

Medical Terminology

- Asthma: Hyper-responsive airways manifested by a narrowing of the airway.
- Bariatric Products: Designed to have a weight capacity of 300 pounds (or more) for those who need that extra support. Bariatric chairs maximize the patient's ability to sit and stand with reduced effort, and lessens the chance of lifting injury to the caregiver.
Note: Bariatric beds have extra bracing integrated into the home care bed frame, along with a wider surface and truss assembly, in order to provide maximum support.
- Bi-PAP: A device that provides ventilation for patients by delivering air to the lungs at two levels of pressure, either cyclically in an anaesthetized patient or triggered by the patient's attempts at breathing when awake.
- Bili Light: Also known as phototherapy, used to help infants with jaundice, a yellow coloring of the skin and eyes related to abnormal liver function.
- Cane: Adjustable height canes can improve balance and reduce fatigue. Travel canes can fold up and be carried in a travel case. Standard crook canes are lightweight and durable to help improve balance and reduce fatigue . Quad canes are used when there is a need for additional stability. Quad canes have a base with four legs, affording greater stability than straight canes. Quad canes can be ordered with narrow or wide bases.
- CHF: Heart failure in which the heart is unable to maintain adequate circulation of blood in the tissues of the body or to pump out the venous blood returned to it by the venous circulation
- Child/Junior Wheelchair: Children and young adults need chairs that can accommodate their changing needs as they grow. In addition, it is important that wheelchairs for children or teens be adaptable to classroom environments and be "friendly looking" to help the user fit more readily into social situations. Manufacturers today are becoming increasingly sensitive to these market demands and are attempting to address them with innovative chair designs and a variety of "kid-oriented" colors and styles.
- Commode: 3-in-1 Commodes are adjustable and include back, pail w/lid, toilet seat, and cover. Some can be used as a free-standing commode or a raised toilet seat.
Lift/commode is a FDA registered medical device, ideal for people with musculoskeletal

or neuromuscular limitations. It is motorized and designed to operate as a lift system and as an adjustable height commode. It can be used as a bedside commode (helps reduce bedpan use) or as a transfer system to move a person from a bed to a seated or standing position.

- **Compression Stocking:** Problems with the veins of the leg occur in both men and women of all ages but certain factors increase the risk of venous problems. Health conditions, lifestyle habits, heredity, injury, surgery, age, and pregnancy all play a role. A broad range of compression hosiery from knee, thigh high, waist chaps, open toe and closed toe are manufactured to meet your needs. For more information visit <http://www.jobst-usa.com>.
- **Continuous Passive Motion (CPM):** Devices are available for synovial joints (hip, knee, ankle, shoulder, elbow, wrist, and TMJ) following surgery or trauma (including fracture, infection, etc). The device moves the affected joint continuously on a 24-hour basis, without patient assistance. The device is held in place across the affected joint by Velcro straps. An electrical power unit is used to set the variable range of motion and speed. The speed and range of motion can be adjusted depending on joint stability, patient comfort level, and other factors assessed intraoperatively.
- **COPD:** A catch-all term for a number of respiratory diseases. The diseases of COPD include chronic bronchitis, pulmonary emphysema, asthma, and bronchiectasis (a chronic inflammatory or degenerative condition of one or more bronchi or bronchioles marked by dilatation and loss of elasticity of the walls).
- **CPAP:** One of the most common sleep disorders is sleep apnea - a disorder that causes a person's airway to close several times during one night's sleep. For those with sleep apnea, relief usually comes with continuous positive airway pressure (CPAP). Continuous Positive Airway Pressure (CPAP) devices deliver a prescribed level of positive pressure non-invasively to the upper airway for the treatment of sleep apnea. Extremely easy to use, CPAPs come with different features such as ramping to allow comfortable adjustment to the pressure; software to capture specific usage and breathing events; and automated altitude adjustment. Accessories, such as nasal interface

applications and humidification devices are provided to afford maximum comfort to ensure patient compliance.

- **Crutch:** Standard adjustable crutches are lightweight and easily adjust to size. Forearm crutches have contoured arm cuffs for extra comfort and stability.
- **Cylinder:** Available in various sizes. Carrying cases or carts are used for the different size oxygen tanks. The different sizes of tanks are listed below:

M2 – Weighs less than 2 pounds and only 7.9 inches in length, this extremely lightweight, compact medical oxygen cylinder is the perfect solution for anyone who needs a convenient, easily transportable medical oxygen supply for a short amount of time. This cylinder is the smallest aluminum oxygen cylinder in the world yet can supply up to 2 hours of oxygen.

M4 – medical oxygen cylinder is a great solution for anyone who needs a convenient, easily transportable medical oxygen supply for a short amount of time. This cylinder weighs under 3 pounds and is only 12 inches in length. This cylinder can supply up to 7 hours of oxygen.

M6 – extremely popular medical oxygen cylinder is the perfect balance between portability and oxygen supply duration. The M6 cylinder is less than 15 inches in length and weighs only 3 pounds and can supply up to 10 hours of oxygen.

