PURPOSE:
To assess for the appropriateness of prescribed medications and proper use of all prescription and over-the-counter medications by the older adult. To reduce and/or eliminate the risk of adverse drug event.

CONSIDERATIONS:
1. With aging, the following body changes impact medication absorption and utilization:
   a. Digestive system slows affecting how fast medicines enter the bloodstream.
   b. Body weight or mass index loss affects the amount of medicine dosage and how long it stays in body.
   c. Circulation system slows, affecting how fast drugs get to the liver and kidneys.
   d. Liver and kidneys slow, affecting the way a drug breaks down and is removed from the body.
   e. In addition to age-related physiologic changes that impact risk for adverse drug events, other factors include:
      (1.) Polypharmacy: multiple medications prescribed by multiple providers.
      (2.) Incorrect medication dosages: over or under therapeutic recommendations or inappropriate for the older adult.
      (3.) Self-medications.
      (4.) Drug–drug or drug–disease interactions.
      (5.) Problems with medication adherence.
      (6.) Medication errors.
      (7.) People over age 65 buy 30% of all prescription drugs and 40% of all over-the-counter drugs.
2. Older adults with medication problems typically:
   a. Are 85 years and older.
   b. Have six active chronic medical conditions.
   c. Have decreased kidney function.
   d. Have low body weight.
   e. Take nine or more medications.

EQUIPMENT:
None

PROCEDURE:
1. Have patient collect all medications that they take and place in bag for review at your next visit, including all prescription medications, over-the-counter medications, vitamins, supplements, herbal remedies, alcohol and illicit drugs.
2. Interview the patient for health and medication history.
3. Review list of medications against the BEERs Criteria for Potentially Inappropriate Medication Use in Older Adults: Independent of Diagnoses or Conditions, as per division needs.
5. Assess functional capacity: ADLs, IADLs, Mini-Cognition, and Health literacy, in addition to patient’s ability to self-administer medication.
6. Assess for barriers in the home environment, which cause adherence issues to medication regime.
7. Provide patient and caregiver education related to safe medication administration, storage and management practices in the home environment.
8. Reinforce physician medication orders and instructions for compliance.

AFTER CARE:
1. Assess and evaluate for medication changes at every visit.
2. Follow-up with primary care practitioner for medication or treatment regimen changes that are needed. Remembering:
   a. "Start Low and Go Slow," or give the lowest possible dose when starting a medication and slow upward titration to obtain clinical benefit.
   b. Discontinue unnecessary therapy.
   c. Attempt a trial of nonpharmacological interventions/treatments prior to requesting medication for new symptoms.
   d. Recommend safer drugs.
   e. Optimize drug regimen. Risk vs. benefit.
   f. Initiation of new medication. Assess for potential drug–disease and drug–drug interactions and correct dosages, the most common causes of ADRs, before starting new drugs.
   g. Avoid the prescribing cascade by first considering a new symptom as being a consequence of a current medication prior to adding a new medication.
   h. Avoid inappropriate medications in older persons.
3. Record assessment and patient/caregiver education in addition to follow-up with physician.
4. Advocate for 'quality' products – bottle easy to open, yet safe, and legible for average reader.
5. Encourage use of ONE pharmacy.
6. Collaborate with primary care provider for ONE disease, ONE drug, ONCE a day.

REFERENCES:

Medicines and You: A Guide for Older Adults.
http://www.fda.gov/Drugs/ResourcesForYou/ucm163959.htm
PURPOSE:
To provide an opportunity for nurses to solicit information and provide support for disruptions in sexual health related to normal and pathologic changes in the older adult.

CONSIDERATIONS:
1. Sexuality is important to older adults as for many, it is an expression of passion, affection, esteem and loyalty.
2. Of Americans between the age of 57 and 64 years, 73% were sexually active.
3. Of Americans between the age of 65 and 74 years, 53% were sexually active.
4. Of Americans between the age of 75 and 85 years, 26% were sexually active.
5. Cognitively impaired adults still retain sexual desire however, they may exhibit sexually inappropriate behavior as an expression of interest.
6. As women age, a loss of estrogen at menopause may decrease vaginal lubrication.
7. As men age, they experience less frequent and weaker ejaculations.
8. Ethnic and cultural background need to be considered prior to asking sexual health questions.
10. Medications can affect sexual function and at times, compliance with taking medications may be impacted by the unwanted side effects, including decreased libido and erectile dysfunction. Common medications that impact sexual functioning include:
   a. Antihypertensives, including angiotensin - converting enzyme inhibitors, [alpha]-blockers, [beta]-blockers, calcium channel blockers and thiazide diuretics.
   b. Antidepressants, including selective serotonin reuptake inhibitors, tricyclic antidepressants and monoamine oxidase inhibitors.
   c. Cholesterol-lowering medications - statins and fibric acid derivatives.
   d. Antipsychotics (phenothiazines and the atypical antipsychotics risperidone).
   e. Seizure medications (carbamazepine) and H2 blockers (cimetidine).

EQUIPMENT:
Quiet private area in the home
Environment of open communication
Nonjudgmental attitude
PLISSIT model

PROCEDURE:
1. Permission (P) – ask permission to discuss sexual health.
2. Ask open ended questions and let the patient describe issues and/or concerns.
3. Involve partner if patient gives permission and wants to discuss unmet needs.
4. Provide limited information (LI) – after identifying concerns, provide information related to normal and pathologic age-related changes in sexual health/function and how it relates to the patient.
5. Offer specific suggestions (SS) – help identify potential medication and treatment regimen, changes, environmental changes or privacy issues as well as alternative forms of sexual expression which promote sexual health and fulfillment.
6. Intensive Therapy (IT) – warranted for those requiring more intensive services beyond nursing care, e.g., those that are sexually inappropriate, hyperactive or aggressive or with abuse history should be referred to other healthcare specialist who specialize in these areas.

AFTER CARE:
1. Follow-up with primary care practitioner to identify potential specialists, if referrals are needed, and address medication or treatment regimen changes needed which are impacting sexual function.
2. Follow-up with primary care practitioner for medication or devices to address erectile dysfunction or other conditions.
3. Follow-up with primary care practitioner for medication or lubrication to address vaginal dryness and pain during intercourse or other conditions.
4. If patient is in a home shared with caregivers, discuss the importance of privacy and need for healthy sexual activity of patient.
5. Document in patient's record:
   a. Assessment and response to PLISSIT approach.
   b. Patient education and instructions given to patient regarding normal and pathogenic changes, medication and disease which impact sexual function and interventions to address sexual health needs.
   c. Contact to primary care practitioner and his/her response regarding patient’s sexual health concerns.

REFERENCES:
PURPOSE:
To provide an opportunity for nurses to solicit information and provide support for disruptions in sleep related to normal and pathologic changes in the older adult.

CONSIDERATIONS:
1. Sleep is important; it impacts mood, memory, and cognitive performance as well as endocrine and immune system function.
2. Sleep deprivation/disturbance has been linked to depression, obesity, hypertension, impaired tissue healing and poor glycemic control in type 2 diabetes.
3. Sleep deprivation/disturbance also contributes to accidents including motor vehicles and falls.
4. Causes of sleep disturbances can include environmental or safety issues, insomnia, sleep apnea, movement disorders and Alzheimer's disease.
5. Two-thirds of adults age 55 to 84 years had one or more symptoms of a sleep problem "at least a few nights a week."
6. Of adults age 70 and older, 23-41 percent are impacted by the prevalence of insomnia.
7. Of adults age 65 and older in a study, 50 percent were found to have at least one chronic sleep problem "occurring most of the time."
8. Determine patient’s cognitive ability and reading comprehension to determine mode of assessment - oral interview vs. patient completing written questionnaire.

