RUNNING SHOES

“Which Shoe?”

The Running Gait Cycle

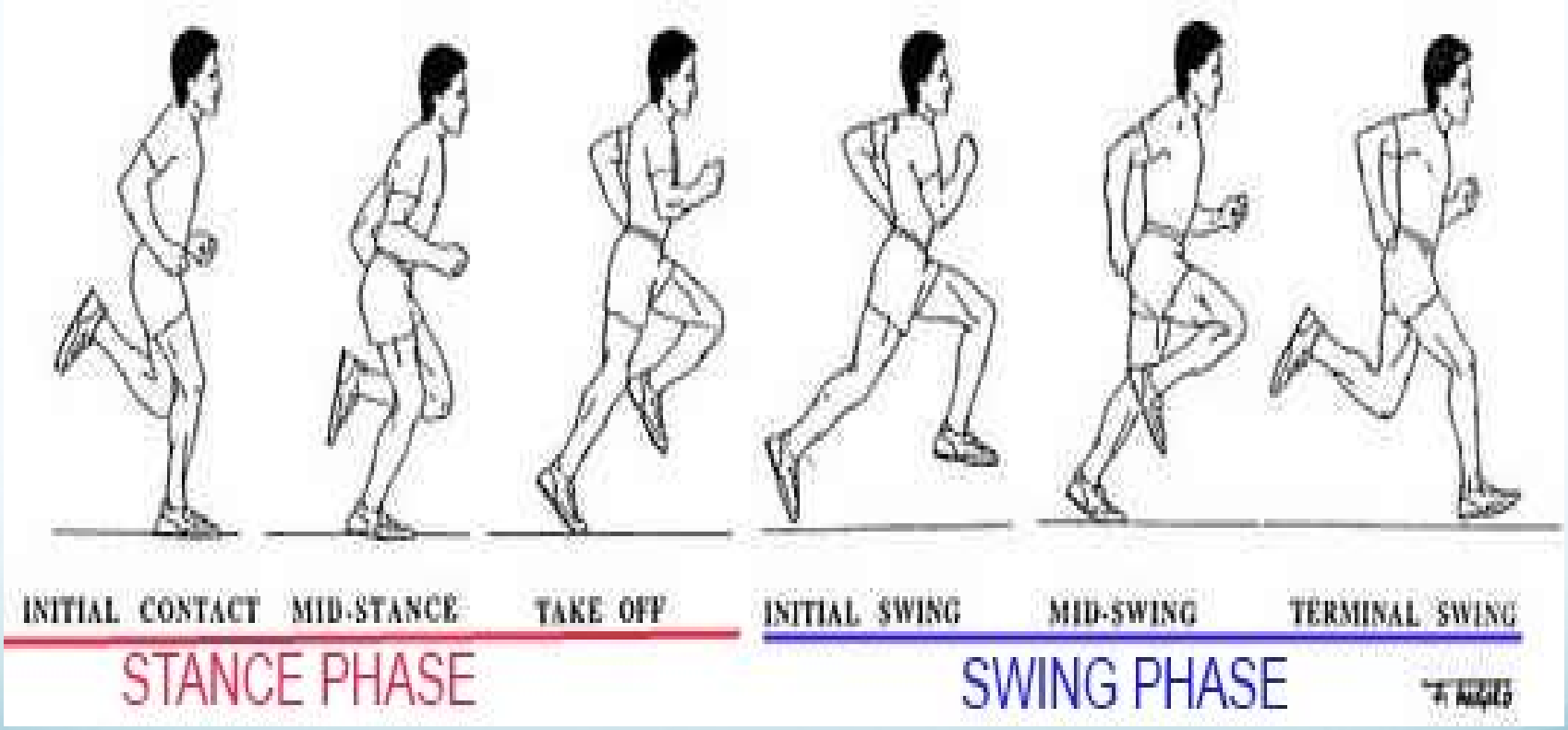
Stance Phase

- When the foot is in contact with the ground.
  - Initial Contact
  - Mid stance
  - Propulsion

Swing Phase

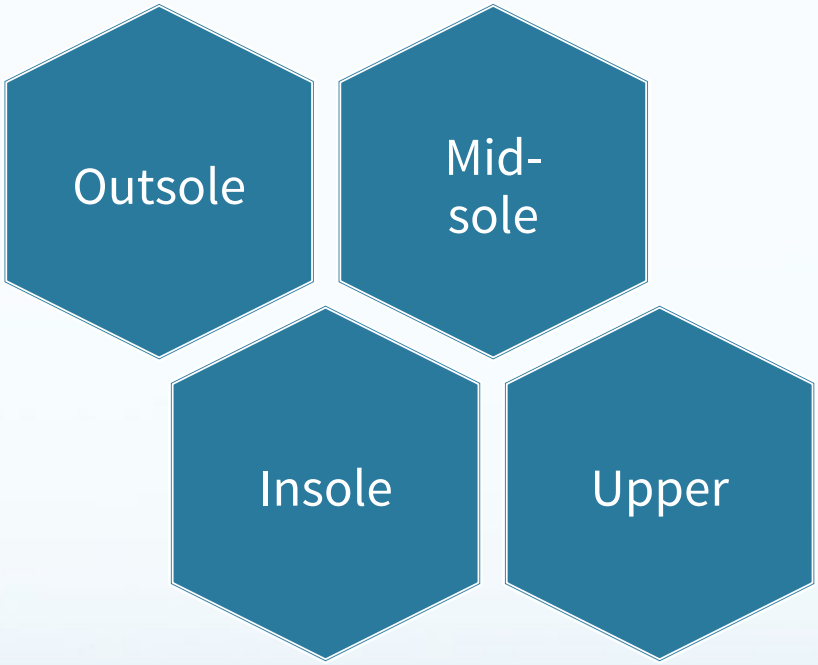
- When the same foot is not in contact with the ground

The Running Gait Cycle



The Running Shoe Dissected

Parts of a Running Shoe



Outsole

It is the part of the shoe that come in contact with the ground.

