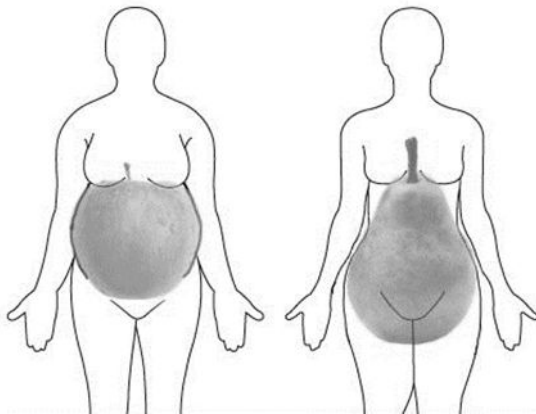


Quick Guide to Bariatric Somatotypes

A somatotype is a classification system for determining body type. This principle is helpful when assessing Bariatric Clients as it facilitates appropriate planning, safety with risk management and improved quality of care. An individualised care approach will ensure safety of the Client and Caregivers whilst maintaining high quality of care with respect, ensuring dignity is maintained.

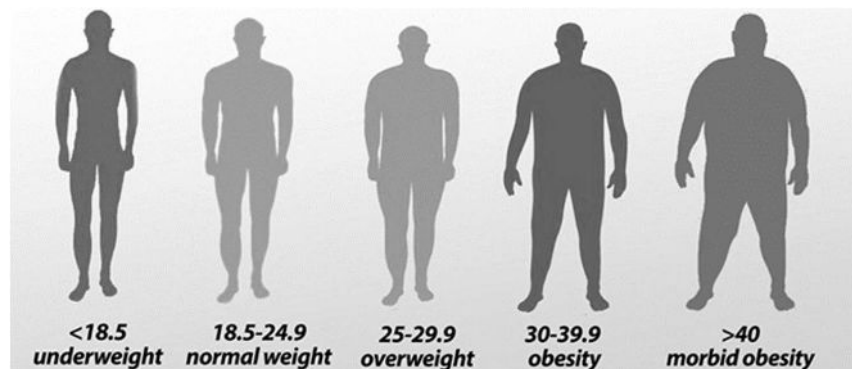


Bariatrics is the branch of medicine that deals with the causes, prevention, and treatment of obesity.

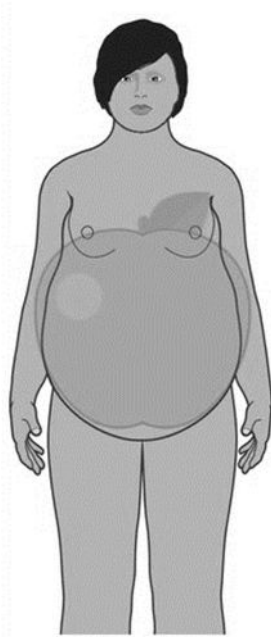
Traditionally we classified body types as apple shape and pear shape. However, we are able to further classify body shape to assist in understanding the practicalities of the impact of the varied body shapes on the prescription of Assistive Technology, movement patterns and positioning of Bariatric Clients.

Implications:

- Impact on Caregivers completing patient handling and transfers
- Number of Caregivers required
- Changes of centre of mass relative to base of support
- Impacted joint angles and range of motion able to be achieved
- Alterations in patterns of movement eg, increased lateral sway in gait
- Impact on prescription of appropriate dimension equipment
- Highly individualised relative dimensions and shape presentations
- Sufficient safe working load of equipment
- Ability to establish correct weight measurement
- Door size, environmental space availability and access



Apple (Android)



Android fat distribution describes the dispersing of human adipose tissue mainly around the trunk and upper body, in areas such as the abdomen, chest, shoulder and nape of the neck. This pattern may lead to an apple shaped body or central obesity and is more common in males than in females.