EQUIPMENT:
Quiet private area in the home
Environment of open communication
Pittsburgh Sleep Quality Index (PSQI) Instrument

PROCEDURE:
1. Obtain the PSQI instrument
2. Administer the PSQI instrument.
3. Tally the patient’s PSQI score.
4. Discuss results with patient and interventions to improve sleep quality.
5. Safe Sleeping Procedures:
   a. Have smoke alarms on each floor of residence.
   b. Lock the outside doors before going to bed.
   c. Keep a telephone with emergency phone numbers by the bed.
   d. Have a good lamp within reach that turns on easily.
   e. Put a glass of water next to the bed in case of thirst.
   f. Use nightlights in the bathroom and hall.
   g. DO NOT smoke, especially in bed.
   h. Remove area rugs to avoid falls when getting out of bed in the middle of the night.
   i. DO NOT fall asleep with a heating pad on; it may burn.
5. Daily Sleep Regimen Procedures:
   a. Follow a regular sleep schedule. Go to sleep and get up at the same time each day, even on weekends.
   b. Try to avoid napping in the late afternoon or evening.
   c. Develop a bedtime routine. Take time to relax before bedtime each night. Some people watch television, read a book, listen to soothing music, or soak in a warm bath.
   d. Keep the bedroom dark, not too hot or too cold, and as quiet as possible.
   e. Have a comfortable mattress, a favorite pillow, and enough blankets for the season.
   f. Exercise at regular times each day but not within 3 hours of bedtime.
   g. Make an effort to get outside in the sunlight each day.
   h. Be careful about when and how much is eaten at meals. Large meals close to bedtime may keep individuals awake, but a light snack in the evening can help those get a good night’s sleep.
   i. Avoid caffeine late in the day. Caffeine (found in coffee, tea, soda and hot chocolate) can keep individuals awake.
   j. Drink fewer beverages in the evening. Waking up to go to the bathroom and turning on a bright light breaks up sleep.
   k. Alcohol does not help sleep. Even small amounts make it harder to stay asleep.
   l. Use the bedroom only for sleeping. After turning off the light, wait about 20 minutes to fall asleep. If not asleep and not drowsy, get out of bed. When tiredness returns, go back to bed.

AFTER CARE:
1. Follow-up with primary care practitioner for medication or treatment regimen changes that are needed to impact sleep quality.
2. Follow-up with primary care practitioner for referrals to specialist or additional needs to address sleep disturbances caused by insomnia, sleep apnea, movement disorders, Alzheimer’s disease or other conditions which impact sleep quality.
3. If patient shares a room or bed with partner/caregiver discuss alternative sleep arrangements to improve sleep quality.
4. Document in patient’s record:
   a. Assessment and PSQI instrument score.
   b. Patient education and instructions given to address sleep disturbances.
   c. Contact to primary care practitioner and his/her response regarding patient’s sleep patterns and/or disturbances.
REFERENCES:


PURPOSE:
To maintain a comfortable and regular bowel pattern.

CONSIDERATIONS:
1. Start by identifying the underlying cause of constipation.
2. If it is medication related, ask physician about changing medication or lowering dosage.
3. Increase fluids, unless contraindicated.
4. Increase dietary fiber as per MD instructions.

EQUIPMENT:
None

PROCEDURE:
1. Instruct patient to increase dietary fiber to about 20 grams/day. Some fiber sources include:
   a. One (1) kiwi fruit.
   b. Five (5) stewed prunes.
   c. 2 tablespoons of bran in meals eaten with 8 ounces of fluid.
2. Oral supplements may be taken along with adequate fluids. These include:
   a. Metamucil – Psyllium
   b. Citrucel – Methylcellulose
   c. Polycarbophil
3. Instruct patient to decrease intake of foods high in fats, e.g., cheese.
4. Encourage patient to increase exercise and physical activity during the day.
5. Educate patient on establishing a bathroom routine:
   a. Have patient sit on toilet with feet on a stool around the same time each day, 30 minutes after a large meal or a cup of warm liquid. This stimulates the gastrocolic reflex.
   b. Ensure the patient has privacy when in the bathroom.
6. Institute a bowel regime 3 times a week or every other day. This includes:
   a. A source of fiber (or stool softener) 3 times a day.
   b. A laxative at bedtime (given the night before a morning suppository).
   c. A suppository upon awakening.

AFTER CARE:
1. Educate patient and caregiver about the importance of keeping up with a dietary regimen.
2. Record the institution of dietary regimen in patient’s chart.
3. Notify physician about condition and changes in diet.

REFERENCES:
The purpose of a bladder drill (timed voiding) is to gradually:

- Increase the length of time between urinations
- Increase the amount of fluid your bladder can hold
- Diminish the sense of urgency and/or leakage you experience.

Keeping a diary of your bladder activity is helpful to monitor your progress. Be sure to talk to your physician about this problem before you begin the program.

It might be a good idea to start this program on a weekend, or when you plan to be at home or near a bathroom. It is very important to drink a minimum of eight glasses of fluid each day (80 to 100 ounces of fluids daily). Drinking the right amount of fluid daily and emptying your bladder at regular intervals helps to decrease bladder infections. Managing your problem by limiting fluid intake is counterproductive and is not recommended.

- **Days 1 to 3:** After awakening, empty your bladder every hour on the hour, even if you do not feel the need to go. Make sure you are drinking frequently. During the night, only go to the bathroom if you awaken and find it necessary.
- **Days 4 to 6:** Increase the time between emptying your bladder to every 1½ hours, following the above fluid intake and nighttime instructions.
- **Days 7 to 9:** Increase the time between emptying your bladder to every 2 hours, following the above fluid intake and nighttime instructions.
- **Days 10 to 12:** Increase the time between emptying your bladder to every 2½ hours, following the above fluid intake and nighttime instructions. Work up to emptying your bladder every 3 to 3½ hours.

You will be the best judge of how quickly you can advance to the next step. These instructions are an outline. You can change the timing; for example, you may find it more comfortable to increase the interval from 1 to 1¼ hours.

You may also increase the pace of this schedule, depending on your individual symptoms and bladder capacity. For example, you may increase the hourly increments every 2 days instead of every 3 days.

A helpful hint: If you feel a sense of urgency, try contracting your pelvic muscles (Kegel exercises) quickly two or three times. Focus on relaxing all other muscles. If possible, sit until the sensation passes; then slowly make your way to the bathroom.

Using a diary to keep track of your progress in bladder drills is also a good idea. Keeping a written record is often a helpful way to make behavioral changes. A diary shows you the value of the effort you’re making.

Drinking the right amount of fluid daily and emptying your bladder at regular intervals helps to decrease bladder infections.

This patient handout was provided by Dorothy Kammerer-Doak, MD, associate clinical professor, Department of Obstetrics and Gynecology, University of New Mexico, Albuquerque; and urogynecologist, Lovelace Health Systems, Albuquerque, NM.
Fecal incontinence, also called bowel or anal incontinence, is extremely common in the United States, afflicting approximately 8% of adults.

Despite affecting a high number of people, many often suffer silently, either due to embarrassment and frustration or the belief that nothing can be done to improve their situation. Many otherwise healthy, active individuals of all ages suffer from fecal incontinence. Although not life threatening, fecal incontinence significantly diminishes quality of life.

Fecal incontinence is the involuntary loss of solid or liquid stool sufficient enough to cause distress and impair your quality of life. Frequent or involuntary passage of gas (flatus) or mucus without loss of fecal material, while not clinically defined as incontinence, may also impair your quality of life and warrant investigation and treatment.

Diagnosing Fecal Incontinence
If you are suffering with fecal incontinence, there is hope. The first step toward reclaiming control lies with taking the initiative to speak with your physician. Your physician may then begin to look into the cause of your problem or he or she may refer you to a specialist in the fields of gastroenterology, colorectal surgery, gynecology, and/or physical therapy. Regardless of the type of specialist you are referred to, it is important that you feel comfortable and confident that your personal concerns are being heard and addressed with care. The purpose of any fecal incontinence treatment should be to help you regain a sense of control over your symptoms.

During your visit with your health care provider, he or she might ask you the following questions so that investigations and treatment can be tailored to meet your specific needs:

- How long has fecal incontinence been present?
- Do you have to wear a pad daily because of fecal incontinence?
- Is fecal incontinence affecting your social, work, and/or sex life?
- Do you have incontinence of mostly solid or liquid fecal matter? Gas?
- Are you aware when you are about to have an episode of incontinence (do you sense a feeling of urgency to get to a bathroom?), or does the episode occur without warning?