ML6 - Similar to the M6 cylinder, the ML6 is a great balance between portability and oxygen supply duration. This cylinder weighs under 4 pounds and is shorter and wider than the M6 cylinder. This cylinder can provide up to 10 hours of oxygen.

M9 – a popular cylinder is a great balance between portability and oxygen supply duration. The M9 is less than 16 inches in length and weighs only 4.5 pounds yet can supply up to 14 hours of oxygen.

- **Cystic Fibrosis (CF):** A life-threatening disorder that causes severe lung damage and nutritional deficiencies. CF is an inherited (genetic) condition affecting the cells that

produce mucus, sweat, saliva and digestive juices. Normally, these secretions are thin and slippery, but in CF, a defective gene causes the secretions to become thick and sticky. Instead of acting as a lubricant, the secretions plug up tubes, ducts, and passageways, especially in the pancreas and lungs. Respiratory failure is the most dangerous consequence of CF. Each year approximately 3,200 white babies are born in the United States with CF. The disease is much less common among black and Asian-American children. Most babies born with CF are diagnosed by age 3, although mild forms of the disease may not be detected until the third, fourth, or fifth decade of life. In all, about 30,000 American adults and children are living with the disorder. Although there's still no cure, the emerging field of gene therapy may someday help correct lung problems in people with CF.

- Diabetes: Disease in which blood glucose levels are above normal

Type 1 diabetes: diabetes of a form that usually develops during childhood or adolescence and is characterized by a severe deficiency of insulin secretion resulting from atrophy of the islets of Langerhans and causing hyperglycemia and a marked tendency toward ketoacidosis -- *called also insulin-dependent diabetes, insulin-dependent diabetes mellitus, juvenile diabetes, juvenile-onset diabetes, type 1 diabetes mellitus*

Type 2 diabetes: a common form that develops especially in adults and most often in obese individuals and that is characterized by hyperglycemia resulting from impaired insulin utilization coupled with the body's inability to compensate with increased insulin production -- *called also adult-onset diabetes, late-onset diabetes, maturity-onset diabetes, non-insulin-dependent diabetes, non-insulin-dependent diabetes mellitus, type 2 diabetes mellitus*

- Diabetic Supplies: Blood glucose monitoring – there are a variety of systems available that allow testing on arms, fingers or thighs, with fast and accurate results and minimal cleaning required.

- Environmental Control Unit: Permit remote control of electronic devices in the immediate surroundings. A person can independently turn lights, radio, and television on and off, answer or initiate phone calls, and unlock a door. Essentially any aspect of the environment can be controlled depending upon the system's complexity. For more information and products visit <http://www.makoa.org/ecu.htm>.
- Helios Portable Oxygen System and Reservoir: Small, lightweight, and long-lasting, encourages an active lifestyle for long-term oxygen therapy patients. No tubes, heavy canisters or batteries are required. The system is also extremely economical. Its pneumatic oxygen conserving device gives it a conservation ratio over continuous flow oxygen of approximately 4:1. This provides up to 10 hours of use at a setting of 2. The portable unit can be refilled in about 40 seconds from the home reservoir, which typically lasts four to six weeks between refills.
- Hepatitis C HCV: An inflammation of the liver causing soreness and swelling. It is the most common chronic blood-borne infection in the United States. The hepatitis C virus usually is transmitted through contact with infected blood, most commonly by sharing needles during intravenous drug use, or getting a blood transfusion before 1992. Hepatitis C also may be spread through unprotected sexual intercourse, but this is uncommon. Most people don't feel sick when they are first infected with hepatitis C. Instead, the virus stays in their liver and causes chronic liver inflammation.
- Hospital Bed: Allows for positioning and safety not possible with standard beds. There are basically three (3) types of hospital beds available for home use: Semi-Electric Beds – allow for raising and lowering the head and the knee break through the use of an automatic hand-held control. Raising the entire bed height is accomplished through use of a manual crank. Manual Beds – allow for raising and lowering the head of the bed and the knee break through the use of a manual crank. Full or half-side rails are available. Full-Electric Beds – allow for the raising and lowering functions of the head and knee break, and the entire bed height adjustment is operated by a hand-held control.
- Hypertension: Blood pressure greater than or equal to 140/90 mmHg.

