Mosso's Ergography

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DYPMCKOP

SLO

- Introduction
- Principle
- Requirements
- Procedure
- Factors that affect performance
- Factors that affect FATIGUE
- In Mosso's ergography, fatigue is affected by
- Factors that causes muscle fatigue
- Calculation
- Precautions
- Observation
- Discussion

SLOs

3.14.1 Define Ergography

3.14.2 Describe stepwise the procedure of Ergography

3.14.3 Explain precaution taken during procedure

3.14.4 Explain the instructions to the subject satisfactorily

3.14.5 Demonstrate the stepwise procedure of Ergography

3.14.6 Explain the clinical significance of Ergography

Introduction

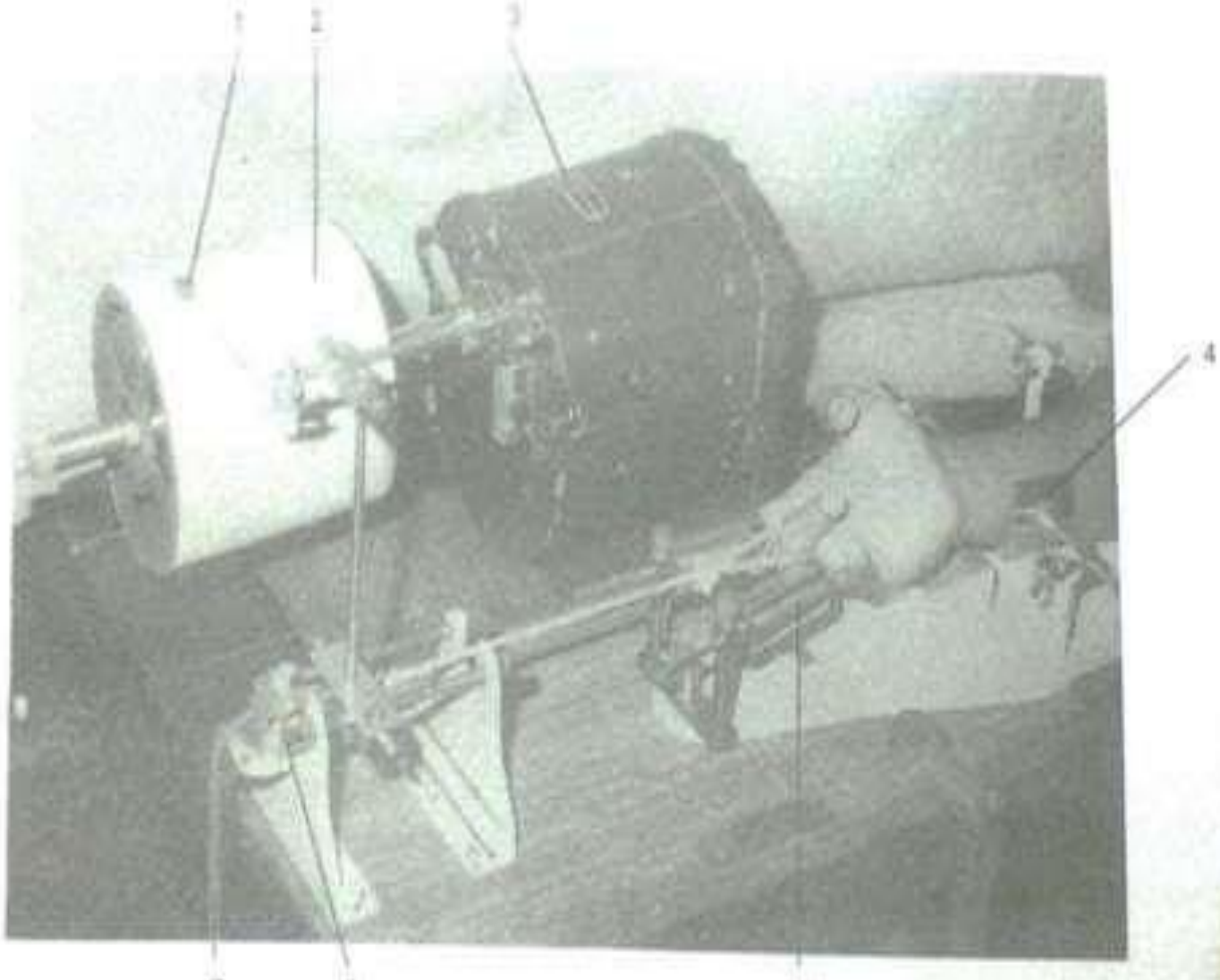
- Erg is unit of work Ergograph is apparatus
- Which is the recording of an ergogram.
- 1st described by Mosso, and therefore is called ***Mosso's Ergography.***
- *Ergogram is the recording of the voluntary contractions of skeletal muscles of a human being on a moving kymograph or* ***manual*** *or Auto movement of the paper.*
- *Ergography is done to asses the work done by* ***flexor of the fingers*** *of the hand.*
- *This is also performed to study the phenomenon of* ***fatigue*** *in*

Principle

- The subject contract the flexors of the fingers against resistance, using Mosso's Ergogram, till the figure is ***FATIGUED***.
- The work done is calculated to study the effect of various factors on the performance.

