

Assessment Formulas

NUTRITIONAL ASSESSMENT FORMULAS

A complete nutritional assessment should ideally include not only a diet history, but several measurements which will provide a more sensitive and accurate assessment of a client's nutritional status. In addition, these measurements are useful indicators of changes in nutritional status.

BODY SIZE

Weight

A measurement of total body weight is often the only measurement available to determine changes. Weight measurements should be done routinely **at each and every visit and be recorded**. In order to ensure accuracy, the same scale should be used and calibrated regularly.

Weight graphing provides an excellent visual assessment and may provide clinical indications of changing health status.

To convert weight in pounds to kilograms: Divide the weight in pounds by 2.2.

To convert kilograms to pounds: Multiply the number of kilograms by 2.2.

Ideal Body Weight (IBW)

This measurement is useful for comparing a person's current (actual) weight against a recommended weight based on height. The Metropolitan Life Insurance Tables (1983) are the most recent tables available.

IBW can also be calculated:

Male: 106 pounds + 6 X number of inches over 5 feet tall

Female: 100 pounds + 5 X number of inches over 5 feet tall

In addition, a 10% plus/minus provision is also included to allow for variations in frame size providing a weight range for good health. Typically, when an individual is below their IBW range fatigue, poor energy, and nutritional risk is obviously increased.

Caution should be used in relying on IBW standards as a basis for determination of nutritional status since these standards have been developed using a healthy adult population.

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Adjusted Body Weight

When someone is obese, that is, their body mass index (BMI) is over 30, instead of using the person's current actual body weight to calculate caloric needs, use adjusted body weight. (For BMI formula, see Page 7-6).

Adjusted body weight is calculated by using the following equation:

Actual Body Weight - Ideal Body Weight x .25 + Ideal Body Weight

Reference Body Weight (RBW)

RBW may be used instead of ideal body weight. RBW is the midpoint of the healthy weight range in the 1995 Dietary Guidelines for Americans. Within the healthy range RBW can be adjusted upward for more highly muscled and downward for less muscled individuals.

Usual Body Weight (UBW)

This is the weight the client usually remembers. The client should be asked what they weighed most of their **adult** life. This is a crucial piece of information to obtain since most people have never weighed within their IBW range. In addition, weights for 6 months ago and 1 year ago should also be asked and recorded.

Expectations for weight management should be appropriately defined based on this information.

Height

The actual height of the client should always be measured at the first visit. Clients often report inaccurate heights which will affect determinations of IBW and potentially assessment of overall nutritional status.

Balance beam scales usually have a height measuring device. Another option is to use a measuring tape placed on the wall.

To convert inches to centimeters: Multiply inches by 2.54.

Instructions for Obtaining Height

Height should be measured without shoes. With the client's back against the wall or measuring board, ask him or her to stand erect and to look ahead. The outer corner of the eye and top of the ear should be in line parallel to the floor. Heels, scapula, and buttocks should touch the wall.

A right-angle headboard should be lowered to rest flat at the crown of the client's head. Height should be read to the nearest inch or .5 cm.

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BODY COMPOSITION

It has been widely agreed that the ability to maintain lean body mass, or muscle tissue can and will influence the overall health of an individual infected with HIV. There is a strong correlation between loss of muscle mass and serious illness. It is therefore important to monitor changes in body composition that influence nutritional status.

Triceps, Skinfold and Mid-upper Arm Circumference

Triceps skinfold (TSF) thickness measures the amount of subcutaneous body fat. Approximately 50% of total body fat is subcutaneous. TSF is one of the skinfold sites found to be most reflective of body fatness. Changes in TSF are estimated to take 3-4 weeks. Formulas using mid-upper arm circumference (MAC) and TSF provide indirect assessment of the arm muscle area and arm fat area.

Instructions for measuring triceps skinfold:

- ❖ Do not take skinfold measurements after the person has exercised, swam, or showered since skinfold thickness will be increased due to increased blood flow to the skin.
- ❖ The caliper needle should be on zero before starting the procedure.
- ❖ The point at which the skinfold measurement is taken is the same point used for mid-arm circumference. This point is halfway between the acromion process of the scapula and the tip of the elbow. Mark this point with a felt pen or adhesive label.
- ❖ Always take skinfold measurements (not only triceps skinfold) on the right side of the body.
- ❖ The person should be sitting or standing with arms relaxed, hanging at their side.
- ❖ At the marked site on the triceps, grasp a vertical fold of the skin and underlying fat between the thumb and index finger, 1 cm above the midpoint. The skinfold should be parallel to the length of the arm. Both the thumb and the index finger should be 8 centimeters apart from the midpoint mark. Place the caliper just below the thumb and index finger.
- ❖ The hand grasping the skinfold should hold the fold while the caliper is being used to measure.
- ❖ Take the measurement 2 seconds after full pressure of the caliper is applied. Three measurements should be taken and the average value used.
- ❖ Always open the caliper prior to removing from the skinfold.
- ❖ Do not use plastic calipers. They lack adequate tension.

For resources and more information on technique, calculations, interpretation and equipment, see **References (Section 10)**.

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Use and Interpretation of Skinfold Measurements

Indirect methods of measuring subcutaneous fat, total body fat and somatic proteins (skeletal protein mass) include skin fold measurements. Special equipment required includes a skinfold caliper.