- **Institutional/Nursing Home/Depot Wheelchair:** The least expensive type of chair available, an institutional chair, is designed for institutional usage only, such as transporting patients in hospitals or nursing homes. It is not an appropriate alternative for anyone who requires independent movement, as the institutional chair is not fitted for a specific individual. These types of chairs are now also used as rental chairs and by commercial enterprises (such as grocery stores and airports) for temporary use.
- **Lifts/Seating System:** Power lift chairs gently move the person to a standing, seated, or reclined position.
- **Lightweight/Sports Wheelchair:** The most popular type of wheelchair for everyday use for a person with good upper body mobility is the lightweight manual wheelchair. Lightweight chairs provide maximum independence of movement with a minimum of effort. Many active wheelchair users also prefer the sportier look of the lightweights compared with the more standard-looking everyday chair. It should be noted, however, that heavy or obese persons may be unable to use these types of chairs because the lighter weight of the frame results in a reduced user capacity as compared to standard everyday chairs. Once used primarily by wheelchair athletes, the lightweight chair today is used by people in virtually all walks of life as a preferred mode of assisted mobility. Three-wheeled chairs, also developed for such sports as tennis and basketball, are also an everyday chair alternative.
- **Liquid Oxygen System:** Consists of a large main tank and one or two portable units. The portable units are used as needed for travel outside of the home. When they are empty, they can be refilled from the large tank. Portable units can be carried with a shoulder strap or cart. Liquid oxygen will evaporate if not used frequently. Therefore the portable units should be filled just prior to use.
- **Multiple Sclerosis:** A chronic, potentially debilitating disease that affects your brain and spinal cord (central nervous system). The illness is probably an autoimmune disease, which means your immune system responds as if part of your body is a foreign substance. In MS, your body directs antibodies and white blood cells against proteins in the myelin sheath surrounding nerves in your brain and spinal cord. This causes

inflammation and injury to the sheath and ultimately to your nerves. The result may be multiple areas of scarring (sclerosis). The damage slows or blocks muscle coordination, visual sensation, and other nerve signals. The disease varies in severity, ranging from a mild illness to one that results in permanent disability. Treatments can modify the course of the disease and relieve symptoms. An estimated 400,000 Americans have MS. It generally first occurs in people between the ages of 20 and 50. The disease is twice as common in women as in men.

- **Muscular Dystrophy (MS):** A group of rare inherited muscle diseases in which muscle fibers are unusually susceptible to damage. Muscles, primarily your voluntary muscles, become progressively weaker. In the late stages of muscular dystrophy, fat and connective tissue often replace muscle fibers. In some types of muscular dystrophy, heart muscles, other involuntary muscles and other organs are affected. There are many forms of muscular dystrophy, some noticeable at birth (congenital muscular dystrophy), others in adolescence (Becker MD), but the 3 most common types are Duchenne, facioscapulohumeral, and myotonic. The various types of the disease affect more than 50,000 Americans. There's no cure, but medications and therapy can slow the course of the disease.
- **Nebulizer:** A type of inhaler that provides a fine mist of medication to the lungs. This is performed by breathing the medicated mist through a mouthpiece or mask attached to the nebulizer device, which is driven via a plastic tubing, attached to the compressor unit. The medications used in nebulizers help you by loosening the mucus in the lungs so it can be coughed out more easily, and by relaxing the airways so that more air can move in and out of the lungs. Nebulizer treatments take approximately 15 minutes to deliver the medication and are prescribed by your physician.
- **Negative Pressure Wound Therapy:** Also known as wound V.A.C therapy, this device uses negative pressure through a controlled suction to close large wounds and promote faster healing. This patented, FDA-approved device is composed of a sophisticated pump, hoses, and monitoring system held within a portable compact case weighing less than 20 pounds. It is recognized as an advanced line therapy alternative for patients when

traditional dressing changes are not effective. It is a method that is considered among recovering patients in hospitals, nursing homes, and other home health care settings. It meets the needs of most cost-effective modalities and an estimated 5 million American patients suffering from chronic or acute wounds.

- **Osteoporosis:** A disease in which the density and quality of bone are reduced, leading to weakness of the skeleton and increased risk of fracture, particularly of the spine, wrist, hip, pelvis, and upper arm. Osteoporosis and associated fractures are an important cause of mortality and morbidity. In many affected people, bone loss is gradual and without warning signs until the disease is advanced. Osteoporosis is also known as "the silent crippler" because a person usually doesn't know they have it until it's too late.

Unfortunately, in many cases, the first real "symptom" is a broken bone. Loss of height – with gradual curvature of the back (caused by vertebral compression fractures) may be the only physical sign of osteoporosis. In the United States, osteoporosis causes more than 1.5 million fractures every year — most of them in the spine, hip, or wrist. And although it's often thought of as a women's disease, osteoporosis affects many men as well. About 8 million American women and 2 million American men have osteoporosis, and nearly 18 million more Americans may have low bone density. Even children aren't immune.

- **Ostomy Supplies:** Pouching systems may include a one-piece or two-piece system. Both kinds include a faceplate/flange (barrier or wafer) and a collection pouch. The pouch (one-piece or two-piece) attaches to the abdomen by the faceplate/flange and is fitted over and around the stoma to collect the diverted output, either stool or urine. The barrier is designed to protect the skin from the stoma output and to be as neutral to the skin as possible.

One-piece Pouching System: The ostomy pouch and skin barrier are joined together permanently. The pouch and skin barrier are applied and removed together – in one piece. Easy to apply and remove and more flexible than a two-piece pouching system.

Two-piece Pouching System

The ostomy pouch and skin barrier are separate. The pouch can be removed without removing the skin barrier. Because it is separate from the pouch, the skin barrier can be more easily positioned around the stoma.