What You Should Know About Fecal Incontinence
Do you suffer from diarrhea or constipation?
Is the volume of fecal incontinence small or large, or are your undergarments soiled?
Do you suffer from concurrent urinary incontinence?
Do you have a bloody or mucus-like discharge?
Have you suffered from any obstetric trauma or undergone any vaginal or rectal surgeries?

Based on how you answer these questions and after a thorough review of your history and previous medical evaluations and treatments, your provider may decide to order some simple tests to help assess the degree of your incontinence and help guide treatment. Testing usually consists of a few minimally invasive studies, including anorectal manometry (a simple test used to measure rectal and pelvic muscle strength and coordination) and anorectal ultrasound (a small ultrasound probe that checks for rectal muscle tears). Depending on your past workup and specific symptoms, other tests may be warranted; however, the evaluation should be as efficient and minimally invasive as possible. While testing is in progress, you may be asked to keep a diary to record any specific concerns or observations that may help your health care provider to better develop treatment options that are custom-made for you.

**While testing is in progress, you may be asked to keep a diary to record any specific concerns or observations that may help your health care provider to better develop treatment options that are custom-made for you.**

### Treatment of Fecal Incontinence

Once the workup is complete and you are ready to begin treatment, your health care provider will counsel you about your options. Fecal incontinence is treated in a tiered approach; the most minimally invasive and conservative treatments are tried first (e.g., instruction in how to use fiber and antidiarrheals to minimize accidents), and more aggressive techniques are offered if those conservative treatments fail. Your health care provider may first focus on improving a deranged bowel habit (i.e., improve any underlying diarrhea or constipation), uncovering previously unknown food intolerances that may contribute to your symptoms, recommending biofeedback therapy, or focusing on bowel hygiene. If these interventions produce suboptimal results, many centers also offer more invasive treatments such as sphincter repair, injection of bulking agents into the rectal muscle, or insertion of an artificial bowel sphincter.

### Biofeedback Training

Biofeedback training is the most common form of treatment that is offered to patients suffering from fecal incontinence. It is a form of pelvic-floor re-training that is well-tolerated, safe, and effective at helping patients with fecal incontinence. Biofeedback sessions should be conducted in a fully equipped, private room under the supervision of an expert therapist who possesses not only technical expertise, but also the sensitivity to help ensure the successful outcome of the biofeedback sessions. Ideally, patients attend these 60-minute sessions approximately one day a week for 6 weeks. During these sessions, the goal is for you to learn to identify the role of the pelvic-floor and rectal muscles in maintaining continence and how to properly isolate the contraction and relaxation of these muscles.

There is hope for those who suffer from fecal incontinence. The first step is to speak with a caring and specially trained clinician to see what course of evaluation and treatment might best meet your individual needs.

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**Resources**

- The International Foundation for Functional Gastrointestinal Disorders
- The Mayo Clinic
- The American Motility Society
  A Registry for GI Motility Laboratories for Patient Evaluation

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*This Patient Handout was prepared by Tisha N. Lunsford, MD, using materials from the International Foundation for Functional Gastrointestinal Disorders Web site; The Mayo Clinic Web site; and The American Motility Society Web site.*

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*The Female Patient grants permission to reproduce this handout for the purposes of patient education.* 4/07

A downloadable version of this patient handout is also available at: [www.femalepatient.com](http://www.femalepatient.com).
Natural menopause is a normal part of getting older. Even though some of the symptoms of menopause can be uncomfortable, menopause should not be considered an illness.

Most of the uncomfortable feelings during menopause are known medically as vasomotor symptoms. Common examples are hot flashes, mood swings, and night sweats. Vasomotor symptoms can be mild, moderate, or severe. Many women with vasomotor symptoms want medication to help ease the discomfort. Some women take hormone therapy. Others don’t need any medication, while some decide to seek “alternative” treatments like herbs or plant-based products.

ARE HERBAL THERAPIES SAFE?
Although many herbal therapies (herbals) are considered to be “natural,” they may create side effects and drug interactions in the body, just like other over-the-counter or prescription drugs. However, herbals are not controlled by the US Food and Drug Administration (FDA), meaning there may be safety or dosage issues that have not been checked or monitored. Herbals might have unlabeled ingredients, different amounts of ingredients than stated on the label, or even none of the ingredients listed on the label. For these reasons, it is important to tell your health care provider if you are taking herbals and which types and brands you are taking.

So far, very few large studies have been done on long-term safety and benefits of most herbals.

WHO SHOULD NOT TAKE HERBALS
When taken for a long time, some herbs can affect the liver. If you have liver problems, or take drugs that already affect your liver, these herbals are not right for you.

Phytoestrogen, a natural version of estrogen found in many herbals, affects hormone-sensitive parts of your body (like your uterus and breasts). Some women with certain types of breast cancer or uterine conditions should not take herbals with phytoestrogen.

TYPES OF HERBALS
Some common herbal and plant-based herbal therapies include soy, black cohosh, red clover, ginseng, and kava.

Soy. Some studies show that soy foods can help with mild hot flashes. However, soy is a phytoestrogen, which could have effects on the breasts or uterus.
Black cohosh. Taking black cohosh may reduce the frequency of hot flashes and mood swings. In high doses, however, it can cause nausea, vomiting, headaches, or dizziness. Women with liver problems (like hepatitis) or those taking drugs that affect the liver should not use this herb. Black cohosh is also a phytoestrogen, but there is much debate about how it actually helps relieve vasomotor symptoms.

Red clover. Another phytoestrogen, red clover may help reduce hot flashes. Like all phytoestrogens, it may not be good for women with certain types of breast cancer or uterine conditions.

Ginseng. Ginseng may improve mood-swings and sleep. It does not help hot flashes.

Kava. Like ginseng, kava may improve mood, but does not reduce hot flashes. Kava has been related to liver damage, so if you have liver problems, this supplement may not be right for you.

DHEA. Not plant-based, dehydroepiandrosterone (DHEA) is a natural substance sold as a supplement. The body changes it into estrogen and testosterone. It may help with hot flashes and decreased sexual arousal. The natural DHEA already found in the body lessens with age, so taking a DHEA supplement might help vasomotor symptoms. There are not enough studies on DHEA supplement side effects, so talk to your health care provider about risks.

OTHER OPTIONS
Remember, menopause is a natural part of getting older. Before you decide to take any herbal treatments or hormones, make sure you are doing all you can to be healthy. Stop smoking, eat right, and exercise. Doing so may help your vasomotor symptoms. You can also wear lighter clothing or clothing in layers to decrease hot flashes.

If you decide to take herbals or other supplements, check with your health care provider to make sure they are right for you. There is not a lot of proof that many supplements work. There is also a risk in taking supplements that are not regulated by the FDA. By talking to your health care provider, you can figure out if certain treatments are worth trying. You can also get a better idea of what to expect when you go through menopause and how to handle the change.
Kegel Exercises

The muscles that surround the vagina—called the pelvic floor muscles (PFM)—help to support the pelvic organs. Weakening of the PFM often results in loss of urine when laughing, coughing, sneezing, exercising, or rising from a chair.

Exercises to strengthen the PFM were popularized by Dr. Arnold Kegel, and are often called Kegel exercises. These exercises can help to control urinary incontinence and urgency.

Begin these exercises by emptying your bladder. Lie down with your head slightly elevated (at a 20° angle) and your knees bent comfortably. Try to relax completely. To aid in achieving a relaxed state, try repeating this relaxation technique: First, tense your fist into a tight ball and count to five. Then, completely relax your fist. Can you feel the difference between the two states? It is important that you are able to do so. Now, contract your abdominal muscles tightly for a few seconds; then relax them completely. This is the way your stomach muscles should feel when you do Kegel exercises: relaxed.

Try to think about the area around your vagina. You want to draw the muscles together quickly and deliberately as though you were trying to stop urination or a bowel movement. Once you have pulled the muscles together, hold the contraction for 10 seconds; then relax completely. Let approximately 10 seconds elapse before beginning another Kegel contraction.

