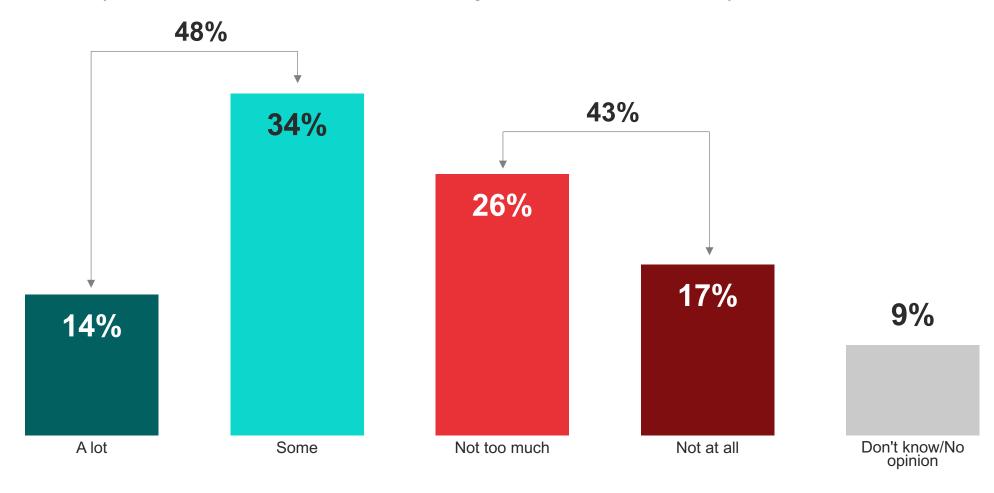# Adults say artificial intelligence has an impact on the manufacturing (72%), healthcare (71%) and media and marketing (69%) industries.

As you may know, artificial intelligence (AI) makes it possible for machines to learn from experience, adjust to new inputs and perform human-like tasks. In your opinion, how significant of an impact does artificial intelligence have on each of the following industries, if at all?

● Significant impact   ● Somewhat of an impact   ● Not much of an impact   ● No impact at all   ● Don't know/No opinion

**Total Impact**

| Industry | Significant impact | Somewhat of an impact | Not much of an impact | No impact at all | Don't know/No opinion | Total Impact |
|---|---|---|---|---|---|---|
| Manufacturing | 39% | 33% | 9% | 4% | 15% | 72% |
| Healthcare | 38% | 33% | 9% | 4% | 15% | 71% |
| Media and marketing | 36% | 33% | 10% | 5% | 16% | 69% |
| Finance and banking | 34% | 32% | 12% | 6% | 17% | 66% |
| Education | 34% | 32% | 12% | 5% | 17% | 66% |
| Agriculture | 27% | 32% | 16% | 6% | 19% | 59% |
| Retail | 26% | 34% | 16% | 7% | 17% | 60% |

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# Half (48%) of adults say they have seen, read, or heard *some* or *a lot* about artificial intelligence in the healthcare industry, while 43% say they have not.

How much have you seen, read, or heard about artificial intelligence in the healthcare industry?



