

Bariatric clients



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14.1 Providing care for bariatric clients

In the past 20 years there has been an increase in the number of bariatric admissions to healthcare facilities. The increasing number of bariatric clients¹ presents a challenge to healthcare and other service providers to give care that is effective and safe for both the clients and staff.

The purposes of this section are to assist staff and to reduce the risks when moving and handling bariatric clients. Bariatric clients should receive treatment without prejudice or discrimination, and be given the respect and dignity accorded to all clients. This section outlines topics to consider when planning for bariatric clients and how to develop a healthcare pathway. It concludes with a discussion of specific issues related to the care of bariatric clients.

Bariatric is the science of providing healthcare for those who are severely obese. The term bariatric derives from the Greek word 'baros' (weight). Several criteria are used to determine if someone is classified as a bariatric client. The following are some examples. Please note that there is not a complete consensus on the criteria for classifying a person as bariatric based on weight or Body Mass Index (BMI).

- A person with a body weight greater than 140 kilograms.²
- A person with a BMI greater than 40 (severely obese), or a BMI greater than 35 (obese) with co-morbidities.³
- A person who has restricted mobility, or is immobile, owing to their size in terms of height and girth.⁴
- A person whose weight exceeds, or appears to exceed, the identified safe working loads (SWLs) of standard hospital equipment such as electric beds, mechanical lifters, operating tables, shower chairs and wheelchairs.⁵

BOX 14.1

What is a bariatric client?

The definition of what constitutes a 'bariatric' patient is a point of contention for a number of services within the journey of bariatric patient care. While a BMI of at least 30 is seen as a useful trigger point to implement bariatric care procedures, its use is limited in informing other procedures such as purchasing.

Source: Australian Safety & Compensation Council, 2009, p. 10

A working definition of a bariatric client is someone who weighs 150kg or more, has a BMI of 40 or more or who has large physical dimensions, a lack of mobility or other conditions that make moving and handling difficult.⁶

1. We use the term 'bariatric client' rather than 'bariatric patient' to recognise that not all people being cared for will be in organisations that use the term 'patient'.

2, 3. BMI is calculated using the formula $BMI = kg/m^2$, where kg = person's weight and m = height in metres (see Appendix 14.1 at the end of this section).

4. See Muir & Archer-Heese, 2009

5. Queensland Health, 2010, part B, p. 48 (Information Sheet – *Moving and Handling the Bariatric Patient*).

6. See Robertson, 2010.

In New Zealand the definition of obesity for adults aged 18 years and over is having a BMI of 30 or more for all ethnic groups. New Zealand's unadjusted obesity rate of 26.5% in 2006-2007 was the third highest measured obesity rate after the United States (33.8% in 2008) and Mexico (30% in 2006).⁷ Rates of obesity increased in surveys conducted between 1997 and 2007.

Many healthcare facilities report a continuing increase in the number of bariatric clients admitted.⁸ For these reasons, all healthcare providers need to develop plans for moving and handling bariatric clients.

Health risks for bariatric clients

People who have been bariatric for a considerable time face chronic and serious health conditions. They usually have difficulty with hygiene and toileting because of their large abdomen, heavier body parts and skin folds, and all these factors affect their mobility. Skin and other body conditions need to be assessed before moving and handling bariatric clients.

Health conditions commonly experienced by bariatric clients include⁹:

- Skin excoriation (where the skin can be striped), rashes or ulcers in the deep tissue folds of the perineum, breast, legs and abdominal areas. There is also the possibility of fungal infection
- Bodily congestion, including fluid retention and poor circulation, resulting from heart and kidney failure. This congestion can cause the leaking of fluid from pores throughout the body, a state called diaphoresis, which makes the skin even more vulnerable to infections and tearing
- Diabetes and respiratory problems
- Added stress to the joints, which may result in osteoarthritis.

Why special planning is needed for bariatric clients

Moving and handling people is a significant hazard for health workers. Caring for a bariatric person is a crucial part of healthcare, but working with bariatric clients can accentuate the risks for both clients and carers. While lifting any client can lead to musculoskeletal injuries, strains, sprains and excessive spinal loading for carers, there are substantial risks associated with moving and handling bariatric clients when performing daily tasks.

