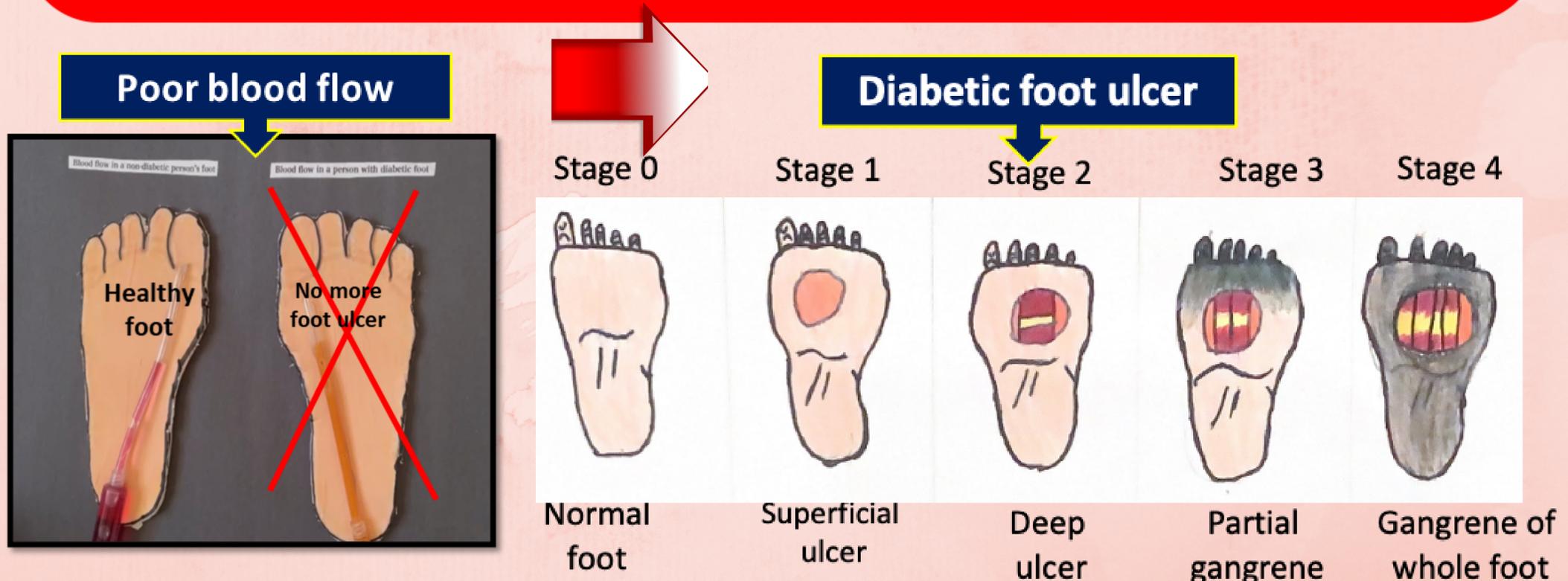


DIABAL SHOES

Suffering From Diabetes ?

Worried about
~ diabetic foot ulcer
~ falling from loss of balance?

- ❖ About 422 million people worldwide have diabetes.
- ❖ Diabetes can affect blood vessels that supply toes
- ❖ Diabetes can cause blood vessels to narrow which leads to reduced blood flow to feet, and necrotic tissues
- ❖ Diabetes can cause nerve damage causing numbness in the legs and feet, called diabetic neuropathy
- ❖ Type 2 diabetes can cause low/high blood sugar which makes people feel dizzy, lose balance and fall



- ❖ Detects and prevents diabetic foot ulcer
- ❖ No more falls caused by loss of balance
- ❖ Massages and relieves diabetic leg pain
- ❖ Low maintenance cost : Replace sensors only without replacing the shoe
- ❖ Customize stylish shoe "skin" to match your outfit
- ❖ Maintains medical records in smartphone via bluetooth