**48%**

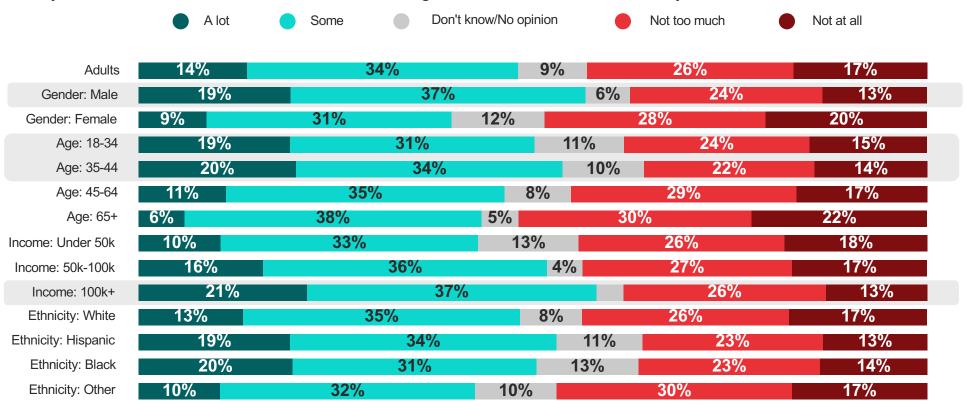**34%**

**43%**

**26%**

**14%**

**17%**

**9%**

A lot

Some

Not too much

Not at all

Don't know/No opinion

8
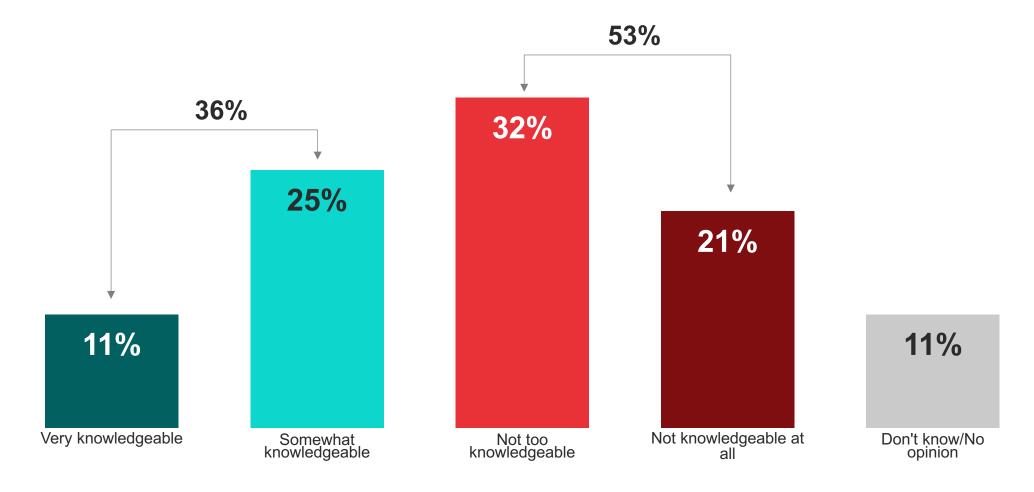
# Men, younger adults, and higher-income adults are especially likely to say they have seen, read, or heard *some* or *a lot* about artificial intelligence in the healthcare industry.

How much have you seen, read, or heard about artificial intelligence in the healthcare industry?

Legend: ● A lot ● Some ● Don't know/No opinion ● Not too much ● Not at all

| | A lot | Some | Don't know/No opinion | Not too much | Not at all |
|---|---|---|---|---|---|
| Adults | 14% | 34% | 9% | 26% | 17% |
| Gender: Male | 19% | 37% | 6% | 24% | 13% |
| Gender: Female | 9% | 31% | 12% | 28% | 20% |
| Age: 18-34 | 19% | 31% | 11% | 24% | 15% |
| Age: 35-44 | 20% | 34% | 10% | 22% | 14% |
| Age: 45-64 | 11% | 35% | 8% | 29% | 17% |
| Age: 65+ | 6% | 38% | 5% | 30% | 22% |
| Income: Under 50k | 10% | 33% | 13% | 26% | 18% |
| Income: 50k-100k | 16% | 36% | 4% | 27% | 17% |
| Income: 100k+ | 21% | 37% | | 26% | 13% |
| Ethnicity: White | 13% | 35% | 8% | 26% | 17% |
| Ethnicity: Hispanic | 19% | 34% | 11% | 23% | 13% |
| Ethnicity: Black | 20% | 31% | 13% | 23% | 14% |
| Ethnicity: Other | 10% | 32% | 10% | 30% | 17% |

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# However, only 36% of adults say they feel knowledgeable about the role of artificial intelligence in the healthcare industry.

How knowledgeable do you feel, if at all, about the role of artificial intelligence in the healthcare industry?



**53%**

**36%**

**25%**

**32%**

**21%**

**11%**

**11%**

Very knowledgeable

Somewhat knowledgeable

Not too knowledgeable

Not knowledgeable at all

Don't know/No opinion

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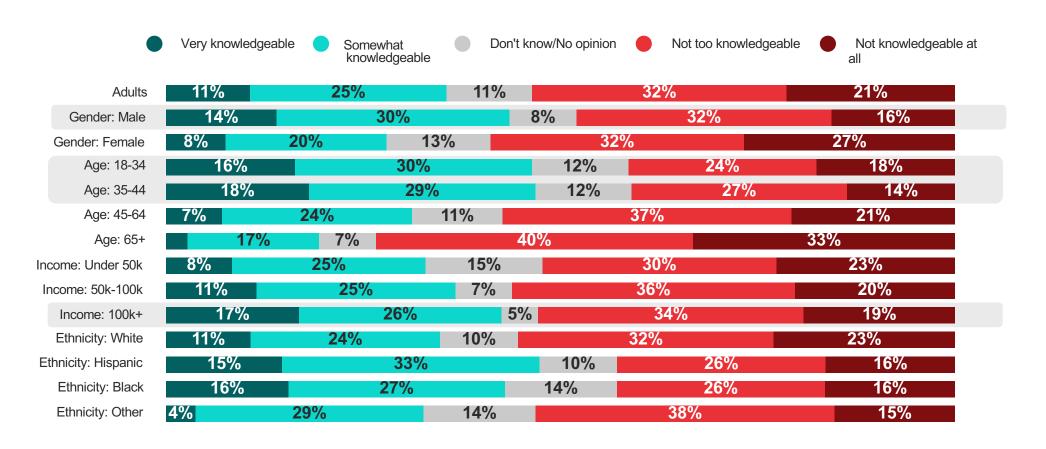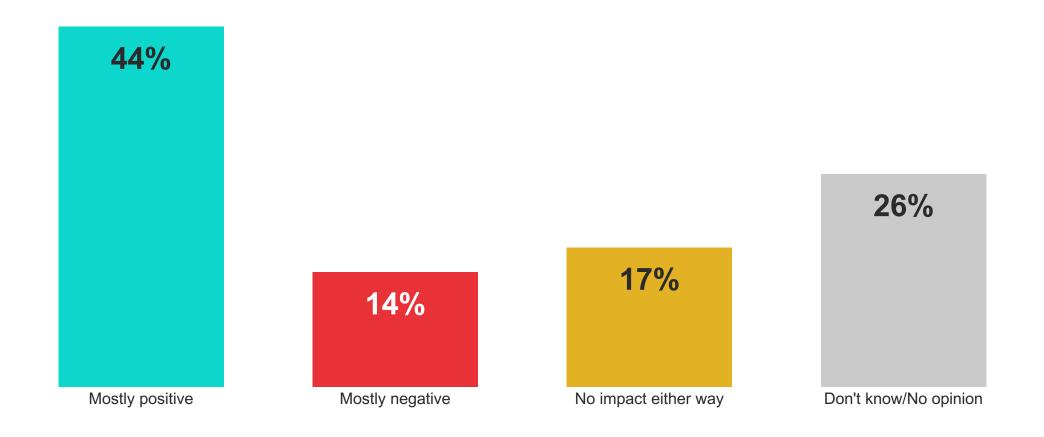# Again, men, younger adults, and higher-income adults are especially likely to say they feel knowledgeable about artificial intelligence in the healthcare industry.

