



Loss of Pulse Detection Overview

(for markets where regulatory clearance / approval has been obtained)

<p>1 Loss of Pulse Detection</p>	<p>Loss of Pulse Detection is a first-to-market smartwatch feature intended to detect pulselessness arising from a number of causes, including but not limited to conditions like cardiac arrest, poisoning, or respiratory arrest. When every minute matters, the Loss of Pulse Detection feature on the Pixel Watch 3 can detect a loss of pulse event and prompt a call to lifesaving emergency services.¹</p>
<p>2 Loss of Pulse event significance</p>	<p>Unanticipated loss of pulse events are time-sensitive emergencies requiring immediate intervention. When a loss of pulse event happens, it's usually up to a bystander to give or get help. However, half of all loss of pulse events related to cardiac arrest, for example, are unwitnessed – leaving millions worldwide effectively no chance of receiving emergency care soon after losing their pulse.</p>
<p>3 A first-of-its-kind feature</p>	<p>Loss of Pulse Detection can detect a pulselessness event and place an automatic call to emergency services even in unwitnessed cases, enabling access to lifesaving care from emergency medical responders, a first-of-its-kind software feature in the smartwatch market.¹</p> <p>Loss of Pulse Detection underwent rigorous validation in lab and clinical environments, the algorithm was tested to ensure accuracy, and regulatory clearance or approval was obtained in markets where the feature is available.</p>
<p>4 How Loss of Pulse Detection works</p>	<p>The AI-based algorithm uses the Pixel Watch 3's multi-path heart rate sensor. If signs of pulselessness are detected, Pixel Watch 3 activates additional sensors' signals to identify any pulse or motion. If no signs of pulse or motion are detected, it begins an initial check-in, escalating to an audio alarm and 20-second countdown. Then, a call to emergency services is automatically placed on an LTE smartwatch or connected smartphone, sharing critical context with the operator, like GPS location and that the person is showing signs of pulselessness.¹</p>

<p>5 Rigorous testing approach and validation</p>	<p>To responsibly develop Loss of Pulse Detection, Google took a rigorous testing approach and obtained regulatory clearance. Further, the algorithm was tested over hundreds of thousands of hours to reduce the risk of false detection and help avoid unnecessary calls to emergency services.</p> <p>Starting with data from Google labs in Seattle and San Francisco, researchers used a tourniquet to artificially induce peripheral pulselessness and show that a watch can detect it. Then, as part of a comprehensive study in a cardiac electrophysiology lab, people with previously scheduled procedures requiring induced ventricular fibrillation wore a watch to evaluate algorithms in real-world loss of pulse events.</p>
<p>6 AI in Loss of Pulse Detection</p>	<p>Loss of Pulse Detection on Pixel Watch 3 uses a multi-check, AI-powered algorithm to identify loss of pulse and minimize false alarms. The machine learning-based algorithm uses the multi-path heart rate sensor to detect signs of pulselessness and prompt a call to emergency services if needed.¹</p>
<p>7 Launch markets</p>	<p>The initial rollout of Loss of Pulse Detection will include support for the following countries:</p> <ul style="list-style-type: none"> ● Austria ● Denmark ● France ● Ireland ● Netherlands ● Norway ● Sweden ● Switzerland ● United Kingdom <p>This product has not been cleared or evaluated by the US FDA. CE marked - Will be available in certain EU markets g.co/fitbit/lossofpulse.</p>

<p>8</p> <p>Enhanced peace of mind with the Pixel Watch 3</p>	<p>Loss of Pulse Detection joins features like irregular heart rhythm notifications, Safety Check, and Fall Detection to help Pixel Watch 3 users stay safe and connected and bring them peace of mind. Whether helping you share heart data with your doctor, or allowing you to easily notify your contacts if you feel unsafe, the Pixel Watch 3 can help you feel more confident in your day to day.</p>
<p>9</p> <p>Loss of Pulse Detection partners</p>	<p>In bringing Loss of Pulse Detection to market, Google worked with partners like cardiologists, global authorities on resuscitation, and Emergency Medical Service leaders, dispatchers, and paramedics to get their feedback on the technology. Their partnership has further validated the positive impact that this feature may have worldwide.</p>

DISCLAIMERS:

EMEA Disclaimer:

¹Loss of Pulse Detection may not detect every instance of a loss of pulse and is not intended for users with preexisting heart conditions or those who require cardiac monitoring. It does not diagnose or treat any medical condition or provide follow-up care. Emergency calling is dependent on call functionality such as your phone or watch being charged and having adequate cellular connectivity. CE marked - Will be made available in select markets by September 2024 g.co/fitbit/lossofpulse.

US Disclaimer:

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