Pediatric Pouching System: Available as either one-piece products or two-piece products and are designed for premature babies, infants, and children. These systems can also be used to manage adult conditions such as small wounds, drain sites, and fistulas. Irrigation systems – Some colostomates can "irrigate," using a procedure analogous to an enema. This is done to clean stool directly out of the colon through the stoma. This requires a special irrigation system, consisting of an irrigation bag with a connecting tube (or catheter), a stoma cone, and an irrigation sleeve. A special lubricant is sometimes used on the stoma in preparation for irrigation. Following irrigation, some colostomates can use a stoma cap, a one- or two-piece system which simply covers and protects the stoma. This procedure is usually done to avoid the need to wear a pouch.

- **Oxygen Concentrator:** Electronically powered device with a series of filters that extract oxygen from room air. Also, a backup system, usually a stationary compressed gas system must always accompany a concentrator in case of power failure or other emergency. Regular household current is sufficient for its use. In limited cases, a humidifier bottle may be necessary to increase moisture to the oxygen as it passes through the tubing to the mask or cannula.

Common Diagnoses That Are Respiratory Related:

- Chronic Obstructive pulmonary diseases (COPD)
- Emphysema
- Asthma
- Chronic Bronchitis
- Lung Cancer
- Acute Myocardial Infarction

- Acute Pulmonary Heart Disease
- Congestive Heart Failure
- Viral Pneumonia
- Bacterial Pneumonia
- Bronchiectasis
- Oxygen Conserver: A type of regulator, which conserves the amount of gaseous oxygen in portable cylinders. Oximetry testing is required to ensure proper oxygen saturation during use of a conserver.
- Parkinson's Disease: Parkinson's disease belongs to a group of conditions called movement disorders. It is both chronic, meaning it persists over a long period of time, and progressive, meaning its symptoms grow worse over time. Parkinson's disease occurs when a group of cells, in an area of the brain called the substantia nigra, that produce a chemical called dopamine begin to malfunction and eventually die. Dopamine is a neurotransmitter, or chemical messenger, that transports signals to the parts of the brain that control movement initiation and coordination. When Parkinson's disease occurs, for unexplained reasons, these cells begin to die at a faster rate and the amount of dopamine produced in the brain decreases.

Four Primary Symptoms:

- Tremor of the hands, arms, legs, jaw, and face
- Rigidity or stiffness of the limbs and trunk
- Bradykinesia or slowness of movement
- Postural instability or impaired balance and coordination
- Patient Lifts: For assistance with patient transferring. Lift/commode is an FDA registered medical device, ideal for people with musculoskeletal or neuromuscular limitations. It is motorized and designed to operate as a lift system and as an adjustable-height commode. It can be used as a bedside commode (helps reduce bedpan use) or as a transfer system to move a person from a bed to a seated or standing position.

- **Pediatric Nebulizer:** A special breathing device usually used 3 or 4 times daily as needed; or as directed by your doctor. It works in the lungs by opening breathing passages to make breathing easier. This device is intended for use in children but may also be used for adults requiring smaller doses.
- **Phototherapy:** Also known as a bili light, used to help infants with jaundice, a yellow coloring of the skin and eyes related to abnormal liver function.
- **Portable E-Tank:** Portable smaller units called E tanks are used for transport. A key is required to turn the tank on and off. The portable tanks must be replaced when empty. Therefore, the family must plan ahead for trips outside of the home. Portable E tanks may be used for backup in case of power failure.
- **Portable Lifting Cushion:** Provide that extra lift needed to help you get in and out of any armchair on your own by shifting your weight forward and pushing off gently with your arms and/or legs. The pneumatic lift will help to gently raise you up to an almost standing position. The cushion is portable and weighs approximately 9 pounds and flattens quickly for easy transport.
- **Portable Oxygen System:** Incorporate either the electronic conserving device, the pneumatic conserving device, or standard flow regulators. These systems provide individuals with a convenient, lightweight supply of oxygen. Systems are available with one or multiple M4, M6, M9, MD, or ME cylinders, fiber-wrapped cylinders, shoulder, horizontal, backpack, or fanny pack style carrying bags, cart, regulator, cannula, and supply tubing. All systems are also available with a straight post valve, hand-tight or a toggle CGA870 valve.
- **Powered Wheelchair:** A powered wheelchair must be selected carefully in order to ensure it not only meets the needs of the individual who will use it but also represents good value for the money being invested in it. Physical considerations include posture, strength, sensation, visual acuity and perception, and the ability to learn how to use the wheelchair safely. A functional evaluation should include actual use of the wheelchair in everyday settings; an evaluation of the individual's ability to get in and out of the wheelchair; and the ability to perform needed activities from the wheelchair.

Transportation to and from various settings also is an important consideration: Is a van available to transport the individual in the chair, or is it necessary for the chair to fold or disassemble in order to be carried in an automobile trunk?