How knowledgeable do you feel, if at all, about the role of artificial intelligence in the healthcare industry?

● Very knowledgeable    ● Somewhat knowledgeable    ● Don't know/No opinion    ● Not too knowledgeable    ● Not knowledgeable at all

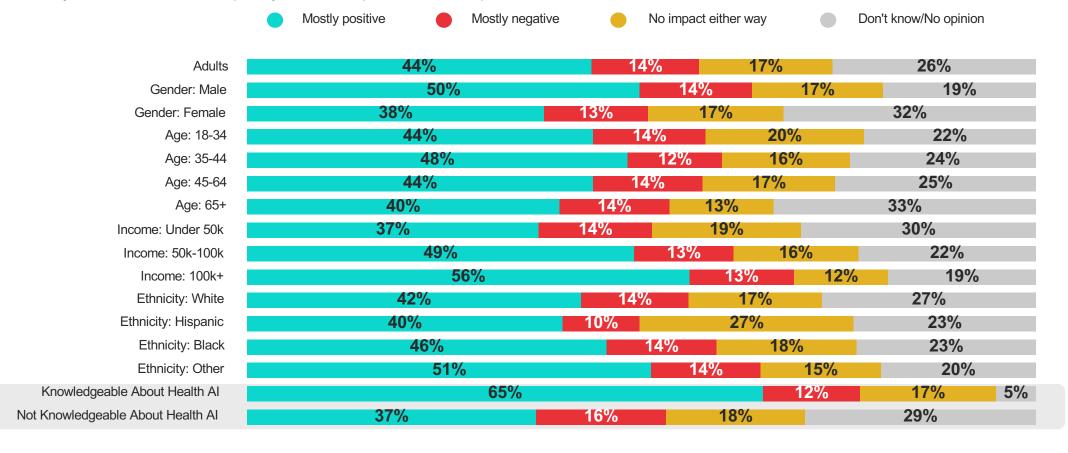| | Very knowledgeable | Somewhat knowledgeable | Don't know/No opinion | Not too knowledgeable | Not knowledgeable at all |
|---|---|---|---|---|---|
| Adults | 11% | 25% | 11% | 32% | 21% |
| Gender: Male | 14% | 30% | 8% | 32% | 16% |
| Gender: Female | 8% | 20% | 13% | 32% | 27% |
| Age: 18-34 | 16% | 30% | 12% | 24% | 18% |
| Age: 35-44 | 18% | 29% | 12% | 27% | 14% |
| Age: 45-64 | 7% | 24% | 11% | 37% | 21% |
| Age: 65+ | | 17% | 7% | 40% | 33% |
| Income: Under 50k | 8% | 25% | 15% | 30% | 23% |
| Income: 50k-100k | 11% | 25% | 7% | 36% | 20% |
| Income: 100k+ | 17% | 26% | 5% | 34% | 19% |
| Ethnicity: White | 11% | 24% | 10% | 32% | 23% |
| Ethnicity: Hispanic | 15% | 33% | 10% | 26% | 16% |
| Ethnicity: Black | 16% | 27% | 14% | 26% | 16% |
| Ethnicity: Other | 4% | 29% | 14% | 38% | 15% |

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# A plurality (44%) of adults say artificial intelligence has a mostly positive impact on the healthcare industry.

Based on what you know, would you say artificial intelligence has a mostly positive or mostly negative impact on the healthcare industry? This can include quality of life for providers and patients, efficiencies, etc.



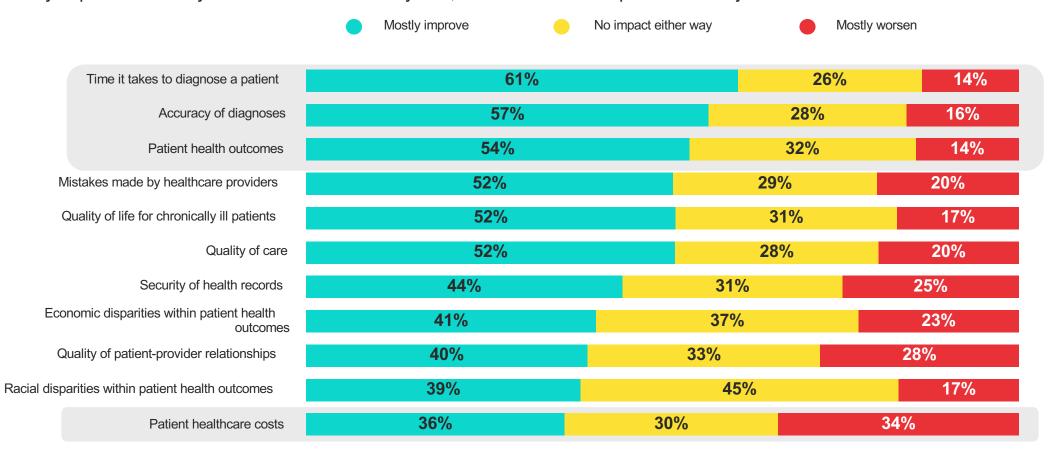| **44%** | **14%** | **17%** | **26%** |
| Mostly positive | Mostly negative | No impact either way | Don't know/No opinion |