Given the risk factors, client safety and the safety of staff need special attention when caring for bariatric clients. Bariatric clients may face greater health risks than the general population and have complex needs. The key to managing the risks around

7. Ministry of Social Development, 2010.

8. For example, Hignett et al 2007; Robertson, 2010.

9. A list of medical conditions affecting bariatric clients that are relevant to moving and handling tasks is available at www1.va.gov/vsn8/patientsafetycenter/safePtHandling/BariatricMedicalConditions.pdf.

moving and handling bariatric clients is to develop and implement a moving and handling plan before their admission to care.

BOX 14.2

Planning for bariatric clients

Each time a new bariatric patient presents, some unique issues arise.

This means that only a certain proportion of the bariatric care tasks are routine and some new problem solving is required to fully and safely accommodate each patient, whether it be in the form of equipment or patient transfer procedures.

Source: Australian Safety & Compensation Council, 2009, p. 10

14.2 Planning for bariatric clients

This section covers specific topics that should be included in the planning process for bariatric clients in order to reduce moving and handling risks. The following key topics need consideration¹⁰:

- Admission planning
- Client assessment
- Communication
- Room preparation
- Mobilisation plan
- Equipment needs
- Space and facility design considerations
- Planning for discharge.

Admission planning

The care of a bariatric client usually starts at admission; however, even before they are admitted staff need to be prepared for a bariatric client. Before the client is admitted it is a good idea to check the corridors and hallways that lead to the client's room or treatment areas to ensure they are wide enough, and that the maximum capacity of any lifts (elevators) that need to be used is sufficient. If necessary, work out alternative routes to avoid potential physical obstacles.

Some steps that may be needed are:

- Provision of transport from the ambulance or other vehicle to the admission area
- Recording the client's existing health conditions
- The client is weighed during admission – knowledge of the client's weight is essential for planning the moving and handling needs of that client
- The client's family is briefed on the hospital's moving and handling policy and this is recorded in the client's notes
- Any equipment and other resources needed for moving and handling the bariatric client are confirmed as available, and checked to ensure that they are suitable
- A bariatric client kit is made available, which may include two client gowns, a large bedpan, two large slide sheets and a bariatric cuff
- All relevant departments and managers that will be providing care or services to the client are informed of the client's admission

¹⁰. The paper by Muir & Archer-Heese (2009), which describes many of these topics, is acknowledged.

- A mobilisation plan is developed and documented for the client following admission – this plan is updated at an agreed frequency or as the client’s condition changes
- A preliminary discharge plan is prepared.

Client assessment

Assessing a client and the transfer tasks needed is the first step in the care and rehabilitation process (see Figure 3.1 in Section 3). The purpose is to identify the risks, goals and resources needed as part of the risk reduction process. Staff may be faced with unplanned situations that can increase the risks for client and carer. The assessment process balances the risks and needs of the client with the available resources. It is important to begin the assessment as part of the admission and schedule regular updates.

Assess a bariatric client’s ability to assist during repositioning, transferring and ambulation. Identify tasks that require lifting, lowering, carrying, pulling, pushing and supporting. Where possible, use hoists or moving and handling aids to perform moving and handling tasks.

In addition to the recommended risk assessment (see Section 3 Risk assessment), critical issues to assess include the client’s:

- Required level of assistance
- Weight-bearing capability
- Height, weight and body circumference
- Conditions likely to affect transfer or repositioning techniques – these may include hip and knee replacements, paralysis, amputations, contractures, osteoporosis, respiratory and cardiac conditions, and skin conditions.

Consultation with other professionals may be needed regarding the client’s physical function and strength.

Communication

Two forms of communication are important. One is the communication that takes place among managers and staff within the organisation, and the other is the staff-to-client communication that can become part of the client’s therapeutic processes.

Organisational communication is important in providing accurate, timely information to the relevant people about the client and their needs. Client information gathered during admission and assessment, including their mobility status, should be documented. Send this information to relevant people who have contact with the client, respecting the client’s confidentiality where appropriate.

Staff-to-client communication is also important. A therapeutic relationship begins with good communication that makes the client feel safe, comfortable and cared for. A client's dislike of using specific equipment or transfer techniques should not lead to the use of unsafe moving and handling practices. A client's initial resistance can usually be overcome by carers taking time to explain why specific equipment and procedures are used to move people. As well, discuss treatment, moving and handling requirements and rehabilitation plans with the client's family or other support people. Communication is covered in more detail in Section 11 Workplace culture.