Requirements

- Mosso's ergography
- Metronome
- Electrical kymograph (if needed)
- Sphygmomanometer
- A set of weights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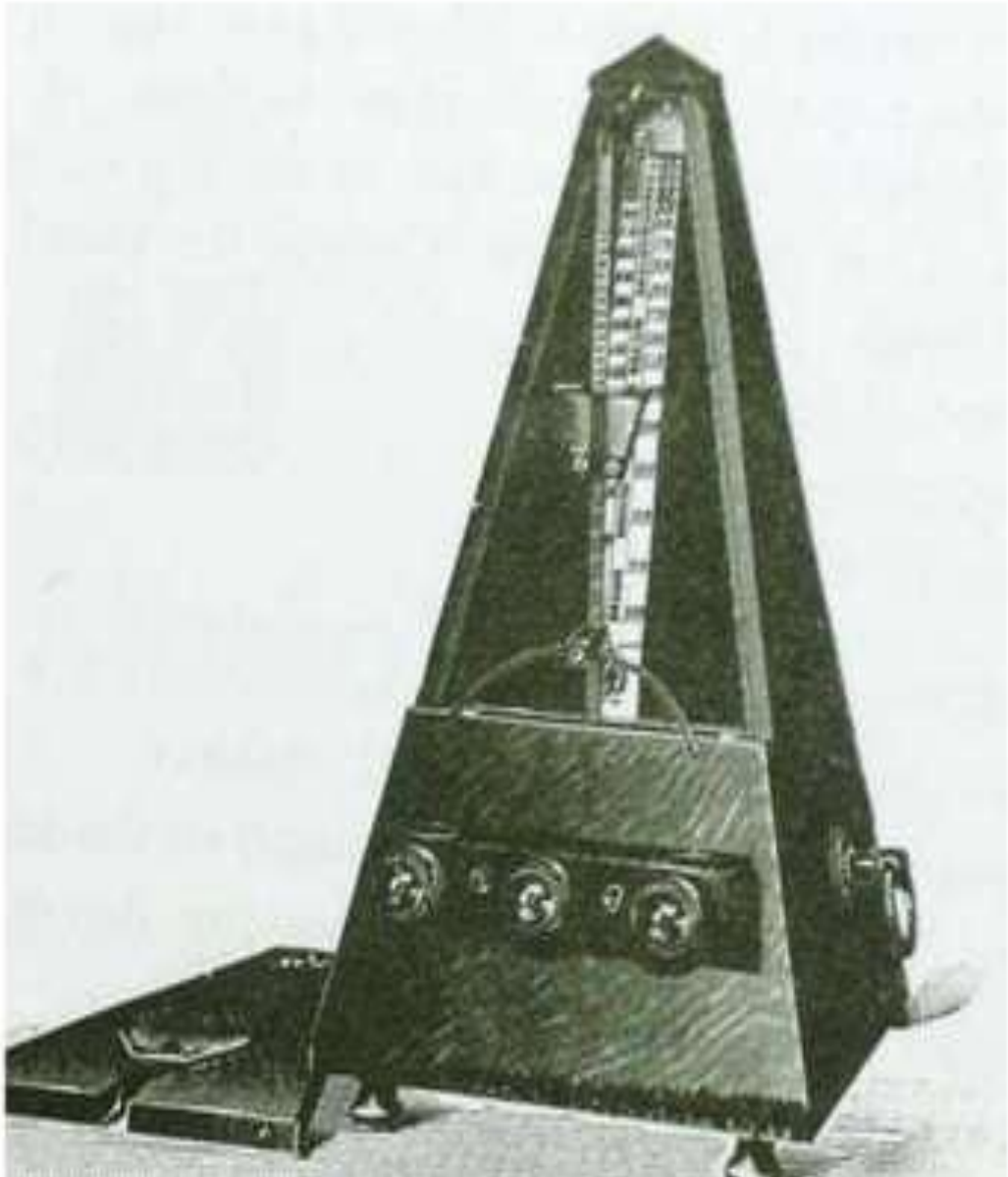
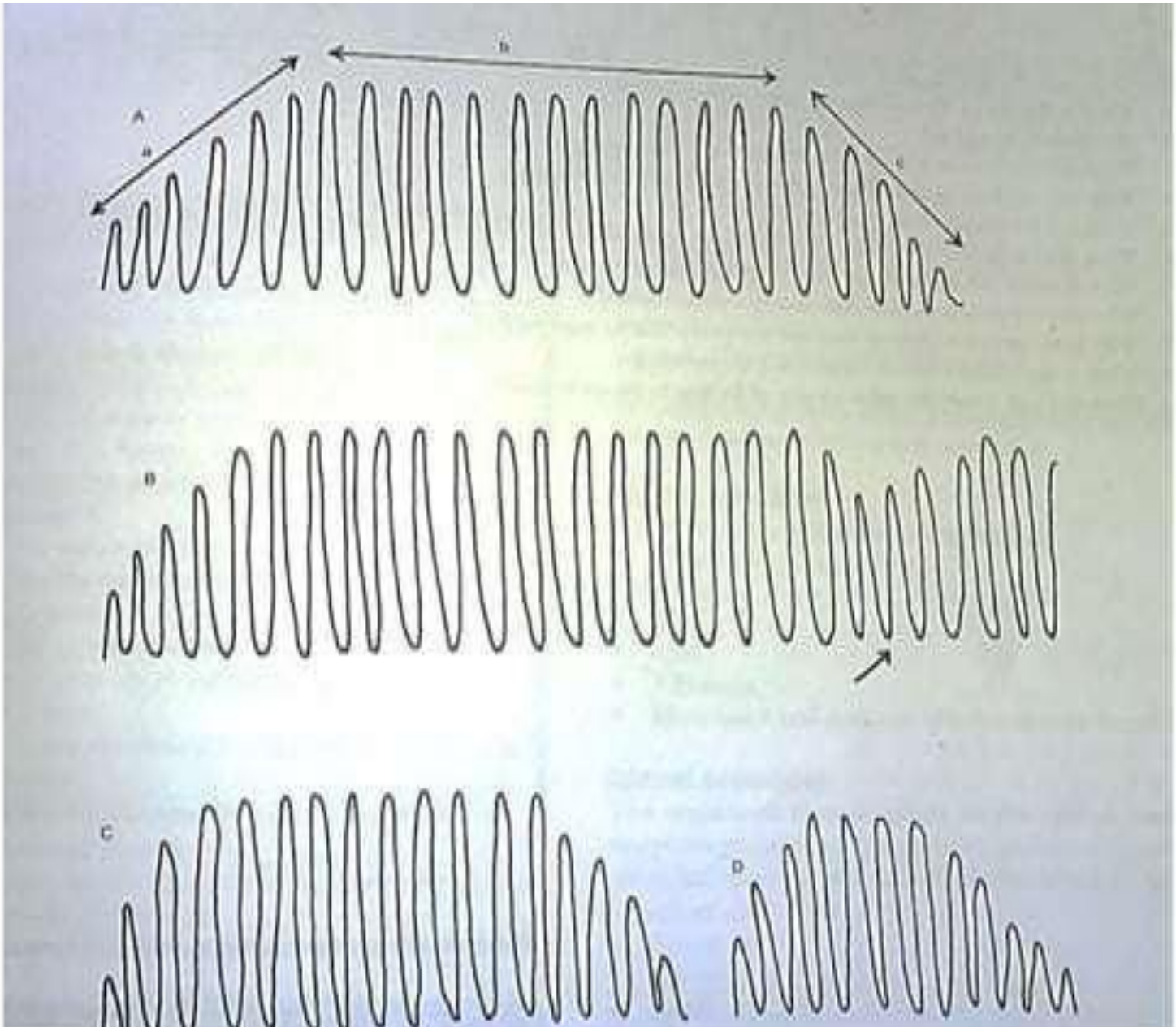