ARTIFICIAL INTELLIGENCE IN HEALTHCARE

# Adults who are knowledgeable about A.I. in healthcare are more likely to say artificial intelligence has a mostly positive impact on the healthcare industry compared to less knowledgeable adults, indicating room to improve awareness about A.I.'s role in healthcare.

Based on what you know, would you say artificial intelligence has a mostly positive or mostly negative impact on the healthcare industry? This can include quality of life for providers and patients, efficiencies, etc.

Legend: ● Mostly positive   ● Mostly negative   ● No impact either way   ● Don't know/No opinion

| Group | Mostly positive | Mostly negative | No impact either way | Don't know/No opinion |
|---|---|---|---|---|
| Adults | 44% | 14% | 17% | 26% |
| Gender: Male | 50% | 14% | 17% | 19% |
| Gender: Female | 38% | 13% | 17% | 32% |
| Age: 18-34 | 44% | 14% | 20% | 22% |
| Age: 35-44 | 48% | 12% | 16% | 24% |
| Age: 45-64 | 44% | 14% | 17% | 25% |
| Age: 65+ | 40% | 14% | 13% | 33% |
| Income: Under 50k | 37% | 14% | 19% | 30% |
| Income: 50k-100k | 49% | 13% | 16% | 22% |
| Income: 100k+ | 56% | 13% | 12% | 19% |
| Ethnicity: White | 42% | 14% | 17% | 27% |
| Ethnicity: Hispanic | 40% | 10% | 27% | 23% |
| Ethnicity: Black | 46% | 14% | 18% | 23% |
| Ethnicity: Other | 51% | 14% | 15% | 20% |
| Knowledgeable About Health AI | 65% | 12% | 17% | 5% |
| Not Knowledgeable About Health AI | 37% | 16% | 18% | 29% |

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ARTIFICIAL INTELLIGENCE IN HEALTHCARE

# A majority of adults say artificial intelligence will mostly improve the time it takes to diagnose a patient (61%), the accuracy of diagnoses (57%), and patient health outcomes (54%). However, 34% of adults also believe that it will mostly worsen patients' healthcare costs.

As you may know, artificial intelligence can be used in the healthcare industry by way of training providers, scheduling, disease detection and diagnosis. Thinking about the use of artificial intelligence in the healthcare industry, do you think each of the following will mostly improve or mostly worsen over the next 5 years, or will it have no impact either way?

● Mostly improve     ● No impact either way     ● Mostly worsen

| | Mostly improve | No impact either way | Mostly worsen |
|---|---|---|---|
| Time it takes to diagnose a patient | 61% | 26% | 14% |
| Accuracy of diagnoses | 57% | 28% | 16% |
| Patient health outcomes | 54% | 32% | 14% |
| Mistakes made by healthcare providers | 52% | 29% | 20% |
| Quality of life for chronically ill patients | 52% | 31% | 17% |
| Quality of care | 52% | 28% | 20% |
| Security of health records | 44% | 31% | 25% |
| Economic disparities within patient health outcomes | 41% | 37% | 23% |
| Quality of patient-provider relationships | 40% | 33% | 28% |
| Racial disparities within patient health outcomes | 39% | 45% | 17% |
| Patient healthcare costs | 36% | 30% | 34% |

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## A quarter of adults feel skeptical (26%), uncertain (25%) and hopeful (24%) about the use of artificial intelligence in healthcare. Feelings vary across age and income levels.

Which of the following best describes how you feel about the use of artificial intelligence in healthcare? Please select up to two responses.

| | Adults | Gender: Male | Gender: Female | Age: 18-34 | Age: 35-44 | Age: 45-64 | Age: 65+ | Income: Under 50k | Income: 50k-100k | Income: 100k+ | Knowledg-able About Health AI | Not Knowledg-able About Health AI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Excited | 12% | 15% | 8% | 16% | 14% | 10% | 5% | 10% | 11% | 16% | 19% | 7% |
| Ambivalent | 4% | 4% | 4% | 3% | 3% | 4% | 6% | 4% | 3% | 5% | 4% | 5% |
| Anxious | 12% | 10% | 14% | 14% | 14% | 11% | 10% | 13% | 10% | 12% | 14% | 12% |
| Skeptical | 26% | 24% | 28% | 23% | 27% | 24% | 33% | 27% | 27% | 22% | 18% | 33% |
| Hopeful | 24% | 27% | 20% | 23% | 24% | 24% | 24% | 20% | 26% | 32% | 30% | 22% |
| Optimistic | 19% | 21% | 17% | 18% | 19% | 21% | 19% | 16% | 22% | 24% | 28% | 17% |
| Uncertain | 25% | 23% | 28% | 20% | 23% | 28% | 30% | 26% | 26% | 22% | 16% | 31% |
| Curious | 17% | 17% | 18% | 20% | 15% | 17% | 16% | 17% | 19% | 15% | 17% | 19% |
| Scared | 11% | 10% | 13% | 9% | 10% | 10% | 17% | 13% | 10% | 9% | 9% | 14% |
| Confused | 7% | 5% | 8% | 7% | 6% | 6% | 8% | 7% | 7% | 5% | 4% | 8% |
| Confident | 9% | 11% | 8% | 10% | 12% | 11% | 4% | 9% | 9% | 10% | 17% | 5% |
| Other, please specify: | 1% | 1% | 1% | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 0% |
| None of the above | 6% | 5% | 7% | 9% | 5% | 5% | 4% | 9% | 3% | 3% | 2% | 3% |