It’s made of carbon rubber, blown rubber or a combination of the two.

It provides durability and traction.

The outsole can have many designs, flex grooves and a split heel.

Midsole

The midsole comprises the cushioning material, mostly a closed cell foam called EVA. Polyurethane may also be used.

Proprietary cushioning devices like encapsulated air or gel can be inserted within the midsole foam.

Posts are areas of firmer, harder to compress EVA.

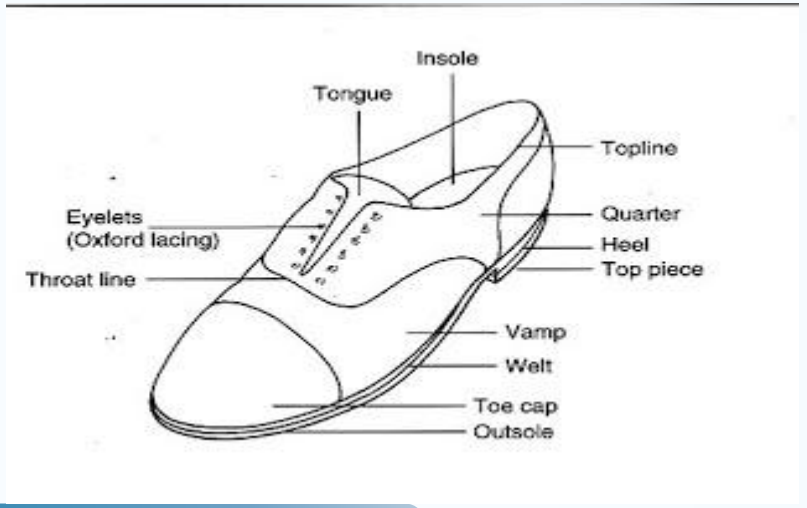
Plates stiffen the forefoot area of the shoe.

Shank stiffens the shoe under the arch and the middle area of the shoe.

Insole (Sockliner)

It’s a removable insert that the foot sits on in the shoe

Upper



This is the material that encases the foot.

It’s made from a soft, breathable mesh.

The upper determines how the shoe fits.

The Upper comprises several parts :

- Vamp and quarter panel
- Toe box
- Laces, Tongue, Eyelets, Eyestay, Overlays
- Heel counter and Heel tab

Selecting a Running Shoe

Selecting a Running Shoe

I.Terrain : Road vs Trail vs Track

- Road shoes are more flexible and light weight than trail shoes which are sturdier and heavier.
- Track shoes are designed for traction and speed for various track surfaces.

II. Gender, Height & Weight

- Women's shoes tend to be lighter with a softer midsole.
- Generally higher the BMI, more the shoe

III. Foot Strike Pattern

- How the foot initially contacts the ground – forefoot, midfoot or heel determines the area and level of cushioning that the runner may require.

Selecting a Running Shoe

IV. Speedwork:

- Performance shoes for speedwork are built lighter, narrower and lower to the ground than most running shoes.
- They tend to wear out faster than normal running shoes.

V. Injuries and Common Foot Problems:

- Injuries must be medically evaluated for shoe/orthotic prescription
- Common foot problems like black toe, bunions, corns & calluses, ingrown toe nails, etc. may find solutions in proper fitting shoes.

Selecting a Running Shoe

VI. Degree of Pronation:

- Normal Pronation : It is the inward roll of the foot (about 15%) on landing
- Overpronation : It is the excessive inward roll of the foot (over 15%) on landing
- Underpronation : It is the insufficient inward roll of the foot (less than 15%) on landing.

Shoes are broadly classified as neutral, motion-control and stability/support on the basis of degree of pronation.

Basically- 3 major factors

#1 Determine how much control do you need in your shoe

- Check heel counter
- Check mid sole

Basically- 3 major factors

#2 How much cushion do you need

- type of foot
- terrain

Basically- 3 major factors

#3 Heel- toe drop

- Type of foot- if you are an over pronator or flat footed then a little (4-8 mm) heel drop is good
- For a neutral foot or a high arch person zero drop (no heel toe drop) is fine.

Fitting a Shoe

- Measure the size of the foot at the store as sizes differ between brands.
- Shoes must be tried on both feet
- Feet swell after exercise or a run so it's better to try on shoes when the feet are swollen.
- Try the shoe with socks and orthotics that will be used.
- Toe box should be roomy and shoes comfortable from the start.
- Walk or preferably run on a firm surface with the shoes.

Barefoot/Minimalistic Running

- Barefoot running is simply running without shoes.
- Minimalistic Running involves shoes that give an experience close to barefoot.

- Pros
  - Better proprioception
  - Can help develop less impactful stride
  - Can strengthen feet

- Cons
  - Less or no protection
  - Type of running surface needs to be considered
  - Can result in injuries incase of deconditioned muscles and improper transition

Important to Note

- Mileage in shoes
- Latest fad
- “If it worked for my friend it will work for me” syndrome
- Be aware of shelf life of a shoe

Shoes classifications

Across brands- motion control, stability, neutral/natural

New designs/models/versions come out each season

Do enough research before buying

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To Promote Running
for Good Health