Android fat cells are mostly visceral - they are large, deposited deep under the skin and are highly metabolically active. The hormones they secrete have direct access to the liver.

Implications:

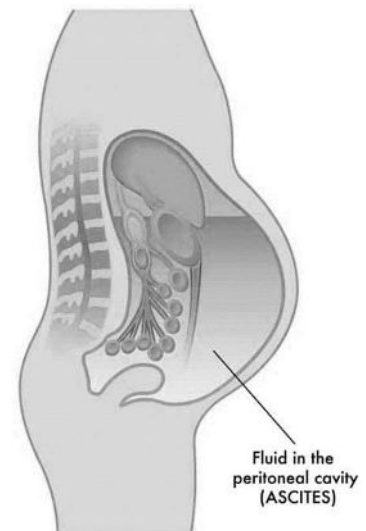
- High waist to hip ratio
- Storage of fat centrally
- Trunk flexion often obstructed
- Airway at risk in Supine and prone
- Utilise Semi Fowler Position (head elevated 30°)
- Shift of centre of mass upwards and forwards

Apple Ascites

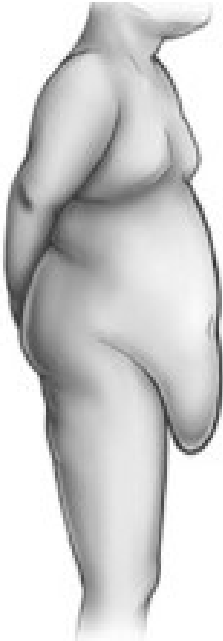
Ascites is the abnormal build-up of fluid in the abdomen. Technically, it is more than 25 ml of fluid in the peritoneal cavity, although volumes greater than one litre may occur. Symptoms may include increased abdominal size, firm abdomen, increased weight, abdominal discomfort, and shortness of breath.

Implications:

- High waist to hip ratio
- Rigid, inflexible abdomen
- Restricted chest wall movement: decreased diaphragmatic activity
- Hypertrophy of respiratory accessory muscles
- poor ventilation (O₂ sats < 90%)
- poor activity endurance



Apple Panniculus



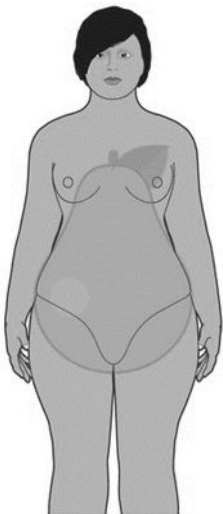
The panniculus, often referred to as pannus, is a dense layer of fatty tissue consisting of excess subcutaneous fat within the lower abdominal region. The skin stretches to accommodate the load creating a gradable 'apron' like protrusion.

In the case of an apple pannus shape, hip and knee function remain intact, and the leg size may be normal. The classification system, describing length of the pannus relative to the body, is useful in determining impact of the degree of tissue.

Implications:

- Momentum of tissue during movement
- Forward downward pull on posture
- Impeding movement of lower limbs into flexion
- Hip abduction to accommodate tissue
- Handling and moving of pannus weight
- Stable sitting impeded
- Position on the side with pannus supported

Pear (Gynoid)



The pear shape, known also as Gynoid, is body fat that forms around the lower body, hips laterally impacting the joint angles at the hip joint and thighs. This adipose tissue will generally be distributed medially or laterally impacting posture and function.

Implications

- Low waist to hip ratio
- Limited hip and knee joint range
- Able to tolerate supine and prone
- Minimal impact on respiratory system
- Present with abducted or adducted leg position
- Reduced strength relative to lower limb body weight
- Lower height of centre of mass

Pear Abducted

Adipose tissue accumulated on the inside of the thighs will cause the hips and legs to adopt an abducted posture to accommodate for the excessive tissue.