- Men, younger adults, and higher income adults are more likely than their counterparts to say they feel excited about the use of artificial intelligence in healthcare.
- Adults who say they are knowledgeable about the use of artificial intelligence in healthcare are more likely than their counterparts to say they feel hopeful and optimistic.

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# A majority of adults say they would be comfortable if their provider started to use artificial intelligence tools for disease detection support (58%) and administrative tasks (57%).

How comfortable or uncomfortable would you be, if at all, if your provider started to use artificial intelligence tools for each of the following? *Total Comfortable*

| | Adults | Gender: Male | Gender: Female | Age: 18-34 | Age: 35-44 | Age: 45-64 | Age: 65+ | Income: Under 50k | Income: 50k-100k | Income: 100k+ |
|---|---|---|---|---|---|---|---|---|---|---|
| Disease detection support | 58% | 63% | 52% | 55% | 65% | 57% | 56% | 51% | 63% | 54% |
| Administrative tasks | 57% | 62% | 53% | 55% | 64% | 55% | 58% | 50% | 61% | 55% |
| Disease treatment support | 53% | 59% | 48% | 52% | 59% | 51% | 53% | 48% | 56% | 49% |
| Disease diagnosis support | 52% | 58% | 47% | 47% | 57% | 54% | 54% | 46% | 58% | 51% |
| Your specialty care | 46% | 52% | 40% | 48% | 55% | 44% | 37% | 41% | 48% | 37% |
| Virtual nursing assistants | 44% | 51% | 37% | 46% | 53% | 45% | 33% | 40% | 45% | 36% |
| Your primary care | 44% | 51% | 37% | 51% | 51% | 42% | 34% | 41% | 46% | 34% |
| Robotic surgery | 40% | 44% | 37% | 35% | 45% | 43% | 38% | 35% | 42% | 34% |

- Men are more likely than women to say they are comfortable with all of the tested scenarios. High-income adults are more likely than middle- and low-income adults to say so.
- Adults age 65+ are especially unlikely to say they would be comfortable with their provider using artificial intelligence tools for specialty care, virtual nursing assistants and primary care.

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# Of the options tested, adults are least comfortable with their provider using artificial intelligence tools for robotic surgery (44%), primary care (42%), virtual nursing assistants (39%), and specialty care (31%).

How comfortable or uncomfortable would you be, if at all, if your provider started to use artificial intelligence tools for each of the following? *Total Uncomfortable*

| | Adults | Gender: Male | Gender: Female | Age: 18-34 | Age: 35-44 | Age: 45-64 | Age: 65+ | Income: Under 50k | Income: 50k-100k | Income: 100k+ |
|---|---|---|---|---|---|---|---|---|---|---|
| Robotic surgery | 44% | 43% | 45% | 47% | 39% | 41% | 50% | 45% | 48% | 38% |
| Your primary care | 42% | 38% | 46% | 32% | 35% | 44% | 56% | 41% | 44% | 38% |
| Virtual nursing assistants | 39% | 36% | 43% | 34% | 29% | 39% | 54% | 38% | 43% | 36% |
| Your specialty care | 38% | 33% | 41% | 30% | 31% | 41% | 50% | 37% | 40% | 36% |
| Disease treatment support | 31% | 29% | 34% | 29% | 25% | 32% | 36% | 33% | 33% | 23% |
| Disease diagnosis support | 31% | 30% | 33% | 31% | 27% | 30% | 34% | 33% | 32% | 24% |
| Disease detection support | 27% | 24% | 29% | 24% | 20% | 29% | 30% | 28% | 27% | 23% |
| Administrative tasks | 26% | 25% | 27% | 26% | 20% | 28% | 28% | 29% | 26% | 17% |

- Except for robotic surgery, older adults are more likely than younger adults to say they would be uncomfortable if their provider started to use artificial intelligence tools for all of the tested scenarios.
- Females are more likely than males to say they would be uncomfortable if their provider started using artificial intelligence tools for primary care, virtual nursing assistants, specialty care, and disease treatment and detection support.

