## RISKS AND CHALLENGES FOR PRETERM BABIES

**Health Risks at Birth**

Preterm babies face critical complications:

- Respiratory Distress Syndrome (RDS) – Due to immature lungs.
- Hypothermia – Inability to regulate body temperature.
- Neonatal infections – Weaker immune systems.

**Long-Term Consequences**

How many preterm babies develop complications?

- Cerebral palsy – Affects 5-10% of preterm babies.
- Vision & Hearing Loss – 25% of babies <28 weeks.
- Developmental Delays – Nearly 40% struggle with learning difficulties.
- Heart diseases & hypertension – Higher risk in adulthood.

**The Challenge in Low-Income Communities**

Many families in rural & underserved areas struggle with:

- Limited hospital access – Long distances, high costs.
- No routine ultrasounds – Doppler scans are expensive.
- Delayed medical intervention – Preterm birth risks go undetected.

## Call to Action & Resources

### WHO NEEDS THESE DEVICES?

- Pregnant women in remote areas
- High-risk pregnancies (previous preterm birth, chronic illness)
- Low-income mothers with limited hospital access

### WHERE TO SEEK HELP?

- Hospitals & Clinics – Free or low-cost screening programs
- NGOs & Government Programs – Affordable maternal care options
- Research & Innovation Hubs – Advancing low-cost fetal monitoring

### TAKE ACTION!

💙 Spread awareness about preterm birth risks

📢 Support affordable fetal monitoring solutions

🔬 Advocate for better maternal care accessibility

📞 Contact Us:

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# Preterm Delivery & Infant Health: The Need for Early Detection

### Why It Matters:

- Every year, 15 million babies are born preterm worldwide (before 37 weeks).
- Complications from preterm birth are the leading cause of death in children under 5 years.
- Early detection using ECG & EHG monitoring can help save lives!

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# Understanding Preterm Birth

## What is Preterm Birth?

A baby is considered preterm if born before 37 weeks of gestation. Depending on how early the birth happens, preterm babies are classified as:

- Late Preterm (34-36 weeks)
- Moderate Preterm (32-34 weeks)
- Very Preterm (28-32 weeks)
- Extremely Preterm (<28 weeks)

## How Common is Preterm Birth?

- 1 in 10 babies worldwide is born preterm.
- Countries with higher preterm birth rates (per 100 births):
- 🇮🇳 India – 3.5 million
- 🇨🇳 China – 1.2 million
- 🇳🇬 Nigeria – 773,600
- 🇵🇰 Pakistan – 748,100
- 🇮🇩 Indonesia – 675,700

## Why Does It Happen?

Risk Factors for Preterm Birth:

- Infections & chronic conditions (e.g., diabetes, high BP).
- Previous preterm birth.
- Twin or multiple pregnancies.
- Poor maternal nutrition.
- Lack of prenatal care.

# Role of ECG & EHG Monitoring in Early Detection

## What is ECG & Why is it Important?

ECG (Electrocardiography) for Fetal Heart Monitoring

- Measures the baby's heart activity in the womb.
- Detects abnormal heart rhythms (arrhythmias).
- Identifies oxygen deprivation (fetal hypoxia) before distress occurs.

## What is EHG & How Does It Help?

EHG (Electrohysterography) for Uterine Contractions

- Non-invasive method to detect preterm labor signs.
- Records electrical signals from the uterus.
- More reliable than traditional tocography (TOCO).

## Why ECG & EHG Over Traditional Methods?

- Safer than frequent ultrasounds.
- Non-invasive, pain-free.
- Can be used at home with proper guidance.

**Bridging the healthcare gap for every mother, everywhere!**

# The Need for Affordable & Portable ECG/EHG Devices

## Challenges for Low-Income Groups

- 80% of maternal deaths occur in low-resource settings.
- Many pregnant women cannot afford frequent hospital visits.
- Traditional Doppler ultrasounds are costly & require trained professionals.

## How Can Portable ECG & EHG Devices Help?

🏠 Affordable, home-based monitoring for at-risk mothers.
🌍 Ideal for rural areas with limited hospital access.
📡 AI-powered alerts detect abnormalities early.
📞 Telemedicine Integration – Doctors can analyze data remotely.

## Real-World Impact

- In a study from India, portable fetal monitors helped reduce neonatal deaths by 30%.
- Community health workers can use these devices to screen expectant mothers at home.