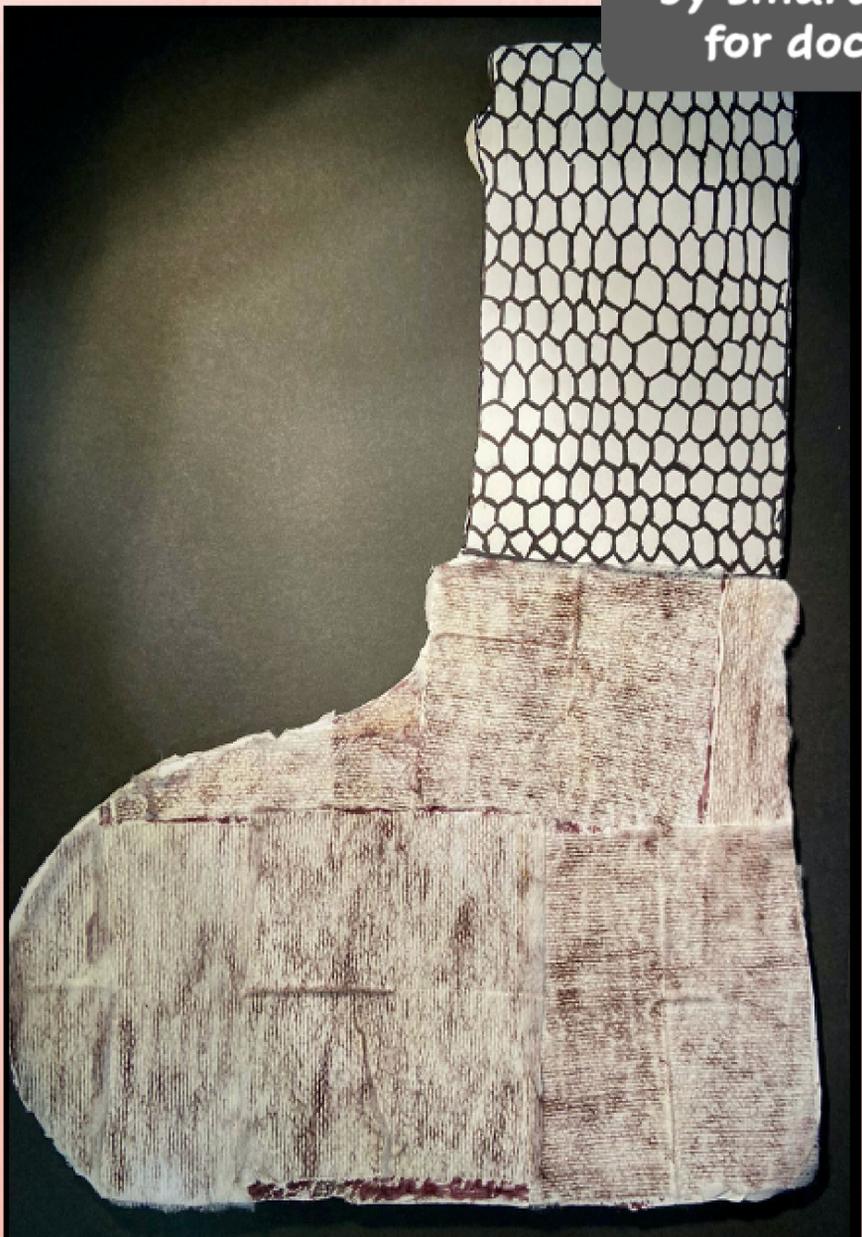
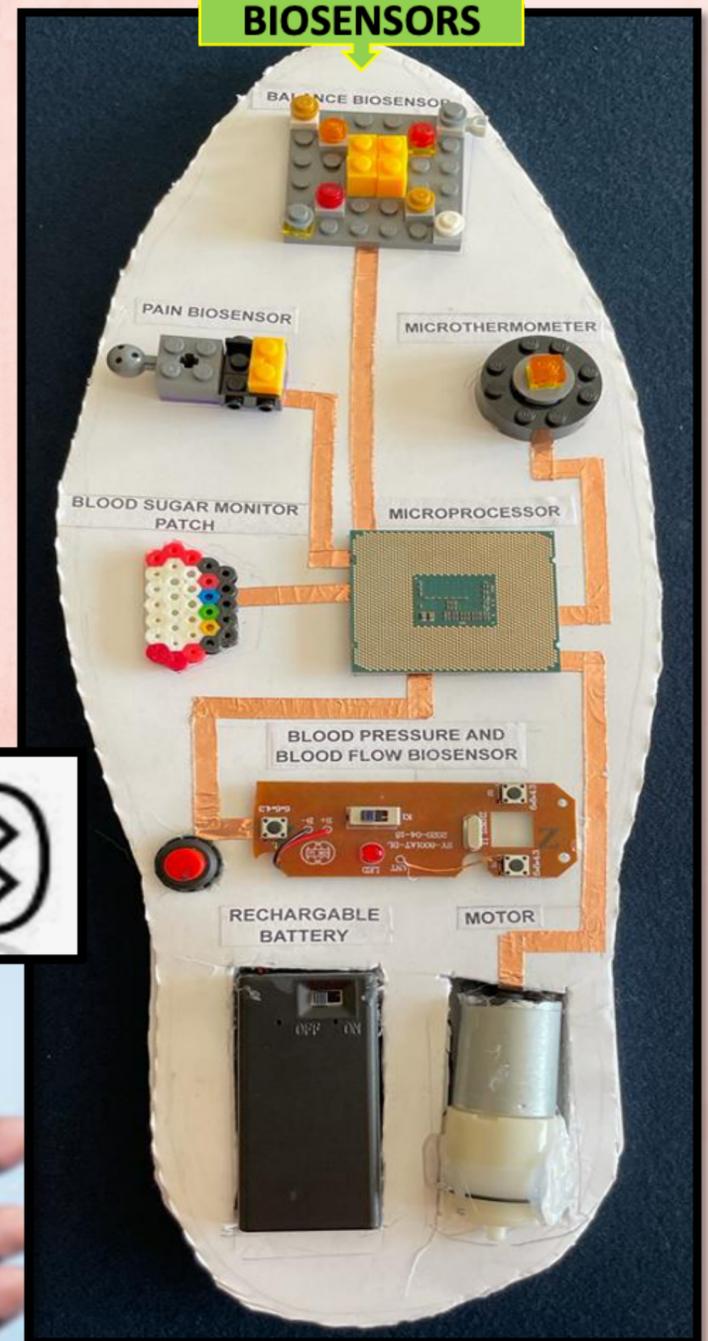
How does DiaBal shoe work?