TRACKING: MEDICAL TECHNOLOGY

ARTIFICIAL INTELLIGENCE IN HEALTHCARE
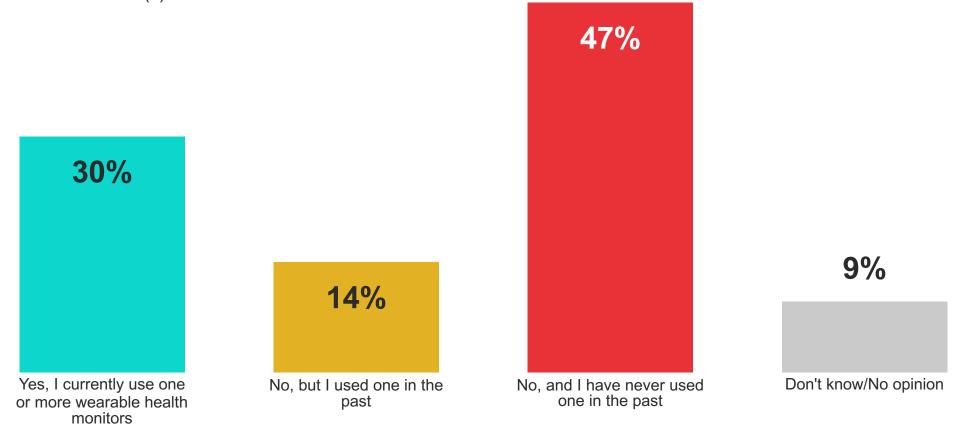
WEARABLE HEALTH MONITORS
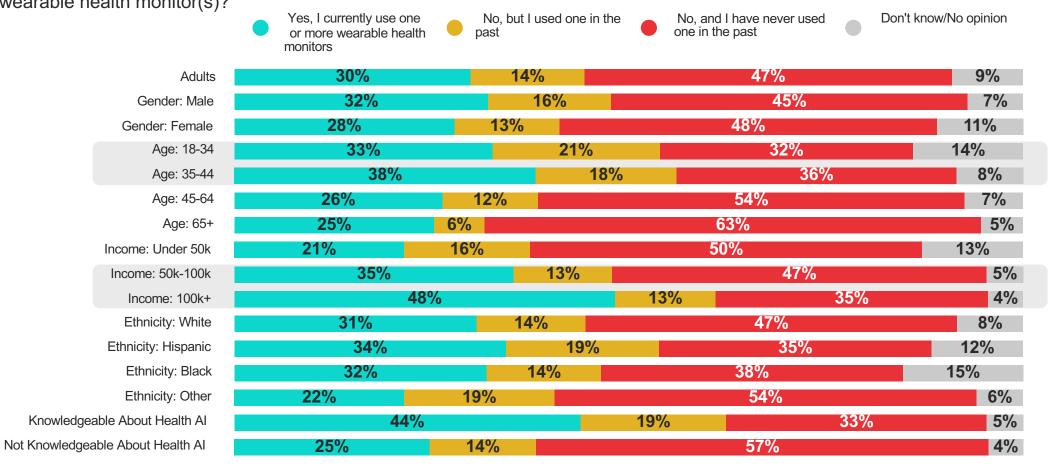
# About a third (30%) of adults say they currently use one or more wearable health monitors.

As you may know, wearable healthcare technology refers to health and fitness monitoring devices worn on the body such as your wrist, finger, or neck. Examples include Garmin smartwatches, Apple watches, Fitbits, and Oura rings. Do you currently use any kind of wearable health monitor(s)?



**30%**
Yes, I currently use one or more wearable health monitors

**14%**
No, but I used one in the past

**47%**
No, and I have never used one in the past

**9%**
Don't know/No opinion

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# Younger adults and higher-income adults are especially likely to say they use one or more wearable health monitors.

As you may know, wearable healthcare technology refers to health and fitness monitoring devices worn on the body such as your wrist, finger, or neck. Examples include Garmin smartwatches, Apple watches, Fitbits, and Oura rings. Do you currently use any kind of wearable health monitor(s)?

● Yes, I currently use one or more wearable health monitors  ● No, but I used one in the past  ● No, and I have never used one in the past  ● Don't know/No opinion

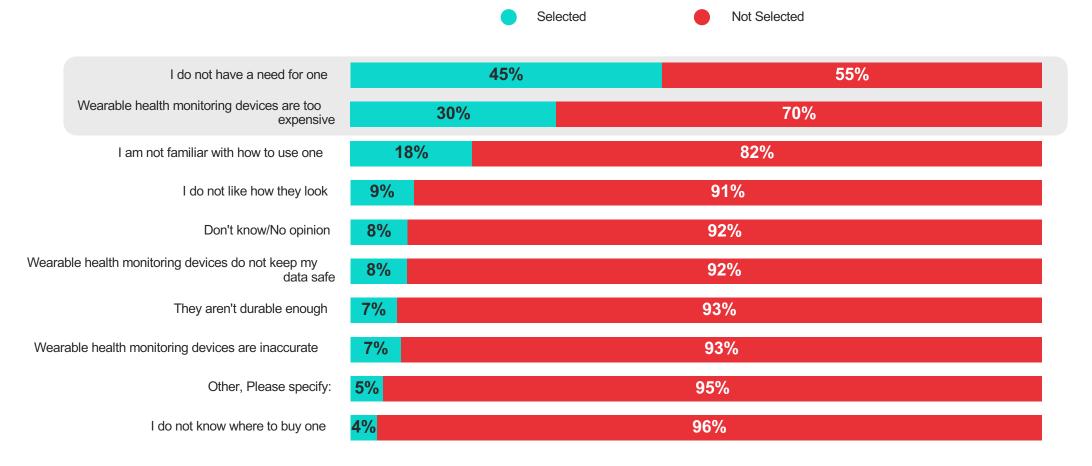| | Yes | No, past | No, never | Don't know |
|---|---|---|---|---|
| Adults | 30% | 14% | 47% | 9% |
| Gender: Male | 32% | 16% | 45% | 7% |
| Gender: Female | 28% | 13% | 48% | 11% |
| Age: 18-34 | 33% | 21% | 32% | 14% |
| Age: 35-44 | 38% | 18% | 36% | 8% |
| Age: 45-64 | 26% | 12% | 54% | 7% |
| Age: 65+ | 25% | 6% | 63% | 5% |
| Income: Under 50k | 21% | 16% | 50% | 13% |
| Income: 50k-100k | 35% | 13% | 47% | 5% |
| Income: 100k+ | 48% | 13% | 35% | 4% |
| Ethnicity: White | 31% | 14% | 47% | 8% |
| Ethnicity: Hispanic | 34% | 19% | 35% | 12% |
| Ethnicity: Black | 32% | 14% | 38% | 15% |
| Ethnicity: Other | 22% | 19% | 54% | 6% |
| Knowledgeable About Health AI | 44% | 19% | 33% | 5% |
| Not Knowledgeable About Health AI | 25% | 14% | 57% | 4% |