Room preparation

The following points need to be checked to ensure that the client's room or ward location is appropriately furnished and equipped.

- Bed – is the bed area large enough to accommodate all equipment needed to manage the client? Is there enough space around the bed area to move the client comfortably from bed to chair or commode chair? Is a single room preferable or is it too small? Are two bed spaces required for the client?
- Are the electric bed and the mattress of sufficient size and weight capacity?
- Equipment – ensure that any required equipment is delivered to the room as part of the bariatric kit.

Consider the space needed to move mobile equipment as well as space for the number of workers required to assist the client or move the equipment. If the bed or other equipment does not have sufficient load-bearing capacity, arrange for a suitable replacement from an equipment pool, or hire it from an external provider.

Equipment needs

Many organisations do not have bariatric equipment. For small facilities, hiring equipment before the admission of a bariatric client is an option. The person organising the equipment hiring needs to be aware of the different features and dimensions of the equipment. Organisations intending to buy bariatric equipment should consult closely staff who are likely to work with bariatric clients and suppliers to ensure they buy the right equipment for the tasks for which

BOX 14.3

Bariatric equipment assessment

Bariatric equipment is often defined by its weight capacity and an equal distribution of load across the equipment is assumed. However, in practice, the shape of the patient and the distribution of weight is variable. This places stress on components of the equipment such as wheels during movement.

Source: Australian Safety & Compensation Council, 2009, p. 10

it will be used. For example, the new equipment will have to fit through doorways and into lifts. Equipment that is likely to be needed includes:

- Weighing scales, preferably at floor level with the highest available capacity, in spaces allowing privacy
- Motor-driven bariatric wheelchairs, with the highest available SWL, for moving clients between locations within a facility. Also consider seat width to accommodate wider clients
- Interview chairs, with transportation wheels if the chairs are used in multiple locations
- Bariatric chairs for waiting rooms, with SWLs clearly marked
- Walking aids with SWLs of 250-300kg
- Air-assisted transfer devices for vertical and lateral transfers
- A mobile hoist or ceiling hoist – ceiling hoists have been identified as the preferred choice for bariatric transfers and bed repositioning¹¹
- A mobile hoist for lifting clients off the floor in the event a client falls (if the bariatric ceiling hoist does not cover the whole area). Note that caution is needed when using mobile hoists with bariatric clients owing to the increased pushing force required and the wheel designs of some hoists
- Appropriate slings
- Electric bariatric beds with pressure-reduction mattresses
- Bariatric stretchers (note: some stretchers may have appropriate weight ratings but be too narrow for bariatric people).

FIGURE 14.1

Bariatric chair



BOX 14.4**Providing facilities for bariatric clients**

Large acute hospitals should consider the need for:

- One or more specially designed bariatric rooms/ensuites
- Provision for these patients in specific areas such as intensive care, emergency, theatre, negative-pressure environments, diagnostics and imaging, outpatients and maternity.

Small hospitals and aged-care facilities with infrequent bariatric presentations may choose to:

- Remove one bed from a two-bed room and use the room for one bariatric patient with hired furniture and equipment
- Refer bariatric patients to alternative facilities.

Consider not only the space required to use equipment but also storing it close to the point of use. Consider the required paths of travel and the access and ease of using equipment along these paths (e.g. doorway widths, floor surfaces).

Source: Queensland Health, 2010, part B, p. 50

Other useful items of equipment for bariatric clients include:

- Walking frames
- Sit-stand devices
- Trapeze bar systems for over beds
- Sit to stand hoists
- Electric bariatric armchairs
- Footstools
- Commodes
- Large bedpans
- Wash basins
- Extra-large slide sheets
- Extra-large gowns
- Blood pressure cuffs.

Space and facility design considerations

A large room is required for the care of a bariatric client to accommodate the person, the equipment and large furniture. Staff need sufficient space to avoid using awkward postures that can put them at risk of injury. This includes having a wide turning arc for bariatric equipment that allows safe biomechanical body positioning for carers. Areas

for special attention are bathrooms and toilets. Showers should be big and fitted with heavy-duty grab rails, multiple handrails, large seats and hand-held showerheads, while large toilet seats are recommended. For added safety, toilet fixtures and sinks should be mounted on the floor, not the wall, although take care that floor-mounted sinks do not interfere with wheelchairs. Bathrooms should be large enough to allow for staff assistance on two sides of the client at the toilet and shower.¹² Section 9 Facility design and upgrading has more information on design features for bariatric clients.