When you contract or tighten your pelvic muscles, you may note that these muscles tire easily, or that you are not able to hold the contraction for the entire 10 seconds. As you continue to exercise, this will happen less frequently. If you think that you are no longer tightening or contracting your muscles, it is very important that you do not tighten them to see if you are contracting. The goal is to maintain constant effort in an active squeeze to build muscle control. In fact, it is more important to maintain a strong, active squeeze for a shorter period of time than to keep “flicking” the muscle for 10 seconds.

You may need to work up gradually to a full 10-second squeeze.

In the following example of Kegel exercise, to the count of 10 seconds:

1. Contract the muscles around the vagina deliberately, quickly, and hard
2. Hold it
3. Hold it
4. Hold it
5. Hold it
6. Hold it
7. Hold it
8. Hold it
9. Hold it
10. Relax completely.

Start the program by exercising three times per day, starting with 10 contractions each time (30 contractions per day). Each week, add five contractions to your regimen until you reach 20 contractions, three times a day, (60 per day). Try to do the exercises at a set time each day, preferably when you are not too tired. When you get comfortable doing the exercises laying down, you may do them sitting.

This patient handout was provided by Dorothy Kammerer-Doak, MD, associate clinical professor, Department of Obstetrics and Gynecology, University of New Mexico, Albuquerque; and urogynecologist, Lovelace Health Systems, Albuquerque, NM.
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<th>Possible Effect on Sexual Function</th>
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<tr>
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<td>Cyproterone Acetate</td>
<td>Prostate Cancer</td>
<td>Decreased libido, impotence, reduced volume of ejaculation</td>
</tr>
<tr>
<td>Disulfiram</td>
<td>Alcohol withdrawal</td>
<td>Decreased sex drive, impotence</td>
</tr>
<tr>
<td>Finasteride</td>
<td>Enlarged Prostate</td>
<td>Ejaculation disorders, reduced volume of ejaculation</td>
</tr>
<tr>
<td>Metoclopramide</td>
<td>Nausea and vomiting</td>
<td>Decreased sex drive, impotence</td>
</tr>
<tr>
<td>Omeprazole</td>
<td>Peptic ulcers, acid reflux disease</td>
<td>Impotence</td>
</tr>
<tr>
<td>Opioid painkillers (morphine)</td>
<td>Severe Pain</td>
<td>Decreased sex drive, impotence</td>
</tr>
<tr>
<td>Prochlorperazine</td>
<td>Nausea and vomiting</td>
<td>Impotence</td>
</tr>
<tr>
<td>Propantheline</td>
<td>Gut spasm, heart failure, fluid retention</td>
<td>Impotence</td>
</tr>
<tr>
<td>Spironolactone</td>
<td>Fluid Retention</td>
<td>Impotence, decreased sex drive</td>
</tr>
</tbody>
</table>

**REFERENCES:**
Dean, John, MD. “Are your Medicines Disrupting Your Sex Life?” Retrieved on 08/01/2010 from www.netdocotr.co.uk/menshealth/feature/medicinessex.htm
All About Menopause

What are peri-menopause and menopause?

Peri-menopause is the transitional time period before menopause occurs, when a woman still gets her period, but starts to experience changes in her menstrual cycle and some symptoms of menopause. Peri-menopause usually begins about 10 years before menopause. During peri-menopause, the amount of estrogen and progesterone, two essential hormones for women, gradually decreases. Menopause is a natural part of aging that occurs when a woman’s menstrual cycles have stopped for at least 1 year. Menopause occurs because the ovaries stop producing estrogen and progesterone, or because the ovaries are removed during hysterectomy. The average woman is 51 years old when this occurs.

What are the Symptoms

A woman in menopause may have none or several of these symptoms, including:
- Hot flushes or flashes (a sudden experience of intense heat and possible sweating in the upper body or face)
- Vaginal dryness or burning
- Pain or discomfort with sexual intercourse
- Joint discomfort
- Problems sleeping
- Mood swings or depression
- Urinating more often or feeling that you must urinate as soon as possible
- Difficulty controlling when you urinate (you may feel that you need to wear a pad to catch any unexpected flow of urine)
- Problems with memory

Possible Risks

- Obesity
- Diabetes
- Osteopenia or osteoporosis (thinning of the bones that can increase risk for bone fracture)
- Osteoarthritis (a decrease in the amount of protective cartilage between bones that may cause cracking sounds and pain in the joints)
- Cardiovascular risk, including high blood pressure, heart attack, stroke, and blood clots
- High LDL or "bad" cholesterol (a substance that carries fat in the blood vessels that may cause hardening of the arteries and can increase the risk for several diseases, including heart attack and stroke)
- Memory loss
- Increased risk for cancer, including breast, ovarian, uterine and colorectal
- Difficulty breathing during sleep
- Urinary tract infections

How can you stay healthy during menopause?

- Regular gynecological and medical checkups
- Annual blood work (to screen for diseases such as diabetes, cardiovascular disease, cancer and thyroid problems)
- Annual mammogram, PAP smear, screening for vaginal infections and STDs
- Bone density test to assess bone density every 1-3 years
- Consider a sleep study if your partner notices you snore at night or hears you having difficulty breathing in your sleep
- Tests for growths or cancer in your colon: hemoccult test to look for blood in the stool, sigmoidoscopy every 5 years, colonoscopy every 10 years
- Regular sexual activity and/or masturbation: Kegel exercises, which are vaginal tightening exercises to prevent urine from leaking, and a lubricant for sexual intercourse
- Report to your healthcare provider any vaginal bleeding that occurs after your menstrual cycles have stopped for 1 year

Therapies to decrease risks, discomforts of menopause

Hormone therapy can help decrease the risk of fractures from osteoporosis, as well as reduce hot flushes, vaginal dryness and discomfort, and the risk of colorectal cancer.

However, because hormone therapy can increase the risk of heart attack, strokes, blood clots, breast cancer and Alzheimer’s disease in women who have not had a hysterectomy, you need to discuss your own use of hormone therapy with your healthcare provider.

Other therapies that should be discussed with your healthcare provider include:
- Diet that includes a variety of green and yellow vegetables, fiber-rich treats, whole grains, dairy products, soy products and plenty of fluids
- Vitamins and minerals, including vitamins B, C, D, E, zinc, magnesium and calcium
- Decreased intake of caffeine, alcohol, concentrated sweets, fats, high-cholesterol foods and red meat
- A combination of aerobic, weight strengthening and flexibility exercises
- Weight management
- Smoking cessation
- Medications that increase bone density and reduce the risk of fractures
- Herbal remedies
- Psychotherapy for depression
- Communication with your partner about your feelings and sexuality

Bobbie Posmanier is a certified midwife and owner of Newtown Midwifery, Huntington Valley, PA.

The purpose of this patient education handout is to further explain or remind you about a medical condition. This handout is a general guide only. If you have specific questions, be sure to discuss them with your healthcare provider. This handout may be reproduced for distribution to patients.
Complete the screen by filling in the boxes with the appropriate numbers. Total the numbers for the final screening score.

### Screening

#### A
Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?
- 0 = severe decrease in food intake
- 1 = moderate decrease in food intake
- 2 = no decrease in food intake

#### B
Weight loss during the last 3 months
- 0 = weight loss greater than 3 kg (6.6 lbs)
- 1 = does not know
- 2 = weight loss between 1 and 3 kg (2.2 and 6.6 lbs)
- 3 = no weight loss

#### C
Mobility
- 0 = bed or chair bound
- 1 = able to get out of bed / chair but does not go out
- 2 = goes out

#### D
Has suffered psychological stress or acute disease in the past 3 months?
- 0 = yes
- 2 = no

#### E
Neuropsychological problems
- 0 = severe dementia or depression
- 1 = mild dementia
- 2 = no psychological problems

#### F1
Body Mass Index (BMI) (weight in kg) / (height in m\(^2\))
- 0 = BMI less than 19
- 1 = BMI 19 to less than 21
- 2 = BMI 21 to less than 23
- 3 = BMI 23 or greater

#### F2
Calf circumference (CC) in cm
- 0 = CC less than 31
- 3 = CC 31 or greater

### Screening score (max. 14 points)

- 12-14 points: Normal nutritional status
- 8-11 points: At risk of malnutrition
- 0-7 points: Malnourished

For more information: [www.mna-elderly.com](http://www.mna-elderly.com)
A guide to completing the Mini Nutritional Assessment MNA®
Mini Nutritional Assessment (MNA®)

The MNA® is a screening and assessment tool that can be used to identify elderly patients at risk of malnutrition. The User Guide will assist you in completing the MNA® accurately and consistently. It explains each question and how to assign and interpret the score.