- **Powered Wheelchair Armrest:** Armrests also come in several styles or with a combination of features. They may be full- or desk-length, or wraparound, and they may be fixed, removable, pivoting, and/or adjustable height.
- **Powered Wheelchair Battery:** A determining factor in the range and power of a powered chair. Generally, the larger the chair's batteries, the greater the power and the longer the chair's range between charges. Many chairs require two rechargeable 12-volt batteries. Most wheelchairs utilize U1, group 22 or 24 batteries, although other batteries are also used. More manufacturers are designing chairs around the group 24 battery because it affords a longer range. The type of battery required is also an important consideration in terms of safety, maintenance, and transport. Powered chairs may utilize lead acid, gel cell, or sealed wet batteries. Gel cell batteries require the least maintenance and have less danger of leaking than do the other battery types. Gel cell batteries are also required by a number of airlines when transporting powered chairs.
- **Powered Wheelchair Brakes:** Most powered chairs utilize a dynamic braking system in which the motor and brakes work together to slow and stop the chair when the joystick or other controller is released, and which automatically engages the brakes when the power is off or when the chair is not being powered in a forward or reverse motion with the controller.
- **Powered Wheelchair Controls:** Powered chairs generally include as a standard feature a manually controlled joystick to regulate the chair's speed and direction. However, most manufacturers offer customized control options to accommodate the varied abilities of the user, including sip-n-puff systems, head and chin switches, push-button controls, trackballs, and tillers. Many chairs also have programmable control features which allow the user or a dealer to adjust or set the chair's speed and control limits as the user's abilities change.

- **Powered Wheelchair Drive System:** The means by which power is delivered to the chair's wheels. Standard drive systems include gear drive, direct drive, and belt drive. The type of drive system affects the power available to propel the chair and the amount and type of maintenance the chair requires.
- **Powered Wheelchair Footrest:** A variety of footrest assemblies are available on both types of wheelchairs. They may be a rigid single unit, 90 degree-90 degree platforms, folding, flip-up, detachable, adjustable length, hemi- height, or have a combination of features.
- **Powered Wheelchair Frame:** Many traditional-style models utilize the traditional cross-brace frame which allows the chair to be folded or collapsed for storage and transport once the batteries have been removed. Other traditional models and some power base chairs disassemble for transport. A number of chairs, however, are designed to be transported while carrying the user; consequently, they do not fold or disassemble.
- **Powered Wheelchair Seating System:** Sold separately from the wheelchairs themselves, as seating must be chosen on an individual basis. It is important when selecting a wheelchair or a seating system to ensure that the two components are compatible. Power base chairs, because of their more modular construction, frequently feature customized chair-style seating systems.
- **Powered Wheelchair Special Power Features:** Powered chairs may offer specialized powered features to meet the user's needs, either as customization or options on a standard chair or as a chair designed specifically for a particular purpose. Among the available features are elevating and lowering seats, and reclining and/or tilt-in-space seats. Specialized chairs have the capacity to raise the user to a standing position, to negotiate stairs, or to be used as a lift or in transferring.
- **Powered Wheelchair Upholstery:** For wheelchairs must withstand daily use in all kinds of weather. Consequently, manufacturers provide a variety of options to users, ranging from cloth to new synthetic fabrics to leather. Many manufacturers also offer a selection of upholstery colors, ranging from black to neon, to allow for individual selection and differing tastes among consumers.

- **Powered Wheelchair Wheels/Tires:** Power base chairs typically use four wheels of the same size, usually 8 to 10 inches in diameter. These chairs may have pneumatic, semi-pneumatic, or solid tires.
- **Ramp:** Portable ramps for wheelchairs and scooters roll up for easy carrying with storage bag. Scooter ramps have side rails and center panels that slide easily into place, locking securely to provide a solid drive surface. Suitcase ramps are convenient and compact, fold up easily and have a built-in carrying handle. Telescopic channel ramps each extend to be used on steps, vans, or curbs. For storage, simply pick up each rail and depress the guide buttons to collapse. Chair lifts allow you to lift and carry your power chair fully assembled.
- **Scooter:** Typically, scooter users have some ability to walk, but are limited in distance or stamina--stroke survivors or people with milder forms of cerebral palsy, multiple sclerosis, post-polio syndrome, arthritis, and cardiac conditions, among others. Scooters are used to increase and extend the range of personal mobility and help conserve energy. Scooter users often have difficulty propelling manual wheelchairs, but do not require the sophisticated electronic controls and seating systems common in powered wheelchairs. A number of other physical factors must also be evaluated when determining whether a scooter is an appropriate mobility aid. A scooter user generally must be able to sit upright for extended periods and have sufficient seated balance to maintain an erect posture. Further, sufficient upper body and arm strength to master the controls and steer and maneuver the unit are required. In addition, uncorrected vision disabilities, or conditions which may cause confusion or memory loss or which inhibit proper safety awareness may render a scooter an unsatisfactory mobility aid.
- **Scooter Accessories:** In addition to the standard features common to all scooters discussed above, manufacturers offer a variety of standard features and optional accessories. Most scooters are equipped with a key lock for turning the scooter on and off, thus conserving battery life and preventing unauthorized use; a battery-level indicator and a proportional speed controller to limit maximum speed. A wide range of accessories also are offered on most scooters, such as crutch and cane holders, oxygen carriers, front

and rear baskets, trailers, headlights, tail lights, horns, canopies, and others. Some manufacturers even offer sidecars to allow an additional passenger. As when purchasing a car, options and additional features increase the base cost of the unit, but accessories should be evaluated in light of their capacity to create a mobility aid which provides maximum user independence. At the same time, it should be kept in mind that some options may decrease battery life, maneuverability, and/or travel range.

