IMPACT OF BMI ON FOOT HEALTH

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1. INTRODUCTION

Body Mass Index (BMI) is a measure of body fat based on height and weight. A high BMI increases mechanical load on the feet, leading to abnormal pressure distribution, structural changes, pain, and reduced mobility. Maintaining a healthy BMI is essential for optimal foot function and overall well-being.

BMI COMPARISON: HEALTHY vs OBESE

HEALTHY BMI 18.5 – 24.9 kg/m²	HIGH BMI / OBESE ≥ 30 kg/m²
	
✓ Normal body weight	! Excess body weight
✓ Balanced pressure distribution	! High plantar pressure
✓ Better posture and gait	! Increased stress on joints and muscles
✓ Lower risk of foot problems	! Higher risk of foot pain and deformities

BMI CLASSIFICATION

BMI (kg/m²)	CATEGORY
< 18.5	Underweight
18.5 – 24.9	Normal
25 – 29.9	Overweight
30 – 34.9	Obesity I
35 – 39.9	Obesity II
≥ 40	Obesity III

Higher BMI = Greater load on feet = Higher risk of foot disorders

2. EFFECTS OF HIGH BMI ON FEET

INCREASED PLANTAR PRESSURE

Normal Pressure | High BMI Pressure

Excess weight increases pressure on the heel and forefoot, leading to pain and tissue damage.

FLAT FEET (PES PLANUS)

High BMI can flatten the medial arch, causing overpronation and instability.

PLANTAR FASCIITIS

Repeated stress and strain on the plantar fascia lead to inflammation and heel pain.

HEEL PAIN

Increased load causes microtears and inflammation in the heel fat pad and fascia.

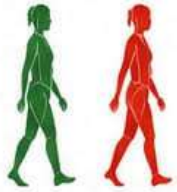
BUNIONS

Excess pressure and poor footwear contribute to bunion formation and progression.

JOIN STRESS & ARTHRITIS

Higher body weight accelerates wear and tear of joints, increasing arthritis risk.

ALTERED GAIT & BALANCE PROBLEMS



Normal Gait | Altered Gait

Excess weight alters walking pattern and reduces balance, increasing fall risk.

3. COMMON SYMPTOMS

Persistent foot pain, especially in heel and arch | Swelling in feet and ankles | Fatigue and tiredness while walking or standing | Reduced mobility and difficulty in movement | Arch discomfort or stiffness | Numbness and pressure sensitivity

4. RISK FACTORS

- Obesity and excess body weight
- Sedentary lifestyle and prolonged sitting
- Poor or unsupportive footwear
- Lack of regular exercise
- Long standing hours
- Rapid weight gain
- Genetic predisposition
- Previous foot injury or deformity
- Aging
- Pregnancy

5. PREVENTION & MANAGEMENT

WEIGHT MANAGEMENT

Achieve and maintain a healthy BMI through balanced diet and regular physical activity.

SUPPORTIVE FOOTWEAR

Wear well-fitted, cushioned shoes with good arch support and shock absorption.

REGULAR EXERCISE

Engage in low-impact activites like walking, cycling, or swimming to improve strength and flexibility.

ORTHOTICS & INSOLES

Use custom orthotics or insoles to reduce pressure, provide support, and improve alignment.

PHYSIOTHERAPY & STRETCHING

Stretching, strengthening, and manual therapy help reduce pain, improve flexibility, and enhance foot function.