Planning for discharge

For discharge planning, ensure the appropriate facilities and arrangements have been made before the client is discharged so that they will be expected at their destination.

For a client returning home, before they are discharged assess what equipment and home help they are likely to need to function safely at home. Ensure there will be appropriate equipment and home help to support and maintain them.

FIGURE 14.2

Discharge planning is important for bariatric clients



¹². See Wignall (2008) for further information about facility design for bariatric clients.

14.3 Developing organisational capacity for bariatric care

The previous section covered specific features needed to prepare for the admission of bariatric clients. This section covers longer-term developments for building capacity within an organisation to handle bariatric clients. These developments are essential to reduce personal risks for both staff and clients, and the potential disruption of services. The developments described in this section are particularly relevant to hospitals and large facilities.

The topics covered include:

- Developing a bariatric client pathway
- Staff training and education
- Monitoring and evaluation.

Developing a bariatric client pathway

It is important to plan all the stages and facility requirements for bariatric clients from admission through to discharge. A bariatric client ‘pathway’ refers to the route that a client will take from first contact with the service provider to treatment completion.¹³ For facilities such as hospitals, this is the period from home into hospital and until the client is discharged. The organisation needs to ensure that the appropriate facilities, equipment and staff expertise are available at each stage (see Box 14.5).

BOX 14.5

Stages in the bariatric client pathway

- Notification of admission prior to arrival and preparation for arrival
- Admission procedures, including transport from vehicle to admission area for outpatient arrivals
- Access from admission area to ward or bed
- Access to specialist clinical facilities
- Rehabilitation and mobilisation services
- Discharge planning
- Discharge
- Communication with other agencies working with bariatric clients.

As part of the planning for a bariatric pathway, it is recommended that a bariatric working party be set up with representatives from the sections or units most likely to

¹³ See Hignett et al (2007) for more details.

handle bariatric clients.¹⁴ The working party should include health and safety staff. The following tasks should be addressed by the bariatric working party. Some of these tasks may be more applicable for large healthcare providers that have higher numbers of bariatric clients.

- Compile information on client admissions for the previous five years to document the number of bariatric clients being admitted each year and the sections where they have been receiving clinical or other care. Useful data to collect are client weight and BMI, wards of admission and assistance required for hygiene care and ambulation
- Compile a bariatric equipment list or register
- Conduct an audit of moving and handling equipment to confirm which existing equipment is suitable for use with bariatric clients
- Plan for the acquisition and upgrading of equipment and spaces to handle bariatric clients
- Make recommendations regarding the location, access and priority for bariatric equipment (see Box 14.6)
- Make recommendations regarding the renovation of buildings to which bariatric clients are admitted
- Educate staff regarding moving and handling bariatric clients
- Seek consultation where there are difficulties in moving and handling a bariatric client. This could be the manual handling coordinator or equivalent with relevant expertise
- Hold regular meetings on the management of bariatric clients
- Develop a reporting system for incidents and accidents where bariatric clients were involved.

BOX 14.6

Bariatric equipment access

RGH (a regional general hospital with 30,000 inpatients) decided that an equipment pool would be more effective and would allow each department to treat the clinical conditions of the bariatric patients as well as manage the bedding and patient movement needs. RGH purchased five sets of bariatric equipment including items such as beds, power assisted bariatric wheel chairs, shower chairs and lifting machines of different load capacities.

Source: Australian Safety & Compensation Council, 2009, p. 6

14. See Robertson (2010) for an Australian example.

Staff training and education

Moving and handling bariatric clients poses a number of challenges to healthcare staff. Organisations that have few bariatric admissions may not have enough staff with bariatric training and experience. A 'cascade' approach is recommended where a bariatric working party or a moving and handling coordinator develops the specialist knowledge needed for bariatric care. This knowledge is then communicated to unit managers and staff at regular intervals, such as at briefing meetings for managers.