- Scooter Armrest: Another consideration in seating. Some scooters offer armrests only as an option; others offer fixed armrests as standard with flip-up armrests available.
- Scooter Base Unit: Basically the body of the scooter. Generally it consists of a steel, aluminum, or composite frame with a fiberglass or composite floor to support the feet and batteries. Some scooter bases also include a shroud over the front wheel and drive head, creating a dashboard for the unit. The base also includes the wheels and the drive train. In some scooters, the seat post is also part of the base. The base unit is the primary determinant of whether the scooter is designed for indoor or outdoor use, the vehicle's maneuverability, the size of its wheelbase, its ground clearance, its turning radius, and its overall dimensions. A scooter should not tip easily during sharp turns or on inclines such as curb cuts (if the scooter is designed for outdoor use). Anti-tip wheels should be included as part of the frame to help support and stabilize the scooter. On front-wheel drive units, anti-tips are often located laterally just behind the front wheels because they generally lack the power for steep inclines. Because most rear-wheel drive scooters are intended to negotiate more rugged terrain, they are usually equipped with rear anti-tips to support the scooter on hills. Side anti-tip wheels are sometimes offered as options. It should be noted that lateral anti-tippers may cause difficulties on curb cuts and ramps.

On some scooters, the base unit may be comprised of modular units or may otherwise be disassembled for transport and storage. These same features may also allow the scooter to be converted from three- to four-wheeled models and/or from indoor to outdoor use.

- Scooter Battery: Most scooters utilize 12- or 24-volt motors and electrical systems generally with one or two 12-volt batteries to power the drive train and controls. Twelve-

volt systems are most frequently found on front-wheel drive scooters, and usually require one 12-volt battery, although two six-volt batteries are sometime used. Some manufacturers offer add-on units for 12-volt systems which allow them to utilize two batteries to extend the scooter's range between charges, although speed and power are not affected. Rear-wheel drive systems generally require two twelve-volt batteries to power 24-volt systems. These batteries are "deep cycle" batteries intended for wheelchairs and scooters and generally last between 12 and 18 months, although with conservation and regular charging, longer life may be achieved. Deep cycle batteries are designed to provide a steady supply of power and be discharged and recharged on a regular basis. Automotive and marine batteries, on the other hand, are designed to be starter batteries, providing short bursts of power only. Consequently, marine and automotive batteries should never be substituted for deep cycle batteries.

There are three basic types available for use with scooters: Lead acid (or wet cell) batteries, sealed lead-acid batteries, and gel cell batteries. Lead acid batteries are the least expensive of the three types, but they also require the most maintenance. In addition to regular charging, electrolyte and water levels must be checked regularly, with water added frequently to maintain appropriate levels. Because these batteries are not sealed, there is danger of acid spillage and explosion if the batteries are not handled properly. Despite these potential problems, lead-acid batteries provide the benefits of a two- to six-month longer battery life and up to a ten percent greater running time than other battery types. Sealed lead acid batteries are maintenance-free versions of these batteries. Because they are sealed in cases, it is unnecessary to add water and the danger of acid spillage is reduced or eliminated. The cases are vented to prevent gas build-up that can lead to an explosion. Finally, gel cell batteries are the most commonly used battery type on scooters. They are sealed in their cases and require no maintenance other than regular charging. Gel cells are the safest of the battery types, with no danger of spillage and limited risk of explosion. However, gel cells are more expensive, and may have a somewhat shorter life than other battery types.

- **Scooter Brakes:** Most rear-wheel drive scooters utilize an electronic or electro-mechanical dynamic, regenerative braking system. This type of braking system works in tandem with the motor, first to slow and then stop the vehicle when the pressure is released on the thumb levers or the controls are otherwise disengaged. When the scooter is not being powered forward or in reverse, the brakes are engaged, thus preventing the scooter from moving. During the application of the brakes, excess power from the motor is channeled to the batteries, providing recharging. Because the brakes are engaged when the scooter is being actively powered, most scooters with this braking system are equipped with a clutch on the motor or another release lever to manually disengage the brakes to allow the scooter to be pushed in case of emergency.

Some scooters also use disc brakes or disc brakes in combination with the braking system discussed above. Some scooters--usually front-wheel drive models--are not equipped with electronic or electro-mechanical brakes. In the absence of a brake system, a manual parking brake applied by lever to a rear wheel is provided. Manual parking brakes may also be offered either as optional or standard features on other scooters to provide extra braking on hills and inclines.

- **Scooter Drive Train, Brakes and Power System:** The drive train is an integral part of the base unit and provides either front- or rear- wheel drive for the scooter. Front-wheel drive is usually found on smaller scooters designed primarily to be used indoors or outdoors on flat, paved surfaces. The motor of the front-wheel drive scooter is located over the front wheel and drives only that wheel. Because of the motor and wheel configuration, front-wheel drive scooters are usually direct-drive units, eliminating chains and belts. However, this also means that the front wheel pulls the weight of the unit and the rider. Consequently, these types of scooters have a lesser capacity to move their load than do rear-wheel drive models, and are therefore less capable of handling hills, curb cuts, and other outdoor terrain. This is compounded by the fact that front-wheel drive models generally have smaller motors, causing them to have a shorter range, less speed and power, and a smaller rider weight capacity.

