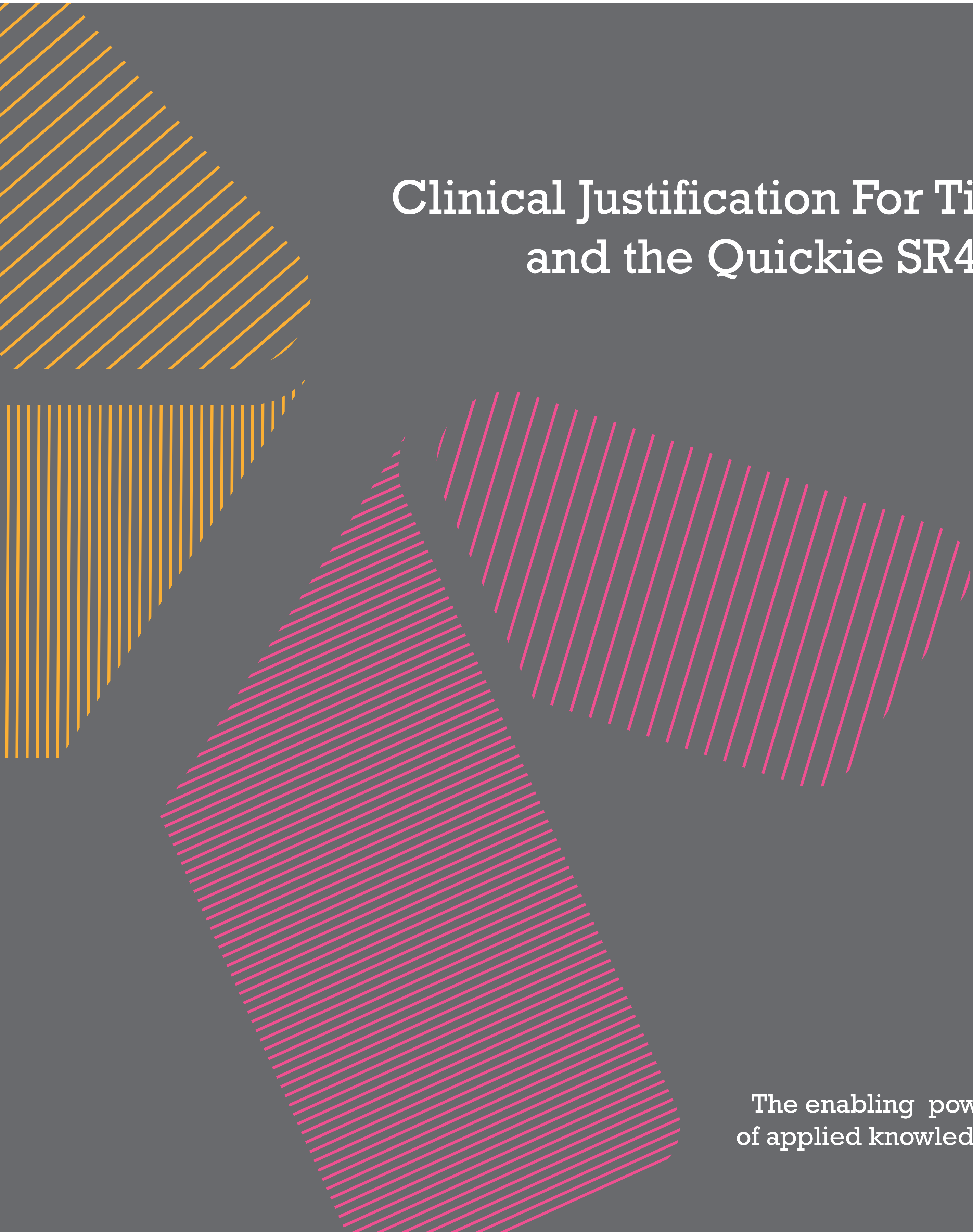
unicare
health



Clinical Justification For Tilt and the Quickie SR45

The enabling power
of applied knowledge

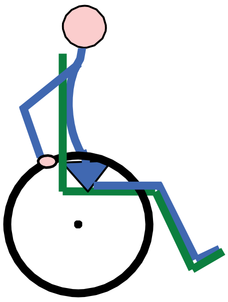
Who should use a Dynamic Tilt System?

Clients Who Cannot Independently Change Their Position

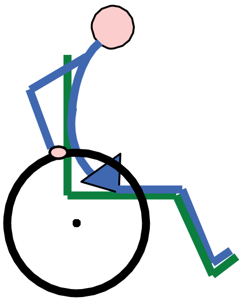
Clients who are unable to independently shift their weight and redistribute pressure are at risk for skin breakdown. With no means to change position, their sitting tolerance could also be compromised. Tilt provides a means for independent weight shifts and position changes. This reduces the risk of skin breakdown and reduces the need for care-givers to provide dependent weight shifts. Sitting tolerance could also be increased, which reduces the need for the care-giver to transfer the client in and out of the chair periodically throughout the day.

Clients Who Cannot Maintain Their Pelvic, Trunk or Head Position and/or Balance Against Gravity For Prolonged Periods of Time

Sitting upright against gravity requires constant resting contractions of the trunk, hip and pelvic muscles. If these muscles are weak or paralyzed and/or if endurance is compromised, clients are unable to maintain an upright posture or they have difficulty maintaining upright for prolonged time periods. These clients will slide forward into a posterior pelvic tilt and thoracic kyphosis (postural collapse). In this collapsed posture, the client is at risk for fixed orthopedic deformities and skin breakdown on the sacrum and spine.