Introduction:

While the prevalence of malnutrition in the free living elderly population is relatively low, the risk of malnutrition increases dramatically in the institutionalized and hospitalized elderly. The prevalence of malnutrition is even higher in cognitively impaired elderly individuals and is associated with cognitive decline.

Patients who are malnourished when admitted to the hospital tend to have longer hospital stays, experience more complications, and have greater risks of morbidity and mortality than those whose nutritional state is normal.

By identifying patients who are malnourished or at risk of malnutrition either in the hospital or community setting, the MNA® allows clinicians to intervene earlier to provide adequate nutritional support, prevent further deterioration, and improve patient outcomes.

Mini Nutritional Assessment MNA®

The MNA® provides a simple and quick method of identifying elderly patients who are at risk for malnutrition, or who are already malnourished. It identifies the risk of malnutrition before severe changes in weight or serum protein levels occur.

The MNA® may be completed at regular intervals in the community and in the hospital or long term care setting.

The MNA® was developed by Nestlé and leading international geriatricians and remains one of the few validated screening tools for the elderly. It has been well validated in international studies in a variety of settings and correlates with morbidity and mortality.

INSTRUCTIONS TO COMPLETE THE MNA®

Before beginning the MNA®, please enter the patient's information on the top of the form:

- Name
- Gender
- Age
- Weight (kg) – To obtain an accurate weight, remove shoes and heavy outer clothing. Use a calibrated and reliable set of scales. If applicable: convert pounds (lbs) to kilograms (1kg = 2.2lbs).
- Height (cm) – Measure height without shoes using a stadiometer (height gauge) or, if the patient is bedridden, by knee height or demispan (see Appendices 4 or 5). Convert inches to centimeters (1inch = 2.54cm).
- Date of screen
Complete the screen by filling in the boxes with the appropriate numbers. Then, add together the numbers to determine the total score of the screen. If the score is 11 or less, continue on with the assessment to determine the Malnutrition Indicator Score.

**Key Points**

Ask the patient to answer the following questions using the suggestions in the shaded areas. If the patient is unable to answer the question, ask the patient’s caregiver to answer. Using the patient’s medical record or your professional judgment, answer any remaining questions.

### A

<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has food intake declined over the past three months due to loss of appetite, digestive problems, chewing or swallowing difficulties?</td>
<td>0</td>
</tr>
<tr>
<td>Score</td>
<td></td>
</tr>
<tr>
<td>0 = Severe loss of appetite</td>
<td>1</td>
</tr>
<tr>
<td>1 = Moderate loss of appetite</td>
<td>2</td>
</tr>
<tr>
<td>2 = No decrease in food intake</td>
<td></td>
</tr>
</tbody>
</table>

**Ask patient**

» “Have you eaten less than normal over the past three months?”

» If so, “Is this because of lack of appetite, chewing, or swallowing difficulties?”

» If yes, “Have you eaten much less than before or only a little less?”

» If this is a re-assessment, then rephrase the question: “Has the amount of food you have eaten changed since your last assessment?”

### B

<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight loss during the last 3 months?</td>
<td></td>
</tr>
<tr>
<td>Score</td>
<td></td>
</tr>
<tr>
<td>0 = Weight loss greater than 3 kg (6.6 pounds)</td>
<td></td>
</tr>
<tr>
<td>1 = Does not know</td>
<td></td>
</tr>
<tr>
<td>2 = Weight loss between 1 and 3 kg (2.2 and 6.6 pounds)</td>
<td></td>
</tr>
<tr>
<td>3 = No weight loss</td>
<td></td>
</tr>
</tbody>
</table>

**Ask patient / medical record (if long term or residential care)**

» “Have you lost any weight without trying over the last 3 months?”

» “Has your waistband gotten looser?”

» “How much weight do you think you have lost?
   More or less than 3 kg (or 6 pounds)?”

Though weight loss in the overweight elderly may be appropriate, it may also be due to malnutrition. When the weight loss question is removed, the MNA® loses its sensitivity, so it is important to ask about weight loss even in the overweight.
### C

**Mobility?**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Bed or chair bound</td>
</tr>
<tr>
<td>1</td>
<td>Able to get out of bed/chair, but does not go out</td>
</tr>
<tr>
<td>2</td>
<td>Goes out</td>
</tr>
</tbody>
</table>

*Ask patient / Patient’s medical record / Information from caregiver*

» “Are you presently able to get out of the bed / chair?”

» “Are you able to get out of the house or go outdoors on your own?”

### D

**Has the patient suffered psychological stress or acute disease in the past three months?**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>No</td>
</tr>
</tbody>
</table>

*Ask patient / Patient medical record / Professional judgment*

» “Have you suffered a bereavement recently?”

» “Have you recently moved your home?”

» “Have you been sick recently?”

### E

**Neuropsychological problems?**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Severe dementia or depression</td>
</tr>
<tr>
<td>1</td>
<td>Mild dementia</td>
</tr>
<tr>
<td>2</td>
<td>No psychological problems</td>
</tr>
</tbody>
</table>

*Review patient medical record / Professional judgment / Ask nursing staff or caregiver*

The patient’s caregiver, nursing staff or medical record can provide information about the severity of the patient’s neuropsychological problems (dementia).

If a patient cannot respond (i.e. one with dementia) or is severely confused, ask the patient’s personal or professional caregiver to answer the following questions or check the patient’s answers for accuracy (Questions A, B, C, D, G, J, K, L, M, O, P).
Body mass index (BMI)?
(weight in kg / height in m^2)

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>BMI less than 19</td>
</tr>
<tr>
<td>1</td>
<td>BMI 19 to less than 21</td>
</tr>
<tr>
<td>2</td>
<td>BMI 21 to less than 23</td>
</tr>
<tr>
<td>3</td>
<td>BMI 23 or greater</td>
</tr>
</tbody>
</table>

**Determining BMI**

BMI is used as an indicator of appropriate weight for height. BMI is calculated by dividing the weight in kg by the height in m^2 (Appendix 1).

\[
BMI = \frac{\text{weight (kg)}}{\text{height (m}^2)}
\]

Before determining BMI, record the patients’ weight and height on the MNA® form.

1. Convert subject’s weight to metric using formula 1kg = 2.2lbs. Convert subject’s height to metric using formula 1inch = 2.54cm
2. If height has not been measured, please measure using a stadiometer or height gauge (Refer to Appendix 3).
3. If the patient is unable to stand, measure height using indirect methods such as measuring demi-span (half arm span) or knee height (See Appendices 4 and 5). If height cannot be measured either directly or by indirect methods, use a verbal or historical height to calculate a BMI. Verbal height will be the least accurate, especially for bedridden patients and patients who have lost height over the years.
4. Using the BMI chart provided (Appendix 1), locate the patient’s height and weight and determine the BMI. It is essential that a BMI is included in the MNA® – without it the tool is not valid.
5. Fill in the appropriate box on the MNA® form to represent the BMI of the patient.
6. To determine BMI for a patient with an amputation, see Appendix 2.

A score of 11 points or less indicates:
Patient may be at risk for malnutrition. Please complete the full MNA® assessment by answering questions G – R.

The screening section of the questionnaire is now complete. Add the numbers to obtain the screening score.

A score of 12 points or greater indicates:
Patient is not at nutrition risk. There is no need to complete the rest of the questionnaire. Rescreen at regular intervals.
### G

**Lives independently (not in a nursing home)?**

<table>
<thead>
<tr>
<th>Score</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Ask patient**

This question refers to the normal living conditions of the individual. Its purpose is to determine if the person is usually dependent on others for care. For example, if the patient is in the hospital because of an accident or acute illness, where does the patient normally live?