Information about the bariatric care pathway for the facility can be included in moving and handling training for staff, as well as specific training on bariatric risk assessments and the use of bariatric equipment. Bariatric equipment suppliers may be able to provide assistance with training in the use of recently purchased equipment. The internet also has some information on education and training materials (see 'Web resources' at the end of this section). These resources should not replace expert training but supplement it, and selection should be carried out by an appropriately skilled person.

Monitoring and evaluation

To assess how well bariatric clients have been cared for, monitoring and evaluation of client care should be carried out. Monitoring and evaluation procedures should cover:

- The collection of incident and injury data to identify client size (BMI, seated hip width), weight and mobility status (see Section 12 Monitoring and evaluation)
- A review of near misses by the moving and handling coordinator, health and safety manager or bariatric working party
- Client satisfaction and comfort with equipment

FIGURE 14.3

Staff training should cover moving bariatric clients



BOX 14.7

Staff training in bariatric care

Problems can arise with staff being unfamiliar with equipment because of infrequency of use, high staff turnover or the employment of agency staff. Training to assess risk in a dynamic environment is also important such that appropriate decisions are made to control risk at the time of patient handling.

Source: Australian Safety & Compensation Council, 2009, p. 3

- The monitoring of bariatric equipment needs and the development and upgrading of bariatric equipment during annual equipment procurement or capital expenditure requests.

Healthcare organisations are strongly advised to monitor the number of bariatric admissions, and client demographics. These data can be used to develop a business case for the procurement of equipment and furniture, staff training and space upgrading.

14.4 Specific issues related to the care of bariatric clients

There are several issues in bariatric care that complement topics covered earlier in this section. This section covers four additional issues and topics. These are:

- Assistance versus mobility and rehabilitation
- Emergency services
- Community care
- Bariatric pregnant women.

Assistance versus mobility and rehabilitation

A potential conflict in the moving and handling of bariatric clients concerns the need to use hoists and other moving and handling equipment while also promoting client rehabilitation and mobility. A focus on reducing risks for both staff and client during movement and handling may result in the client becoming dependent on carers and equipment and unable to move on their own initiative. This may lead to the neglect of the client's mobilisation and rehabilitation. There needs to be a balance between developing a bariatric client's mobility and using moving and handling equipment to ensure client and staff safety. Although there is no set formula to achieve a balance, it is important to be aware of these issues.

Emergency services

Given the rise in the number of obese people in New Zealand, emergency services such as the ambulance and fire services face the likelihood of having to transport bariatric clients. Ambulance and fire services and funeral workers face an increased risk of injuries when moving bariatric clients. They may have limited access to lifting equipment and there is often limited space within which to move or transfer clients safely. For these and other reasons, it is acknowledged that in the case of an emergency the correct moving and handling procedures and techniques may be difficult to apply, and there may be a place for well intentioned improvisation. Nevertheless, it is strongly recommended that a thorough risk assessment be conducted whenever possible.

Operational staff in emergency services need to be trained in moving and handling techniques to ensure that low-risk techniques are used. If hoists or other equipment are used, a competent person is needed to operate and maintain the equipment. All equipment should have the SWLs clearly visible. Equipment failure when moving and handling bariatric clients can result in significant injury to the clients and the people caring for them.

Steps should also be taken to protect the privacy and dignity of bariatric clients. The process of removing clients from their homes can attract curious onlookers, especially if doors need to be removed and walls cut open. Police assistance may be required to clear onlookers and place sheets over windows if required.

Client moving and handling may be compromised when working in confined areas that make access to the client difficult. Specific factors to include in the risk assessment prior to moving and handling a bariatric client are:

- The weight and size (BMI, seated hip width) of the person
- The size and SWL of equipment
- The use of equipment in restricted spaces.

Another risk to staff is that of crush injuries where hands or limbs become pinned between the client and a hard surface such as a wall or floor. This is a real risk if the client suddenly moves or falls while being moved.

Hospitals and emergency services may need to meet to discuss protocols and specific arrangements for moving and transporting bariatric clients in an emergency. Transferring a bariatric client from a vehicle could pose serious difficulties if there are no appropriate protocols regarding equipment and services on arrival at the hospital.

Many mobile floor hoists will not be suitable for moving bariatric clients from vehicles, because their lift arms may make contact with the vehicle's door or the vehicle roof could prevent the client being lifted up off the seat. Some mobile hoists that have telescopic arms and retractable straps could be used, but hoists have weight limitations that must be checked with the clients' weights. Ideally hospital ambulance bays and triage areas will have ceiling hoists installed with the maximum available SWLs clearly visible.