Rear-wheel drive scooters are powered by motors connected to the rear axle, either via a chain, a belt, a transaxle unit, or some combination. Because the scooter is driven by the rear wheels, they push the combined weight of the unit and the rider, rather than pull it. The combined weight of the rider, the motor, and the batteries over the rear wheels, generally create better traction than that usually provided by front-wheel drive models. The increased traction combined with the more powerful motors used on rear-wheel drive scooters results in better climbing ability. The units also have a greater maximum speed, a longer traveling range between battery charges, and a larger rider weight capacity. These scooters have a wider wheel base and a greater overall length, making them less maneuverable and rendering some models unsuitable for indoor use. They may also be too large for van or bus lifts.

- Scooter Seating: The most common seat found on scooters is a chair-style seat similar to those found on boats. The basic seat is molded hard plastic or fiberglass, but most manufacturers offer a padded-seat option, usually with a choice of vinyl or fabric upholstery. Vinyl upholstery is frequently less expensive, but because it is a slipperier surface, it may not be the best choice for those whose disability makes it difficult to maintain position or balance.
- Scooter Tiller: The control and steering mechanism for the scooter, usually containing the controls to drive the scooter forward or in reverse, as well as steering the front wheel or wheels. Most scooters offer one type of standard tiller with other controllers available as options. Possibilities include thumb levers, loop handles, joysticks, and others. Thumb levers are the most common controls, allowing the user to keep both hands on the handle bars while using the left thumb to power the scooter in reverse and the right to power the scooter forward. The amount of pressure applied to the lever will determine the speed of the vehicle (unless it is equipped with a proportional speed control). Consequently, a fair amount of hand control is necessary for safe operation. Finger control levers or a joystick may be alternatives. Some manufacturers may also be able to adapt controls to user requirements at extra cost.

The tiller itself is often an upright post attached to the front wheel. However, it is also becoming common to find flexible, accordion-style tillers which can be adjusted for height and/or position. This not only enables the user to place the tiller in the most comfortable position while driving, but also allows it to be moved up and out of the way during transfers. In the absence of a dashboard or shroud over the front wheel, a control box with the key lock, battery level indicator, speed controller, and other features may be affixed to the tiller handlebars.

Since a joystick controls both speed and direction, scooters equipped with them generally do not have the post-and-handlebar tiller; the joystick is usually attached to an armrest or to an armrest extension, with a choice of right or left mounting. While this frees the space in front of the user and may accommodate easier transitions for some, the lack of handlebars may make transfers more difficult for others.

- **Scooter Wheels/Tires:** The size of the wheels and tires on a scooter have a direct effect on the scooter's ability to surmount obstacles and its stability. Scooters are generally equipped with six-, eight-, or ten-inch wheels, although other sizes may also be used. Some models use the same size wheels both front and rear, while others may have smaller wheels in front and larger rear wheels. Smaller wheels are generally found on front-wheel drive scooters intended for indoor use. As a rule, the intended use of the scooter should dictate the size of the wheels and tires. The larger the wheels, the more stable the unit. Similarly the larger and wider the tires, the greater the unit's traction and capacity to manage such obstacles as curb cuts and uneven outdoor terrain.

Several types of tires are available for scooters. Manufacturers generally offer a specific tire as standard equipment, with others available as extra-cost options. Pneumatic tires include air-filled tubes and are similar to those found on automobiles. Air pressure should be checked regularly to maintain proper levels, and tires may need to be replaced if punctured. The addition of an anti-flat compound before inflation reduces the risk of tires going flat. They provide good shock absorption when properly inflated. Foam filled tires are similar to pneumatic tires, but include foam inserts rather than air-filled tubes. These

tires cannot be deflated and, therefore, require less maintenance. They may be more expensive than pneumatic tires and may not offer a consistently comfortable ride. The least expensive tire option is the solid rubber tire. These tires require the least maintenance, but provide minimal shock absorption and are intended primarily for indoor use.

- **Sleep Apnea:** A chronic medical condition where the affected person repeatedly stops breathing during sleep. These episodes last 10 seconds or more and cause oxygen levels in the blood to drop. It can be caused by obstruction of the upper airway, resulting in Obstructive Sleep Apnea, or by a failure of the brain to initiate a breath, called Central Sleep Apnea. It can cause and worsen other medical conditions, including hypertension, heart failure, and diabetes.
- **Specialty Wheelchair:** Because of the diverse needs of wheelchair users, wheelchairs have been designed to accommodate many lifestyles and user needs. Hemi chairs, which are lower to the floor than standard chairs, allow the user to propel the chair using leg strength. Chairs that can be propelled by one hand are available for people who have paralysis on one side. Oversized chairs and chairs designed to accommodate the weight of obese people are also offered. Rugged, specially equipped chairs are available for outdoor activities. Aerodynamic three-wheeled racing chairs are used in marathons and other racing events. Manual chairs that raise the user to a standing position are available for people who need to be able to stand at their jobs, or who want to stand as part of their physical conditioning routine. These and other specialized chair designs generally are manufactured by independent wheelchair manufacturers who are trying to meet the needs of specific target markets.
- **Standard/Everyday Wheelchair:** Some wheelchair users still prefer or require a standard wheelchair, which is characterized by a cross-brace frame, built-in or removable arm rests, swing-away footrests, a mid- to high-level back, and push handles to allow non-occupants to propel the chair.