Implications

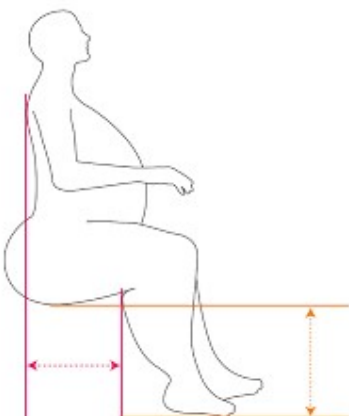
- Lower limbs unable to achieve midline posture
- Valgus stress on knees with consequent pain
- Difficulty log rolling
- Availability of equipment to accommodate increase base of support
- Feet positioning in sitting may be wider than the seat width

Pear Adducted

Adipose tissue accumulated on the outside of the thighs will cause the hips and legs to adopt an adducted posture with the bulk of width coming from excessive tissue.

Implications

- Lower limbs and feet positioned in a more typical anatomical position
- Implications for width of equipment at the thigh relative to upper body



Bulbous Gluteal

Excessive buttock tissues creating protruding 'shelf' of tissue in sitting.

Implications

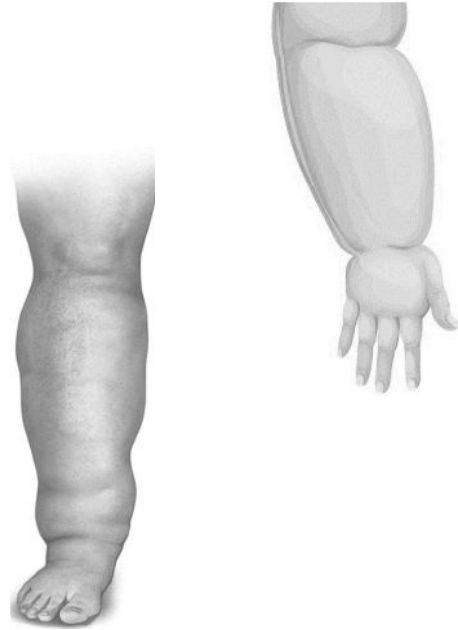
- Change of centre of mass further backwards in sitting and standing
- Flexion to keep centre of mass over base of support
- Accommodation of tissue in chair seating
- Reduced back support in traditional seating
- Poor tolerance of supine position

Generalised Oedema (Anasarca)

A symptom of an underlying condition. Characterised by severe generalised oedema due to build-up of body fluid in the extracellular space (interstitial space) and is not removed via the lymphatic system.





Implications

- Potential postural oedematous deformity
- Decreased joint range of motion
- Shift of centre of mass downwards in standing
- Shift of centre of mass forwards in sitting
- Increased heat and perspiration effecting microclimate
- Skin susceptibility to skin tears
- Greater impact of shear, friction and pressure
- Often present with asymmetry
- Reduced joint range of motion
- Poor strength to weight ratio making movement difficult
- Increased susceptibility to pain
- Effects blood pressure and heart rate
- Pitting oedema



Moving & Handling Risk Assessment

Assessment of a Bariatric Client is an essential component of holistic care. Their moving and handling needs must be individualised to maximise independence and facilitate function. It is important to recognise the individual unique movement patterns and their adaption strategies to facilitate transfers that align with the varied biomechanics of each somatotype.

PHYSICAL	COGNITIVE	BEHAVIOURAL	CLINICAL/MEDICAL
The abilities and limitations on a person's body and physical functional potential	The ability or limitation to follow instructions or prompts in a meaningful way	The ability to physically and cognitively execute tasks reliably, predictably and safely	Limitations due to a person's medical status or protective adaptations required
			

Bariatric Client Centred Care Pathway



Cowley 2011

Patient Handling Technology

Utilising Bariatric Assistive Technology is essential to avoid risk of Pressure Injury, skin tears, falls and adverse effects of immobility. Offering high quality of care will assist in decreasing dependency and offer movement and transfers that maximise comfort, facilitate function and ensure dignity and respect.