> “Do you normally live in your own home, or in an assisted living, residential setting, or nursing home?”

### H

**Takes more than 3 prescription drugs per day?**

<table>
<thead>
<tr>
<th>Score</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>No</td>
</tr>
</tbody>
</table>

**Ask patient / Patient medical record**

Check the patient’s medication record / ask nursing staff / ask doctor / ask patient

### I

**Pressure sores or skin ulcers?**

<table>
<thead>
<tr>
<th>Score</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>No</td>
</tr>
</tbody>
</table>

**Ask patient / Patient’s medical record**

> “Do you have bed sores?”

Check the patient’s medical record for documentation of pressure wounds or skin ulcers, or ask the caregiver / nursing staff / doctor for details, or examine the patient if information is not available in the medical record.
### J

How many full meals does the patient eat daily?

<table>
<thead>
<tr>
<th>Score</th>
<th>Meals</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1 meal</td>
</tr>
<tr>
<td>1</td>
<td>2 meals</td>
</tr>
<tr>
<td>3</td>
<td>3 meals</td>
</tr>
</tbody>
</table>

**Ask patient / Check food intake record if necessary**

- “Do you normally eat breakfast, lunch and dinner?”
- “How many meals a day do you eat?”

A full meal is defined as eating more than 2 items or dishes when the patient sits down to eat.

For example, eating potatoes, vegetable, and meat is considered a full meal; or eating an egg, bread, and fruit is considered a full meal.

### K

Selected consumption markers for protein intake

- At least one serving of dairy products per day?
  - Yes ☐  No ☐
- Two or more servings of legumes or eggs per week?
  - Yes ☐  No ☐
- Meat, fish or poultry every day?
  - Yes ☐  No ☐

**Score**

- 0.0 = if 0 or 1 Yes answer(s)
- 0.5 = if 2 Yes answers
- 1.0 = if 3 Yes answers

**Ask the patient or nursing staff, or check the completed food intake record**

- “Do you consume any dairy products (a glass of milk / cheese in a sandwich / cup of yogurt / can of high protein supplement) every day?”
- “Do you eat beans/eggs? How often do you eat them?”
- “Do you eat meat, fish or chicken every day?”
**L**

<table>
<thead>
<tr>
<th>Consumes two or more servings of fruits or vegetables per day?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score 0 = No</td>
</tr>
</tbody>
</table>

**Ask the patient / check the completed food intake record if necessary**

» “Do you eat fruits and vegetables?”

» “How many portions do you have each day?”

A portion can be classified as:
- One piece of fruit (apple, banana, orange, etc.)
- One medium cup of fruit or vegetable juice
- One cup of raw or cooked vegetables

**M**

<table>
<thead>
<tr>
<th>How much fluid (water, juice, coffee, tea, milk) is consumed per day?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score 0.0 = Less than 3 cups</td>
</tr>
</tbody>
</table>

**Ask patient**

» “How many cups of tea or coffee do you normally drink during the day?”

» “Do you drink any water, milk or fruit juice? What size cup do you usually use?”

A cup is considered 200 – 240ml or 7-8oz.

**N**

<table>
<thead>
<tr>
<th>Mode of Feeding?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score 0 = Unable to eat without assistance *</td>
</tr>
<tr>
<td>Score 1 = Feeds self with some difficulty **</td>
</tr>
<tr>
<td>Score 2 = Feeds self without any problems</td>
</tr>
</tbody>
</table>

**Ask patient / Patient medical record / information from caregiver**

» “Are you able to feed yourself?” / “Can the patient feed himself/herself?”

» “Do you need help to eat?” / “Do you help the patient to eat?”

» “Do you need help setting up your meals (opening containers, buttering bread, or cutting meats)?”

* Patients who must be fed or need help holding the fork would score 0.

** Patients who need help setting up meals (opening containers, buttering bread, or cutting meats), but are able to feed themselves would score 1 point.

Pay particular attention to potential causes of malnutrition that need to be addressed to avoid malnutrition (e.g. dental problems, need for adaptive feeding devices to support eating).
### Self-View of Nutritional Status

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Views self as being malnourished</td>
</tr>
<tr>
<td>1</td>
<td>Is uncertain of nutritional state</td>
</tr>
<tr>
<td>2</td>
<td>Views self as having no nutritional problems</td>
</tr>
</tbody>
</table>

**Ask the patient**

» “How would you describe your nutritional state?”

Then prompt “Poorly nourished?”

“Uncertain?”

“No problems?”

The answer to this question depends upon the patient’s state of mind. If you think the patient is not capable of answering the question, ask the caregiver / nursing staff for their opinion.

### In comparison with other people of the same age, how does the patient consider his/her health status?

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>Not as good</td>
</tr>
<tr>
<td>0.5</td>
<td>Does not know</td>
</tr>
<tr>
<td>1.0</td>
<td>As good</td>
</tr>
<tr>
<td>2.0</td>
<td>Better</td>
</tr>
</tbody>
</table>

**Ask patient**

» “How would you describe your state of health compared to others your age?”

Then prompt “Not as good as others of your age?”

“Not sure?”

“As good as others of your age?”

“Better?”

Again, the answer will depend upon the state of mind of the person answering the question.

### Mid-arm circumference (MAC) in cm

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>MAC less than 21</td>
</tr>
<tr>
<td>0.5</td>
<td>MAC 21 to 22</td>
</tr>
<tr>
<td>1.0</td>
<td>MAC 22 or greater</td>
</tr>
</tbody>
</table>

Measure the mid-arm circumference in cm as described in Appendix 6.

### Calf circumference (CC) in cm

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>CC less than 31</td>
</tr>
<tr>
<td>1</td>
<td>CC 31 or greater</td>
</tr>
</tbody>
</table>

Calf circumference should be measured in cm as described in Appendix 7.
Final Score

» Total the points from the assessment section of the MNA* (maximum 16 points).

» Add the assessment and screening scores together to get the total Malnutrition Indicator Score (Maximum 30 points).

» Check the appropriate box indicator.

» If the score is greater than 23.5 points, the patient is in a normal state of nutrition and no further action is required.

» If the score is less than 23.5 points, refer the patient to a dietitian or nutrition specialist for nutrition intervention.

Until a dietitian is available, give the patient / caregiver some advice on how to improve nutritional intake such as:

» Increase intake of energy/protein dense foods (e.g. puddings, milkshakes, etc).

» Supplement food intake with additional snacks and milk.

» If diet alone does not improve the patient’s nutritional intake, the patient may need oral nutritional supplements.

» Ensure adequate fluid intake; 6-8 cups / glasses per day.

Follow-Up

» Re-screen all patients every three months.

» Please refer results of assessments & re-assessments to dietitian/doctor and record in medical record.
## Appendix 1 • Body Mass Index table

### Source:

### Height (feet & inches)

<table>
<thead>
<tr>
<th>Height (cm)</th>
<th>Underweight</th>
<th>Weight Appropriate</th>
<th>Overweight</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>150-152.5</td>
<td>153-155</td>
<td>156-160</td>
<td>161-162.5</td>
<td>163-165</td>
</tr>
<tr>
<td>166-167.5</td>
<td>170-172.5</td>
<td>175-177.5</td>
<td>180-182.5</td>
<td>185-187.5</td>
</tr>
<tr>
<td>190-192</td>
<td>195-197</td>
<td>200-202</td>
<td>205-207</td>
<td>210-212</td>
</tr>
<tr>
<td>240-242</td>
<td>245-247</td>
<td>250-252</td>
<td>255-257</td>
<td>260-262</td>
</tr>
</tbody>
</table>