Among emergency services that may need to transport or move bariatric clients, there should be a common special emergency code to signify 'bariatric and urgent' so that when the ambulance or another service arrives at the scene, they have suitable equipment. Ambulances, hospitals, fire emergency teams and police should share this common code.

Further reading on transporting bariatric clients, including case studies for ambulance, fire and funeral services, are available on the Safe Work Australia website (see 'Web resources' at the end of this section).

FIGURE 14.4

Ensure door openings are adequate for bariatric clients



Community care

Consideration should be given to a bariatric client's discharge from a facility. Poor preparation for discharge can be disastrous for the client and their family. This could result in poor recovery or a worsening of their condition, which could lead to re-hospitalisation.

Topics that need to be assessed and dealt with (changes made, equipment or services provided) before a client's discharge are:

- The home environment access and space, especially if new equipment is to be installed
- What equipment is needed
- Ensuring that equipment and furniture used by the client have adequate SWLs
- Moving the client up and down ramps in a wheelchair, which may be high risk and need special arrangements
- Home support services for the client – home support workers may require specific training before the client's discharge
- Communication with other agencies and services – ensure that the appropriate notifications and referrals have been made before discharge, such as to the client's general practitioner, home support agencies and the community nurse.

Bariatric pregnant women

Bariatric pregnant women may have specific requirements (e.g. lithotomy, poles, water births) that require prior planning and additional facilities for birthing suites and services for pregnant women.

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Web resources

Safe Work Australia has published a series of reports on handling bariatric clients for hospitals and for ambulance, fire and funeral services. Its home page is: www.safeworkaustralia.gov.au. On the home page, click on Publications. Access the reports using the Publications search box with the keyword 'bariatric'.

Pressure Ulcer Prevention and Management Guidelines (Fact sheet for severely obese patients) (Australia)

www.health.qld.gov.au/psq/pip/docs/pup_obese.pdf

Supplying rehabilitation services for bariatric patients (United States)

www.rehabpub.com/issues/articles/2007-10_04.asp

Bariatric rehab (United States)

www.bariatricrehab.com/home.html

Fat Bias in Safe Patient Handling (patient perspectives on bariatric patient handling)

www.washingtonsafepatienthandling.org/images/meetingrockv5.pdf

Overweight and Obesity Trends Among Adults (United States)

www.cdc.gov/nccdphp/dnpa/obesity/trend/index.htm

NIH Obesity Education Initiative: Clinical Guidelines (United States)

www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf

Appendix 14.1 Chart for calculation of BMI – use height (centimetres) and weight (kilograms)

Height	155cm 5'1	160cm 5'3	165cm 5'5	170cm 5'7	175cm 5'9	180cm 5'11	185cm 6'1	190cm 6'3
Weight	BMI	BMI	BMI	BMI	BMI	BMI	BMI	BMI
80kg	33	31	29	28	26	25	23	22
90kg	37	35	33	31	29	28	26	25
100kg	42	39	37	35	33	31	29	28
110kg	46	43	40	38	36	34	32	31
120kg	50	47	44	42	39	37	35	34
130kg	54	51	48	45	42	40	38	36
140kg	58	56	51	48	46	43	41	39
150kg	62	59	55	54	49	46	44	42
160kg	67	63	59	55	52	49	47	44
170kg	71	66	62	59	56	53	50	42
180kg	75	70	66	62	59	56	53	50
190kg	79	74	70	66	62	59	56	53
200kg	83	78	74	69	65	62	58	53
210kg	87	82	77	73	69	65	62	58
220kg	92	86	81	76	72	68	64	61
230kg	96	90	85	80	75	71	67	64
240kg	100	94	88	83	78	74	70	67
250kg	104	98	92	86	82	78	73	69
260kg	108	102	96	90	85	80	76	72
270kg	112	105	99	93	88	83	79	75
280kg	117	109	103	97	91	86	82	78
290kg	121	113	107	100	95	90	85	80
300kg	125	117	110	104	98	93	88	83
310kg	129	121	114	107	101	96	91	86
320kg	133	125	117	111	104	99	93	89