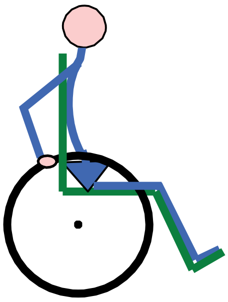


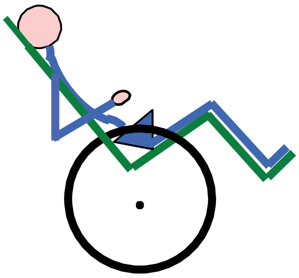
Upright posture requires active muscle contractions to maintain posture against gravity in a standard back



Poor posture results when fatigue occurs

Tilting in space re-orients the body to reduce the effects of gravity and limit postural collapse. This helps clients to maintain an upright position and facilitates thoracic extension and a neutral pelvis.





Clients Who Are At Risk For Respiratory Complications

When a client falls into postural collapse as above, the respiratory system could be compromised. The diaphragm has less room to drop as it contracts, so the lungs do not fully expand. This can result in collapse of lower parts of the lung (atelectasis) and/or poor clearance of secretions, which can result in pneumonia. In addition, it becomes more difficult to take a deep breath, resulting in more rapid, shallower breaths. Tilt can be used to prevent postural collapse, promote thoracic extension and reduce the risk of respiratory complications.

Clients Who Are At Risk For Digestive Complications

When a client falls into postural collapse as above, the digestive system could also be compromised.
Food cannot pass as easily down the gastrointestinal tract, which can result in gastritis, gastric reflux, esophagitis, and bowel impaction. In addition, head and neck position are not optimal, which could cause aspiration with swallowing and/or could elicit primitive reflexes such as the gag reflex or tongue thrust. Tilt can be used to promote postures that reduce the risk of these complications.

Clients Who Are At Risk For Postural Hypotension

Postural hypotension is a condition in which the blood pressure drops when client is in the upright position. This could lead to dizziness or loss of consciousness. Dynamic tilt allows the client to be re-positioned with the head in a lower position in order to raise the blood pressure in the head/brain.

Clients Who Are At Risk For Autonomic Dysreflexia

Autonomic dysreflexia is a condition in which the blood pressure increases due to an event or condition that the body interprets as “noxious”. It is a warning sign produced by the body to let the client know that something is wrong, such as an overfull bladder (kinked catheter), an impacted bowel, a constriction of blood flow, a change in position, etc. With autonomic hypertension, the blood pressure could rise high enough to be life threatening. Dynamic tilt allows the client to be brought into the most upright position possible, as quickly as possible, in order to lower the blood pressure in the head/brain.

Accommodate Hip Joint Contractures

If the client needs to change position for the reasons above, but also needs the system to accommodate fixed hip flexion or fixed hip extension, tilt might be the best choice for dynamic seating. Recline requires the hip to have a specific range of motion. A client with a hip flexion contracture cannot recline beyond the angle of the contracture, and therefore cannot take full advantage of the recline system. Since tilt maintains the same hip angle throughout the weight shift, it is a better choice for these clients.

Minimize the Risk of Eliciting Extensor Spasticity

Extensor spasticity is often facilitated or “set off” by a slight shortening or a quick stretch of the extensor muscles, such as the hip and knee extensors. Shortening of the hip extensors and quick stretch of the knee extensors occurs during the beginning of recline, as the hip and knee joints open up. For clients with extensor spasticity, recline can actually cause an increase in this spasticity. Tilt maintains the same hip angle throughout the weight shift, eliminating this risk.

Reduce The Risk Of Shear Forces

As a client is reclined and then brought back to upright, there is some forward sliding of the client’s pelvis and back on the seating surface. This is because the client’s pivot point (hip joint) does not exactly match the pivot point of the chair (seat to back junction). The pivot point of the chair is generally lower and further back than the pivot point of the client due to anatomy of the body and cushion height. The forward sliding results in shear forces. The closer the pivot points between the client and the chair, the less shear displacement, but the shear can never be totally eliminated. In contrast, when the client is tilted and then brought back to upright, there is no movement of the body relative to the seating system, so there are no shear forces generated. For a client at risk for skin breakdown due to shear, tilt might be a better option for weight shifts.

- J3 backrests offer WC 19 transit tested and approved hardware adding to the safety and security of clients being transported in taxi's and buses

- ## Cushion (Included selection)
  The Union features a top layer of soft, Visco memory foam, with an extra layer covering the Pelvic Loading Area. This combination creates the ultimate sitting surface that distributes weight for pressure reduction and maximum comfort. The Union's foam base is moderately contoured to encourage proper positioning of the pelvis and thighs. Added 1" lateral pelvic wedges offer superior lateral stability and alignment of the pelvis for more involved positioning needs. For convenience and protection, the Union features a dual-cover system. The inner cover is water-resistant and easy to wipe off and clean, while its Aqua-guard zipper and anti-wicking thread protect the foam base from fluids. The machine-washable, stretch outer cover reduces surface tension and utilizes naturally anti-microbial, silver-impregnated X-static® fiber. A layer of 3DX spacer fabric promotes airflow and dissipates heat and moisture for additional skin protection.

- ## Headrest (Included selection)
  The Whitmyer Cobra headrest hardware offers maximum adjustability to provide support where it is needed. The sleek shape of the bracketry gives maximum protection to carers. Plush Single pad Headrest Systems utilize dual density foam layers on a contoured, curved panel. These single pad headrests are easily adjustable and accommodate changes or inconsistencies in body positioning. Unique "cupping" shape provides posterior support with a high degree of comfort.

- ## Elevating Legrest (Optional)
  The Quickie SR45 can be fitted with Quickie articulated elevating legrests. These feature an easy to use, dependable mechaism, and generous calf pads to maximise supprt area.

unicare health

PO Box 82 Bentley WA 6982
T 08 9351 7500   F 08 9350 5299
info@unicarehealth.com.au
www.unicarehealth.com.au