



HEALTH - Project Ideas

- Frostbite early warning using wearables for use in Siachen.
- Breathalyzer for detecting possibility of schizophrenia
- Biomechanics and injury prevention for pace bowlers

HEALTH - Frostbite Detection

What is it?

<https://www.youtube.com/watch?v=tPEj-osKZyo>

<https://pubmed.ncbi.nlm.nih.gov/33320326/>

<https://hackaday.io/project/11841-frostbite-detector-and-alarm>

How can one detect using wearables? Sensor identification

<https://iopscience.iop.org/article/10.1088/2631-7990/aca44d/pdf>

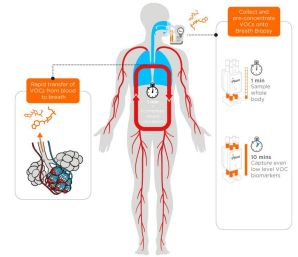
Batteries at low temperatures?

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8216142/>

Size of wearable and comfort



HEALTH - Detection of Schizophrenia using breath



What is schizophrenia?

<https://www.youtube.com/watch?v=iYCcjHBuNwU>

<https://www.who.int/news-room/fact-sheets/detail/schizophrenia>

Using the presence of VOC' s to detect

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC502626/>

Accuracy:

Least count: what ppm can you detect

<https://www.mdpi.com/1424-8220/22/3/1238>

Creating an artificial breath

HEALTH - Biomechanics of bowling and injuries

<https://www.youtube.com/watch?v=HDL4FIUguC8>

Biomechanics: application of mechanics (statics and Kinematics) to the human body

Modelling

Collecting data

Runup analysis

Arm action analysis

Typical Injuries