Procedure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Factors that affect performance

- Age
- Sex
- Height
- Physical build
- Training
- Race
- Motivation

Factors that affect FATIGUE

- THE DEGREE OF WORK.
- THE DURATION OF WORK
- Venous Occlusion
- Arterial Occlusion

In Mosso's ergography, fatigue is affected by

- ***The weight to be lifted***
  - ↑ses the weight lifting, fatigue occurs early
- ***The frequency of contractions***
  - Fatigue occurs early when the frequency of contraction ↑ses.
- ***Motivation***
  - Encouragement delays fatigue.
- ***Blood supply to the exercising muscle***
  - Venous and arterial occlusion accelerate fatigue.

Factors that causes muscle fatigue

- These are :
  - Depletion of nutrients (O_2, Creatine P, ATP)
  - Depletion of NEUROTRANSMITTERS
  - Production & Accumulation of metabolites.

Calculation

- $W = F \times S$
  - W is the Work done (in kg m)
  - F is the load (kg)
  - S is the total distance (in meters) through which the load is lifted.

Name one condition each in which muscle performance gets impaired due to venous occlusion and arterial occlusion.

- Venous blood supply to a muscle gets impaired due to thrombosis secondary to thrombophlebitis and
- due to arterial occlusion in Buerger's disease, a disease characterized by inflammation of the coats of arteries. (chain smoking is a precipitating factor.)

- Precautions
- Observation
- Discussion

References

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THANK YOU....