# Adults who do not currently use a wearable health monitor say they do not have a need for one (45%) or that the devices are too expensive (30%).

Which of the following reasons best describe why you do not currently own a wearable health monitor, such as a fitness tracker or smartwatch? Please select all that apply.
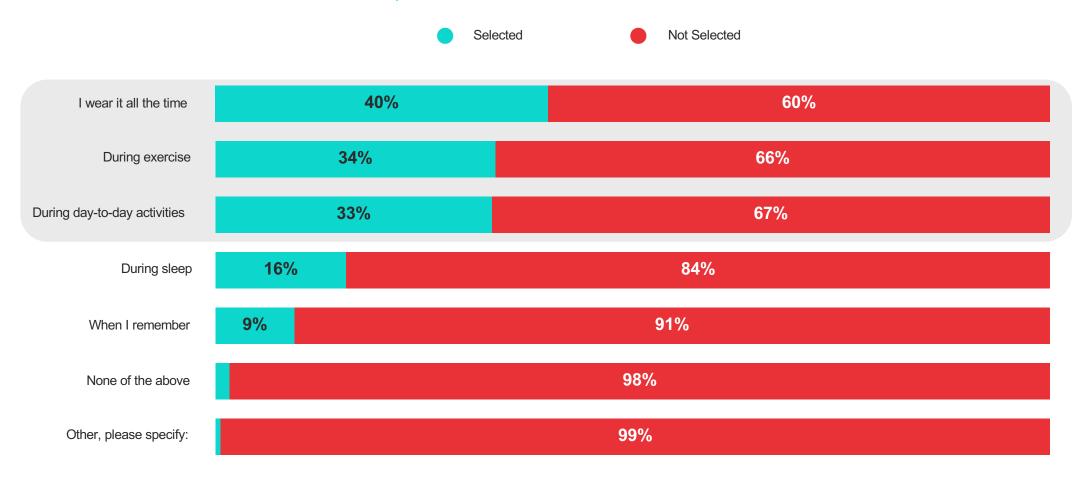
**AMONG ADULTS THAT DON'T CURRENTLY USE A WEARABLE HEALTH MONITOR, n=1,343**

● Selected    ● Not Selected

| Reason | Selected | Not Selected |
|---|---|---|
| I do not have a need for one | 45% | 55% |
| Wearable health monitoring devices are too expensive | 30% | 70% |
| I am not familiar with how to use one | 18% | 82% |
| I do not like how they look | 9% | 91% |
| Don't know/No opinion | 8% | 92% |
| Wearable health monitoring devices do not keep my data safe | 8% | 92% |
| They aren't durable enough | 7% | 93% |
| Wearable health monitoring devices are inaccurate | 7% | 93% |
| Other, Please specify: | 5% | 95% |
| I do not know where to buy one | 4% | 96% |

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WEARABLE HEALTH MONITORS

# Adults who currently use a wearable health monitor say they wear it all the time (40%), during exercise (34%), and during day-to-day activities (33%).

Which of the following best describes the situations you use your wearable health monitor(s), if ever? Please select all that apply.
**AMONG WEARABLE HEALTH MONITOR USERS, n=659.**