Balance biosensor : detect loss of balance
Electrical pain biosensors : sense numbness/tingling to indicate onset of diabetic foot
Microthermometer : detect temperature difference between foot and body.
Blood sugar monitor : measure the amount of sugar in the blood
Blood pressure biosensor : detects and signals low blood pressure
Blood flow biosensor : detect and measure blood flow within toes using optical device
Microprocessor : Controls all biosensors & motor

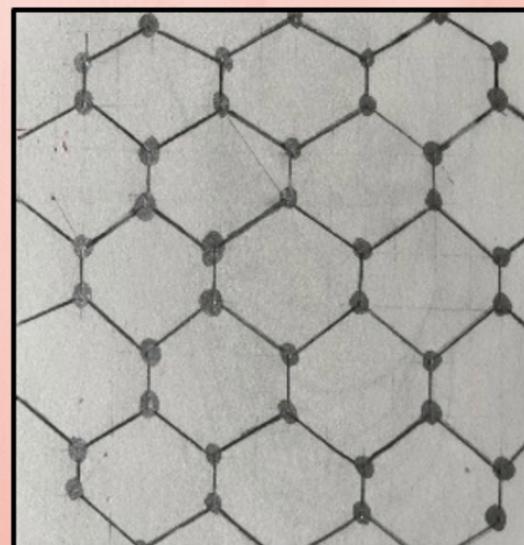
DC Motor : works the massager by converting electrical to mechanical energy
Rechargeable battery : provides electric energy to run motor

