

# Clinical Report for Participant 6

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## Clinical Report

The physiological data analysis reveals a total of 671 measurements, out of which 227 instances indicate stressed conditions and 444 readings show non-stressed states. The participant's stress levels were classified using machine learning algorithms with an overall accuracy of 0.88, macro F1-score of 0.86, and weighted F1-score of 0.87. However, an abnormal stress pattern has been detected, indicating prolonged periods of stress.

## Classification Results

The classification report shows that the classifier achieved precision scores of 0.89 for non-stressed instances and 0.85 for stressed instances, with recall values of 0.93 and 0.77 respectively. A higher recall value indicates a lower false negative rate, meaning fewer non-stressed instances were misclassified as stressed. On the other hand, a higher precision value suggests a lower false positive rate, suggesting that more stressed instances were correctly classified as such.

## Abnormal Patterns

The analysis has identified an abnormal stress pattern, signifying prolonged periods of stress. Prolonged stress can lead to various medical conditions, including cardiovascular diseases, depression, anxiety disorders, and impaired immune system function. It is crucial for the participant to address this issue promptly to prevent potential health complications in the future.

## Recommendations

1. Practice stress management techniques such as deep breathing exercises, progressive muscle relaxation, or mindfulness meditation regularly to help manage stress levels.
2. Engage in regular physical activity to reduce cortisol (stress hormone) levels and promote overall well-being.
3. Establish a consistent sleep schedule and ensure adequate sleep duration each night, as lack of sleep can exacerbate stress symptoms.

4. Seek support from friends, family members, or mental health professionals to discuss emotional concerns related to stress.
5. Adopt a healthy diet rich in fruits, vegetables, lean proteins, and whole grains, while limiting intake of caffeine and alcohol, which can increase stress levels.
6. Schedule regular check-ups with healthcare providers to monitor stress levels and identify any potential health risks associated with prolonged stress.