● Selected          ● Not Selected

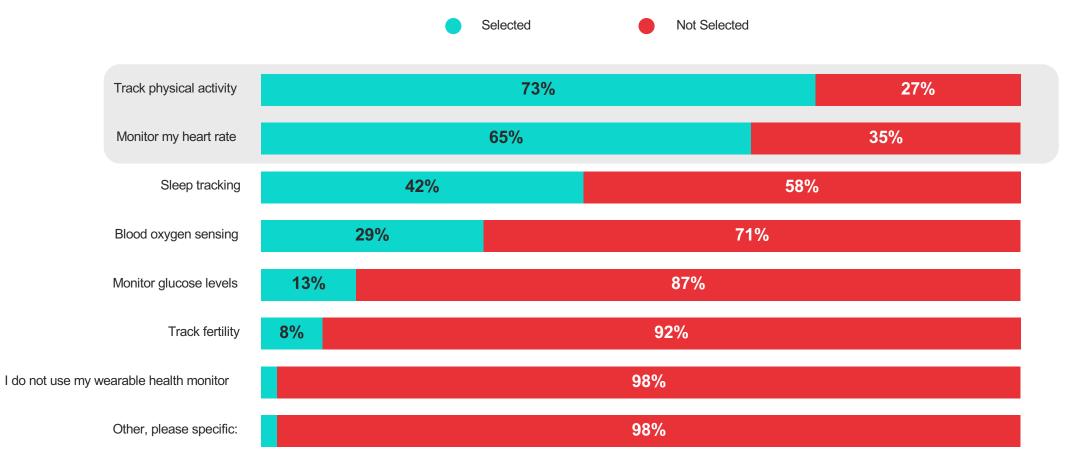| | Selected | Not Selected |
|---|---|---|
| I wear it all the time | 40% | 60% |
| During exercise | 34% | 66% |
| During day-to-day activities | 33% | 67% |
| During sleep | 16% | 84% |
| When I remember | 9% | 91% |
| None of the above | | 98% |
| Other, please specify: | | 99% |

WEARABLE HEALTH MONITORS

# A majority of current wearable health monitor users say they use their monitor(s) to track physical activity (73%) and to monitor their heart rate (65%).

Which of the following describes how you use your wearable health monitor(s), if any? Please select all that apply.
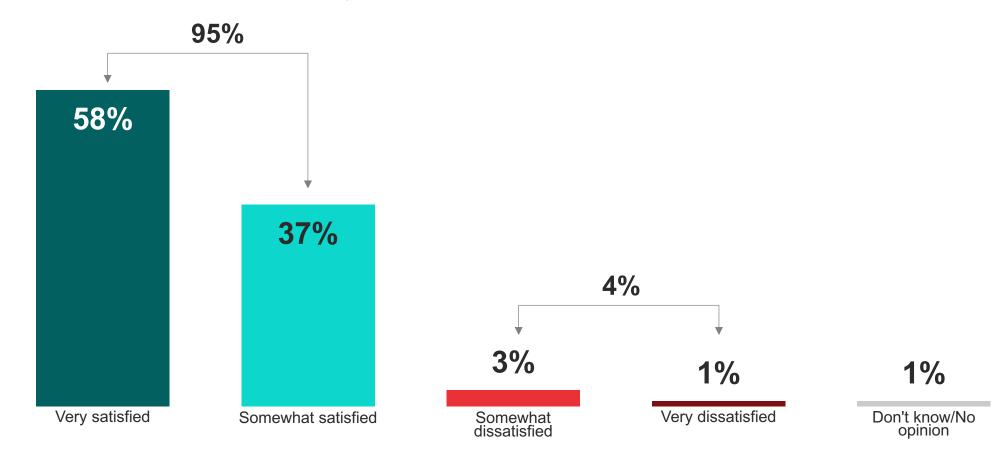
**AMONG WEARABLE HEALTH MONITOR USERS, n=659.**

● Selected    ● Not Selected

| | Selected | Not Selected |
|---|---|---|
| Track physical activity | 73% | 27% |
| Monitor my heart rate | 65% | 35% |
| Sleep tracking | 42% | 58% |
| Blood oxygen sensing | 29% | 71% |
| Monitor glucose levels | 13% | 87% |
| Track fertility | 8% | 92% |
| I do not use my wearable health monitor | | 98% |
| Other, please specific: | | 98% |

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# Nearly all current wearable health monitor users say they are satisfied (95%) with their monitor.

How satisfied or dissatisfied are you with your wearable health monitor(s), if at all?

**AMONG WEARABLE HEALTH MONITOR USERS, n=659.**



**95%**

**58%**

**37%**

**4%**

**3%**

**1%**

**1%**

Very satisfied

Somewhat satisfied

Somewhat dissatisfied

Very dissatisfied

Don't know/No opinion

# Adults say ease of use (58%) and affordability (57%) would be very important if they were looking to purchase a wearable health monitor.

If you were looking to purchase a wearable health monitor, how important would each of the following features be, if at all?

● Very important  ● Somewhat important  ● Don't know/No opinion  ● Not too important  ● Not important at all

| | Very important | Somewhat important | Don't know/No opinion | Not too important | Not important at all | Total Important |
|---|---|---|---|---|---|---|
| Ease of use | 58% | 23% | 11% | 5% | 4% | 81% |
| Affordability | 57% | 24% | 10% | 6% | | 81% |
| Accuracy of monitoring metrics | 50% | 23% | 14% | 8% | 5% | 73% |
| Heart rate monitoring | 49% | 30% | 11% | 7% | 4% | 79% |
| Ability to track physical activity | 44% | 32% | 11% | 8% | 4% | 76% |
| Blood oxygen sensing | 36% | 34% | 14% | 11% | 5% | 70% |
| Blood glucose monitoring | 34% | 29% | 13% | 15% | 9% | 63% |
| Sleep tracking | 29% | 34% | 12% | 16% | 9% | 63% |
| Ability to share metrics | 24% | 30% | 15% | 21% | 10% | 54% |
| Aesthetics | 23% | 31% | 17% | 18% | 10% | 54% |

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