

RECENT TRENDS IN WEARABLE HEALTH MONITORING
DEVICES

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ABSTRACT:

With the advancement in the field of nanotechnology, VLSI and wireless communication technology, electronics have found a new emerging trend in the form of wearable electronics for health monitoring applications. Ongoing research in this field has resulted in number of wearable devices, garments that can monitor and relay various types of data. The continuous research and progress in the field of wearable health monitoring sensors will transform the future healthcare industry drastically by enabling continuous non-invasive monitoring of a person's health. These systems comprise various types of sensors like electrochemical sensors, fiber optic sensors, smart textiles etc. These systems facilitate low cost wearable non invasive solution for continuous all day and any place health and activity status monitoring.

Keywords: wearable, nanotechnology, textiles.

1. Introduction:

Wearable health monitoring has grabbed an attention of researchers since last decade. As an effect of it we can see numerous advancements in this field which is an effect of numerous contributions done by researchers in this field. This has yielded various commercially available health monitoring devices. It's a need of current population to monitor a patient's health while he is out of the hospital. Even it is the need of normal person to monitor his health continuously which will also provide real time feedback information about a person's health. This information can be communicated to a personal or to a health care center [6]. Wearable systems for health monitoring may comprise various types of miniature sensors, wearable or even implantable. These sensors can measure various physiological parameters like heart rate, blood pressure, body and skin temperature, oxygen saturation, respiration rate, electrocardiogram, electrolyte levels, glucose levels etc. The obtained measurements are communicated via a wireless link using Bluetooth or zigbee to a central node, for example, Smartphone, a Personal Digital Assistant (PDA) or a microcontroller board, which may then in turn display the according information on a user interface or transmit the aggregated vital signs to a medical center.