### Weight (kg)

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>Underweight</th>
<th>Weight Appropriate</th>
<th>Overweight</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-105</td>
<td>110-115</td>
<td>120-125</td>
<td>130-135</td>
<td>140-145</td>
</tr>
<tr>
<td>150-155</td>
<td>160-165</td>
<td>170-175</td>
<td>180-185</td>
<td>190-195</td>
</tr>
<tr>
<td>200-205</td>
<td>210-215</td>
<td>220-225</td>
<td>230-235</td>
<td>240-245</td>
</tr>
</tbody>
</table>

### Height (cm)

<table>
<thead>
<tr>
<th>Height (cm)</th>
<th>Underweight</th>
<th>Weight Appropriate</th>
<th>Overweight</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>150-152.5</td>
<td>153-155</td>
<td>156-160</td>
<td>161-162.5</td>
<td>163-165</td>
</tr>
<tr>
<td>166-167.5</td>
<td>170-172.5</td>
<td>175-177.5</td>
<td>180-182.5</td>
<td>185-187.5</td>
</tr>
<tr>
<td>190-192</td>
<td>195-197</td>
<td>200-202</td>
<td>205-207</td>
<td>210-212</td>
</tr>
<tr>
<td>240-242</td>
<td>245-247</td>
<td>250-252</td>
<td>255-257</td>
<td>260-262</td>
</tr>
</tbody>
</table>

### Weight (pounds)

<table>
<thead>
<tr>
<th>Weight (pounds)</th>
<th>Underweight</th>
<th>Weight Appropriate</th>
<th>Overweight</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>220-225</td>
<td>230-235</td>
<td>240-245</td>
<td>250-255</td>
<td>260-265</td>
</tr>
<tr>
<td>270-275</td>
<td>280-285</td>
<td>290-295</td>
<td>300-305</td>
<td>310-315</td>
</tr>
<tr>
<td>320-325</td>
<td>330-335</td>
<td>340-345</td>
<td>350-355</td>
<td>360-365</td>
</tr>
<tr>
<td>370-375</td>
<td>380-385</td>
<td>390-395</td>
<td>400-405</td>
<td>410-415</td>
</tr>
<tr>
<td>420-425</td>
<td>430-435</td>
<td>440-445</td>
<td>450-455</td>
<td>460-465</td>
</tr>
</tbody>
</table>

Last Update 9/10
Appendix 2 • Determining BMI for amputees

To determine the BMI for amputees, first determine the patient’s estimated weight including the weight of the missing body part.\(^8,9\)

» Use a standard reference (see table) to determine the proportion of body weight contributed by an individual body part.

» Multiple patient’s current weight by the percent of body weight of the missing body part to determine estimated weight of missing part.

» Add the estimated weight of the missing body part to patient’s current weight to determine estimated weight prior to amputation.

Divide estimated weight by estimated body height\(^2\) to determine BMI.

Example: 80 year old man, amputation of the left lower leg, 1.72 m, 58 kg

1. Estimate body weight: Current body weight + Proportion for the missing leg
   \[58 \text{ (kg)} + [58 \text{ (kg)} \times 0.059] = 61.4 \text{ kg}\]

2. Calculate BMI:
   Estimated body weight / body height (m)\(^2\)
   \[61.4 / 1.72 \times 1.72 = 20.8\]

References cited:

Weight of selected body components
It is necessary to account for the missing body component(s) when estimating IBW.

Table: Percent of Body Weight Contributed by Specific Body Parts

<table>
<thead>
<tr>
<th>Body Part</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trunk w/o limbs</td>
<td>50.0</td>
</tr>
<tr>
<td>Hand</td>
<td>0.7</td>
</tr>
<tr>
<td>Forearm with hand</td>
<td>2.3</td>
</tr>
<tr>
<td>Forearm without hand</td>
<td>1.6</td>
</tr>
<tr>
<td>Upper arm</td>
<td>2.7</td>
</tr>
<tr>
<td>Entire arm</td>
<td>5.0</td>
</tr>
<tr>
<td>Foot</td>
<td>1.5</td>
</tr>
<tr>
<td>Lower leg with foot</td>
<td>5.9</td>
</tr>
<tr>
<td>Lower leg without foot</td>
<td>4.4</td>
</tr>
<tr>
<td>Thigh</td>
<td>10.1</td>
</tr>
<tr>
<td>Entire leg</td>
<td>16.0</td>
</tr>
</tbody>
</table>
Appendix 3 • Measuring height using a stadiometer

1. Ensure the floor surface is even and firm.
2. Have subject remove shoes and stand up straight with heels together, and with heels, buttocks and shoulders pressed against the stadiometer.
3. Arms should hang freely with palms facing thighs.
4. Take the measurement with the subject standing tall, looking straight ahead with the head upright and not tilted backwards.
5. Make sure the subject's heels stay flat on the floor.
6. Lower the measure on the stadiometer until it makes contact with the top of the head.
7. Record standing height to the nearest centimeter.

Accessed at:

Appendix 4 • Measurement of Demispan

Demispan (half-arm span) is the distance from the midline at the sternal notch to the web between the middle and ring fingers along outstretched arm. Height is then calculated from a standard formula.10

1. Locate and mark the midpoint of the sternal notch with the pen.
2. Ask the patient to place the left arm in a horizontal position.
3. Check that the patient's arm is horizontal and in line with shoulders.
4. Using the tape measure, measure distance from mark on the midline at the sternal notch to the web between the middle and ring fingers.
5. Check that arm is flat and wrist is straight.
6. Take reading in cm.

Calculate height from the formula below:

Females
Height in cm = (1.35 x demispan in cm) + 60.1
Males
Height in cm = (1.40 x demispan in cm) + 57.8

Source:
Reproduced here with the kind permission of BAPEN (British Association for Parenteral and Enteral Nutrition) from the ‘MUST’ Explanatory Booklet.
For further information see www.bapen.org.uk
(http://www.bapen.org.uk/pdfs/must/must_explan.pdf)
Knee height is one method to determine stature in the bed- or chair-bound patient and is measured using a sliding knee height caliper. The subject must be able to bend the knee and the ankle to 90 degree angles.

1. Have the subject bend the knee and ankle of one leg at a 90 degree angle while lying supine or sitting on a table with legs hanging off the side of the table.

2. Place the fixed blade of the knee caliper under the heel of the foot in line with the ankle bone. Place the fixed blade of the caliper on the anterior surface of the thigh about 3.0 cm above the patella.

3. Be sure the shaft of the caliper is in line with and parallel to the long bone in the lower leg (tibia) and is over the ankle bone (lateral malleolus). Apply pressure to compress the tissue. Record the measurement to the nearest 0.1 cm.

4. Take two measurements in immediate succession. They should agree within 0.5 cm. Use the average of these two measurements and the person’s chronological age in the country and ethnic group specific equations in the following table.

5. The value calculated from the selected equation is an estimate of the person’s true stature. The 95 percent confidence for this estimate is plus and minus twice the SEE value for each equation.

### Using population-specific formula, calculate height from standard formula:

<table>
<thead>
<tr>
<th>Gender &amp; ethnic group</th>
<th>Equation: Stature (cm) =</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic white men (U.S.)</td>
<td>78.31 + (1.94 x knee height) – (0.14 x age)</td>
</tr>
<tr>
<td>Non-Hispanic black men (U.S.)</td>
<td>79.69 + (1.85 x knee height) – (0.14 x age)</td>
</tr>
<tr>
<td>Mexican-American men (U.S.)</td>
<td>82.77 + (1.83 x knee height) – (0.16 x age)</td>
</tr>
<tr>
<td>Non-Hispanic white women (U.S.)</td>
<td>82.21 + (1.85 x knee height) – (0.21 x age)</td>
</tr>
<tr>
<td>Non-Hispanic black women (U.S.)</td>
<td>89.58 + (1.61 x knee height) – (0.17 x age)</td>
</tr>
<tr>
<td>Mexican-American women (U.S.)</td>
<td>84.25 + (1.82 x knee height) – (0.26 x age)</td>
</tr>
<tr>
<td>Taiwanese men</td>
<td>85.10 + (1.73 x knee height) – (0.11 x age)</td>
</tr>
<tr>
<td>Taiwanese women</td>
<td>91.45 + (1.53 x knee height) – (0.16 x age)</td>
</tr>
<tr>
<td>Elderly Italian men</td>
<td>94.87 – (1.58 x knee height) – (0.23 x age) + 4.8</td>
</tr>
<tr>
<td>Elderly Italian women</td>
<td>94.87 + (1.58 x knee height) – (0.23 x age)</td>
</tr>
<tr>
<td>French men</td>
<td>74.7 + (2.07 x knee height) – (-0.21 x age)</td>
</tr>
<tr>
<td>French women</td>
<td>67.00 + (2.2 x knee height) – (0.25 x age)</td>
</tr>
<tr>
<td>Mexican Men</td>
<td>52.6 + (2.17 x knee height)</td>
</tr>
<tr>
<td>Mexican Women</td>
<td>73.70 + (1.99 x knee height) – (0.23 x age)</td>
</tr>
<tr>
<td>Filipino Men</td>
<td>96.50 + (1.38 x knee height) – (0.08 x age)</td>
</tr>
<tr>
<td>Filipino Women</td>
<td>89.63 + (1.53 x knee height) – (0.17 x age)</td>
</tr>
<tr>
<td>Malaysian men</td>
<td>(1.924 x knee height) + 69.38</td>
</tr>
<tr>
<td>Malaysian women</td>
<td>(2.225 x knee height) + 50.25</td>
</tr>
</tbody>
</table>