- T.E.N.S. Dual Channel Unit: A transcutaneous electro-nerve stimulator; pain control that goes where you do. A small medical device slightly larger than a beeper, attaches to your pants or belt and helps alleviate pain while you wear it.
- T.E.N.S. Unit: Dispensed by doctors to their patients for home use. They operate on a 9v. transistor battery and have small wires and pads that adhere to a painful area and alleviate pain. Tiny free nerve endings secrete a chemical called "substance P" that transmits pain signals to our brain. T.E.N.S. units artificially stimulate free nerve endings, thereby depleting them of substance P, literally stopping the pain signal in its tracks.
- Urinary Incontinence: Incontinence is the inability to control the passage of urine. This can range from an occasional leakage of urine to a complete inability to hold any urine. Urinary incontinence affects approximately 13 million people in the United States and is more common in women than in men. It occurs in 10 percent to 25 percent of women younger than age 65 and in 15 percent to 30 percent of women older than age 60 who do not live in nursing homes. Among nursing home residents, incontinence is even more common, affecting more than 50 percent of female patients.
- Urinary Pouching System: Urostomates can use either one or two-piece systems. However, these systems also contain a special valve or spout which adapts to either a leg bag or to a night drain tube connecting to a special drainable bag or bottle.

For more information on ostomy and ostomy supplies

visit http://www.ostomy.org/Ostomy_Information.html#gen_info and <http://www.hollister.com/us/>.

- Ventilator: An automatic mechanical/pneumatic device designed to reduce or provide the work required to move gas into and out of the lungs.
- Walker: Available in a variety of styles to meet individual needs. Folding, adjustable walkers can be easily transported in vehicles. Hemi-walkers allow for one-hand utilization. Wheeled walkers minimize lifting. Many accessories, such as walker trays, baskets or pouches are available.

- **Wheelchair Armrest:** Many lightweight manual chairs are designed to be used without armrests. The absence of armrests makes it easier for the user to roll up to a desk or table, and many active wheelchair users prefer the streamlined look of a chair with no armrests. However, armrests are helpful if the user has difficulty with upper body balance while seated. Armrests come in a variety of styles including desk length (to allow the user closer access to desks and tables) or full length and both types may be flip-up, fixed, or detachable.
- **Wheelchair Brakes:** Brakes or wheel locks are available in several different designs, and can be mounted at various heights to maximize convenience to the user.
- **Wheelchair Footrest:** Usually are incorporated into the frame of the chair as part of the design. Cross-brace folding chairs often have footrests which swivel, flip up, and/or can be removed.
- **Wheelchair Frame:** The two most common types of frames currently available are rigid frame chairs (where the frame remains in one piece and the wheels are released for storage or travel), and the standard cross-brace frame (which enables the frame to fold for transport or storage).
- **Wheelchair Seating System:** Sold separately from the wheelchairs themselves, as seating must be chosen on an individual basis. It is important when selecting a wheelchair or a seating system to ensure that the two components are compatible.
- **Wheelchair Upholstery** Must withstand daily use in all kinds of weather. Consequently, manufacturers provide a variety of options to users, ranging from cloth to new synthetic fabrics to : leather. Many manufacturers also offer a selection of upholstery colors, ranging from black to neon, to allow for individual selection and differing tastes among consumers.
- **Wheelchair Wheels/Tires:** Most wheelchairs use four wheels, with two large wheels at the back and two smaller ones (casters) at the front. The standard tire used for the rear wheels on most wheelchairs is a pneumatic tire, for which the standard size is 24 inches. Smaller and larger sizes, however, also are available. Many manufacturers now also offer other types of tires--such as solid tires, semi-pneumatic, or radial tires--at extra cost. Mag

wheels and off-road wheels also are options on some chairs. Casters, too, vary in size (ranging from six to eight inches in diameter) and composition (pneumatic, solid rubber, plastic, or a combination of these).

- Wound V.A.C Therapy: Also known as negative pressure wound therapy, this device uses negative pressure through a controlled suction to close large wounds and promote faster healing. This patented, FDA-approved device is composed of a sophisticated pump, hoses, and monitoring system held within a portable compact case weighing less than 20 pounds. It is recognized as an advanced line therapy alternative for patients when traditional dressing changes are not effective. It is a method that is considered among recovering patients in hospitals, nursing homes, and other home health care settings. It meets the needs of most cost-effective modalities and an estimated 5 million American patients suffering from chronic or acute wounds.