

SNS COLLEGE OF PHYSIOTHERAPY

Affiliated to The Tamil Nadu Dr. MGR Medical University, Chennai
Coimbatore – 641035

COURSE NAME : Basic physics and biomechanics

SUBJECT CODE : 6273

TOPIC : Patient Experience

Empathize I: Patient Experience

- Sensation varies with current
- Fear of shock or burn
- Painful areas have higher resistance
- Chronic patients need comfort
- Patient comfort depends on how current changes with resistance.



Empathize II: Therapist Challenges

- Different skin resistance
- Moist vs dry skin Electrode
- size variability Machine
- setting confusion
- Therapists must adapt current based on tissue resistance.

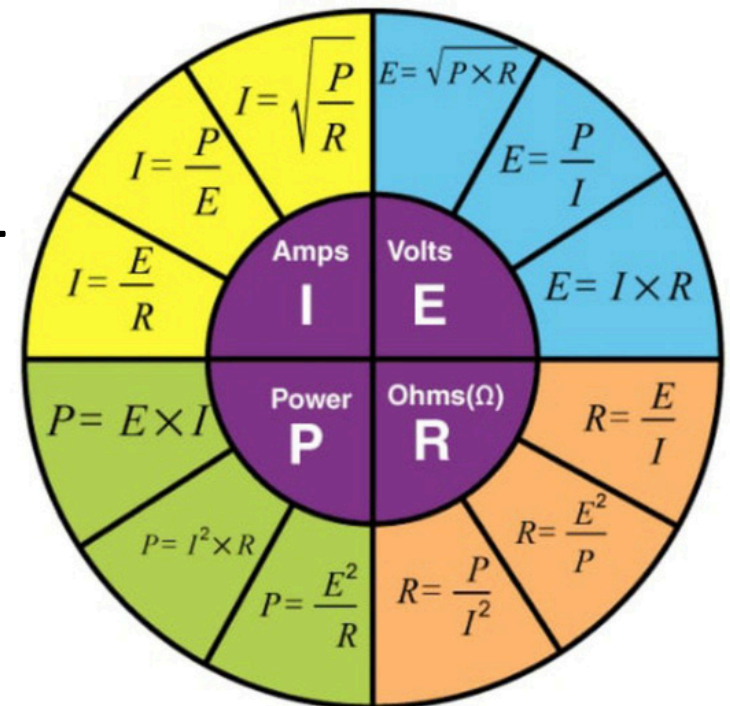


Define I: Clinical Problem

- Same voltage \neq same current High
- resistance causes discomfort Risk
- of burns
- Problem: unsafe current delivery due to ignored resistance.

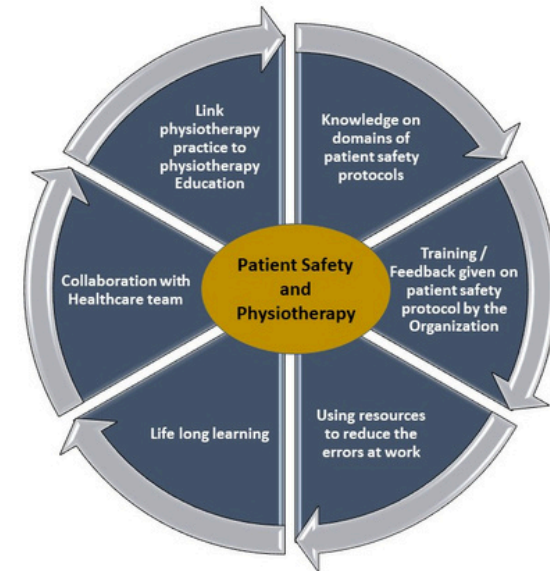
Define II: Ohm's Law Recall

- $V = IR$ Current inversely proportional to
- resistance Clinical relevance in
- electrotherapy
- Ohm's law explains patient-to-patient variation (viva point).



Ideate I: Safety Strategies

- Reduce skin resistance
- Increase electrode size
- Use gel or wet sponge
- Gradual intensity rise
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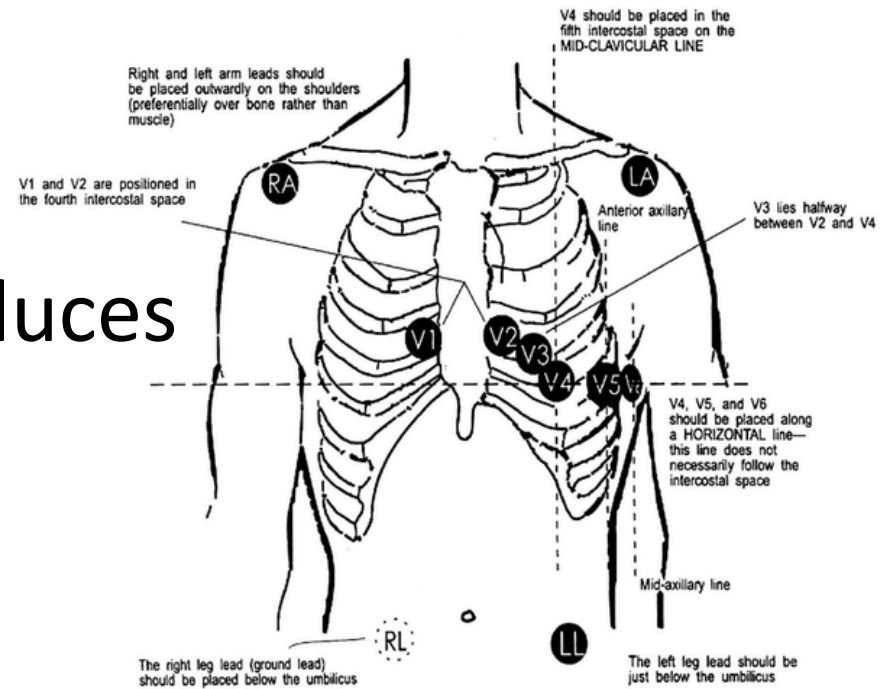
Brainstorming methods to control current safely.

Ideate II: Case-Based Indications

- Painful trigger point
 - Edematous limb
 - Post-surgical scar
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- Different tissues = different resistance (MCQ favorite).

Prototype I: Treatment Setup

- Skin preparation
- Electrode placement
- Machine setting check
- Standardized setup reduces resistance errors.



Prototype II: Clinical Case

- Case: TENS for knee OA Dry
- skin increases resistance
- Need higher voltage
- Applying Ohm's law to adjust treatment.

Test I: Outcome Evaluation

- Patient comfort Effective
- muscle contraction No skin
- redness
- Testing confirms correct current selection.

Test II: Exam Reflection

- Viva: Why burns occur?
- MCQ: Effect of resistance
- Common mistakes
- Reflection strengthens clinical and exam performance.