Source:
http://www.rxkinetics.com/height_estimate.html
Appendix 6 • Measuring Mid Arm Circumference

1. Ask the patient to bend their non-dominant arm at the elbow at a right angle with the palm up.

2. Measure the distance between the acromial surface of the scapula (bony protrusion surface of upper shoulder) and the olecranon process of the elbow (bony point of the elbow) on the back of the arm.

3. Mark the mid-point between the two with the pen.

4. Ask the patient to let the arm hang loosely by his/her side.

5. Position the tape at the mid-point on the upper arm and tighten snugly. Avoid pinching or causing indentation.

6. Record measurement in cm.

7. If MAC is less than 21, score = 0.
   If MAC is 21-22, score = 0.5.
   If MAC is 22 or greater, score = 1.0.

Source: Moore MC, Pocket Guide to Nutrition and Diet Therapy, 1993

Appendix 7 • Measuring Calf Circumference

1. The subject should be sitting with the left leg hanging loosely or standing with their weight evenly distributed on both feet.

2. Ask the patient to roll up their trouser leg to uncover the calf.

3. Wrap the tape around the calf at the widest part and note the measurement.

4. Take additional measurements above and below the point to ensure that the first measurement was the largest.

5. An accurate measurement can only be obtained if the tape is at a right angle to the length of the calf.

References

Snellen chart for adults

K H O R
20/100

O Z N H V C
20/70

R K S C Z H V D
20/50

H O C Z R K D S V N
20/30

S D K H O R C V
20/20
Your vagina is an impressive organ. When nothing is inside it, its soft, folded walls are compressed and touching each other. But when needed, it has the ability to stretch a little bit—to accommodate a tampon, for instance—or quite a lot, so a baby's head can pass through during childbirth. The female hormone estrogen helps the vagina remain moist and stretchy. When estrogen levels drop, women can develop vaginal atrophy, also called atrophic vaginitis.

About Vaginal Atrophy

Vaginal atrophy is most likely to occur after menopause, when your ovaries naturally decrease estrogen production and your periods stop. It can also happen after surgical removal of your ovaries. Sometimes your ovaries shut down even if only your uterus is removed. Your ovaries also produce less estrogen when you are breast-feeding, causing temporary vaginal atrophy. In this case, the vaginal walls return to their usual moist, stretchy state after your baby stops, or decreases, nursing.

Medications used to treat conditions of the reproductive system, such as endometriosis or fibroids, can decrease estrogen levels and cause temporary vaginal atrophy. It can also be caused by medications used to treat some cancers.

Vaginal atrophy usually occurs gradually, not immediately after estrogen levels decrease. It may take several years before you notice the changes.

As the vaginal walls become thinner and drier and lose some of the folds (called rugae) that allow them to stretch, some women never notice any symptoms. Others may experience a burning sensation, a feeling of dryness, some itching, or a thin, watery discharge. One of the most common symptoms is pain when inserting anything into the vagina, such as during intercourse, masturbation, or other sexual contact. After intercourse, you may experience some light bleeding or spotting.

During a pelvic examination, your health care provider may see the changes in your vagina.

Treatments: Over-the-Counter and Prescription

There are two ways to treat vaginal atrophy. One is to control the symptoms by providing moisture to the vaginal walls with either vaginal lubricants or vaginal moisturizers. The second option is to use estrogen-containing medications that are either topical (placed directly in the vagina) or systemic (reaching the vagina by way of your bloodstream).

Vaginal Moisturizers.—Available without a prescription, these can be found in most drug stores. They come in many forms, the most common being liquids, gels, and suppositories. If vaginal dryness or burning is a constant, everyday problem, a vaginal moisturizer can be used daily. You can place these moisturizers inside your...
Vaginal atrophy is the result of decreasing estrogen levels, which causes the vaginal tissue to become thin and dry, losing its ability to stretch easily. If vaginal atrophy is bothersome, you can use vaginal lubricants and moisturizers, available without prescription, or discuss using estrogen-containing products with your health care provider.

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What You Should Know About Vitamin D

Vitamin D helps your body absorb calcium, which is needed to build and maintain strong bones. People with low vitamin D levels may have low bone mass or low bone density.

Why do I need vitamin D?
Vitamin D helps protect your bones. Calcium works with vitamin D to build bone mass in children and keep bones strong and healthy in adults. Maintaining appropriate levels of vitamin D and calcium is especially important for women, because they are more likely to develop osteoporosis (a condition that makes bones weak and easily breakable).

How can I get vitamin D?
You can get vitamin D from 3 sources:
- Sunlight
- Food
- Supplements and medications.

Your skin makes vitamin D from the sun’s rays. This is why vitamin D is known as the “sunshine vitamin.” The amount of vitamin D your skin makes depends on the time of day, season, your location (southern and southwestern regions of the United States are generally sunnier), skin color, and age.

However, it may be best to stay out of the sun because of concerns of skin cancer. Sunscreens block the rays necessary for your skin to make vitamin D, and being in the sun without sunscreen can make you vulnerable to the sun’s harmful effects. Many people thus obtain vitamin D from other sources, such as food or supplements.

Foods rich in vitamin D include fatty fish (like mackerel, salmon, and tuna), egg yolks, and beef liver. Vitamin D is sometimes added to many other foods, such as milk, margarine, and breakfast cereals. It is very difficult to get all the vitamin D you need from food alone. This is why people may also take vitamin D supplements.

Before taking any supplement, talk to your health care professional. Find out if your calcium supplement, multivitamin, or medication already contains the right amount of vitamin D for your needs. If so, you may not need a separate vitamin D supplement.

Who may need more vitamin D?
Some people may not be getting enough vitamin D. You may be at risk if you:
- spend little time in the sun
- have very dark skin
- are age 50 or older
- have certain medical conditions like pancreatic enzyme deficiency, Crohn’s disease, cystic fibrosis, celiac disease, or some forms of liver disease
- are obese.

How can I check my vitamin D levels?
A blood test can determine if you are getting enough vitamin D. If you feel you may be at risk for vitamin D deficiency, be sure to talk to your health care professional about this test and options for increasing your vitamin D intake.

Remember: vitamin D is crucial in helping protect your bones. It works with calcium to strengthen your bones and decrease your chance of developing osteoporosis. Vitamin D is especially important for women, because they are more likely than men to have low bone mass or low bone density.

Some Food Sources of Vitamin D

Natural sources
- Salmon (3.5 oz): 360 IU
- Mackerel (3.5 oz): 345 IU
- Tuna, canned (3.5 oz): 200 IU
- Beef liver (3.5 oz): 15 IU
- Egg (1, whole): 20 IU

Fortified foods
- Margarine (fortified, 1 tbsp): 60 IU
- Milk (fortified, 8 oz): 98 IU
- Breakfast cereals (fortified, 1 cup): 40 IU