Data collected by smartphone for doctors

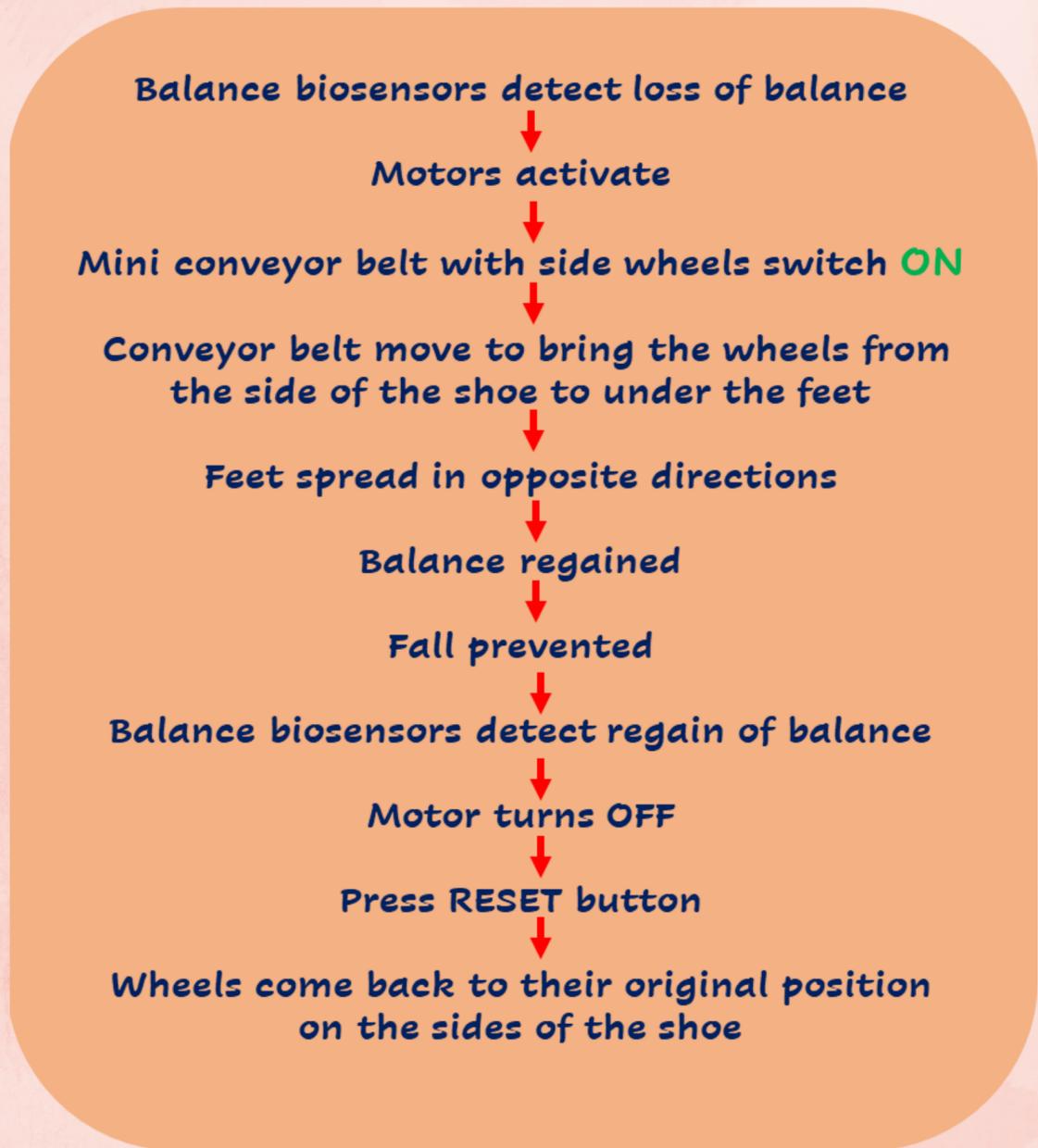
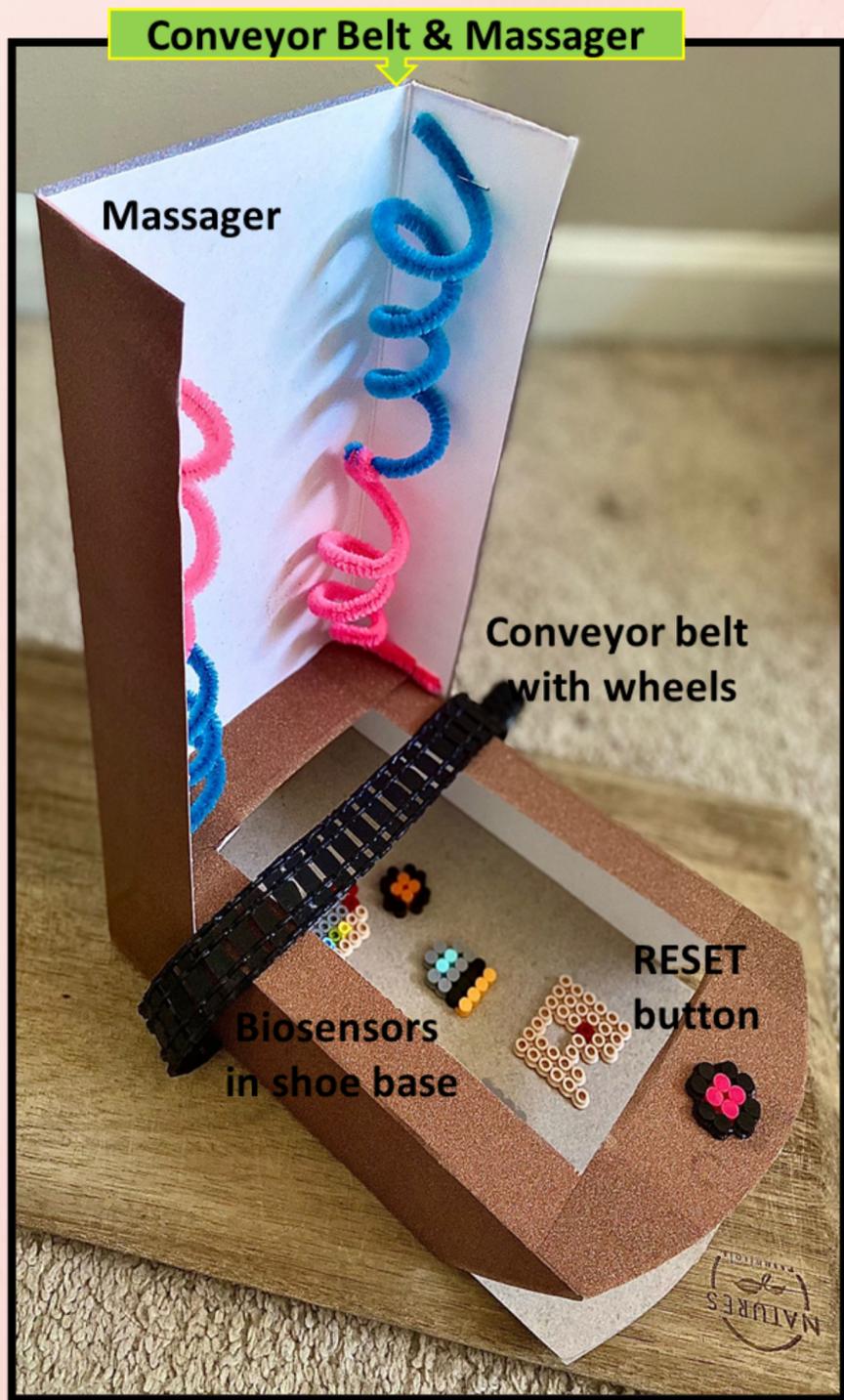
PROTOTYPE



Made of GRAPHENE as graphene is strong, super flexible, lightweight, waterproof, and breathable.



How does DB shoe restore balance?



PROTOTYPE



FASHIONABLE SKINS



Fashionable skins to match dress with DiabAl shoes