Good clinical skill and judgment is a critical element in obtaining and interpreting skinfold data. The thickness of skinfolds gives an estimation of subcutaneous fat and stored energy. The most common skinfold site is over the triceps muscle. This measurement is taken with calipers on the right arm midway between the olecranon process and the acromial process (midway between the shoulder and the elbow). The most common approach to interpreting Tricep Skinfold (TSF) results are to compare them to percentile values for age and gender. In general, patients are considered to be malnourished if the TSF is at the 5th percentile or below, and to be at risk if the TSF is between the 5th and 15th percentiles.

Depletion can be a reflection of poor oral intake or nutrient deprivation. Serial measurements are useful in evaluating changes in subcutaneous fat or somatic protein mass in patients whose weight remains normal.

A major drawback to these measurements is that they are chiefly used to detect overweight; percentile tables have been established based on healthy populations. In addition, the measurements are relatively imprecise unless the same person does the measurements each time and has good technique.

Estimation of Somatic Protein Stores

Midarm muscle circumference (MAMC) and midarm muscle area (MAMA) may be calculated from TSF and mid-arm circumference (MAC) using the following equations:

$$\text{MAMC(cm)} = \text{MAC(cm)} - 0.314 \times \text{TSF(mm)}$$

$$\text{MAMA(mm}^2\text{)} = \frac{(\text{MAC(cm)} - 3.14 \text{ TSF(mm)})^2}{4 \times 3.14}$$

**where MAC and TSF are in mm.*

The results provide an indication of muscle mass. Reference standards for age and gender are commonly available.

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Bioelectrical Impedance Analysis (BIA)

The three-compartment model of body composition allows for monitoring shifts in fluids and muscle. In this model the body is divided into three parts:

- 1. Body Cell Mass (BCM):** The most metabolically active tissue compartment made up of highly functional protein stores e.g. muscle, organs and circulating cells.
- 2. Extracellular Tissue (ECT):** Bone, plasma, collagen
- 3. Fat Mass:** Fat stores

- ❖ When BCM is increased or decreased the changes are mostly attributed to muscle tissue changes.
- ❖ When ECT is increased or decreased it may be due to fluid shifts.
- ❖ Note BIA parameters at initial assessment and monitor changes over time to give you a more accurate estimation of the individual's muscle and fat mass. See sample BIA Screening Flow Sheet, (Page 8.7).
- ❖ Note and review BIA results on a special form for the client. See BIA Results form, (Page 7-7).

Evaluation of Body Cell Mass (BCM) using BIA

- ❖ Ideal body cell mass (IBCM) is estimated by multiplying an individual's ideal body weight by one of the following factors:
 - 0.42 for adult males
 - 0.32 for adult females
- ❖ Comparing the individual's current BCM to the IBCM (CBCM/IBCM) is helpful in evaluation and developing nutrition goals and appropriate interventions.
- ❖ It is generally accepted that more than one BIA test is necessary to establish a baseline, identify a trend in body composition, and provide the basis for starting or changing therapy.
- ❖ BIA is not sensitive enough alone to identify body shape changes seen in "lipodystrophy syndrome". Waist-hip and mid-arm circumference measurements are more useful.

BIA Equipment

- ❖ BIA machines are available in single or multiple frequencies. Prices range from \$600 to \$2000 for single frequency machines, and start at \$5000 for multiple frequency devices.
- ❖ Some are programmed to just read out raw data or direct measurements of impedance, resistance, reactance, and phase angle, and make available software enabling users to input their own equations.
- ❖ Some devices use proprietary equations for calculating fat, body cell mass and other components and are less flexible in the user's ability to manipulate equations

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and software applications.

For more information and links about BIA and equipment, see References (Section 10).

Body Mass Index (BMI)

BMI is an estimation of fat versus lean in body composition. It has been demonstrated to have a relatively high correlation with estimates of body fatness. BMI assesses a person's weight status as simply being underweight, average weight or overweight based on height.

$$\text{BMI} = \frac{\text{Weight (kg)}}{\text{Height (meters}^2\text{)}} \quad \text{or} \quad \frac{\text{weight (pounds)} \times 703}{\text{height (inches)} \times \text{height (inches)}}$$

BMI is not a sensitive measurement for HIV. It can be a general marker for changes and should be included in assessments.

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BIA Screening Flow Sheet

Name_____ Age_____ Gender_____

Height_____ Usual Weight _____ Desirable Weight _____

Ideal Body Weight _____ Ideal Body Cell Mass _____

| | | | | | | |
|--------------------|--|--|--|--|--|--|
| Date | | | | | | |
| Wt. (lbs.) | | | | | | |
| % UBW | | | | | | |
| % DBW | | | | | | |
| BMI | | | | | | |
| BCM | | | | | | |
| %IBCM | | | | | | |
| Fat (lbs.) | | | | | | |
| Total Fluid | | | | | | |
| Note | | | | | | |

Clinician's Signature _____ Date_____

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BIA Results

Date_____ Name_____

Age_____ Gender_____

Height_____ Weight_____ BMI*_____ IBW**_____

Reactance_____ Resistance_____

| | Weight in lbs. | % IBW |
|---|----------------|-------|
| Usual Body Weight (UBW) | | |
| Desirable Body Weight (DBW) | | |
| Body Cell Mass (BCM) (reflects changes in muscle) | | |
| Fat | | |

Fluid Status: ☐ Dehydrated ☐ Acceptable ☐ Edema

Assessment:

- ☐ Current body composition appears normal
- ☐ Requires further nutritional assessment/follow-up
- ☐ Recommend nutrition referral
- ☐ Recommend follow-up BIA _____ (date)

*BMI, body mass index, is measured by dividing current weight (kg) by height (meters) squared:

Weight/Height²

20-25 = Healthy weight

Under 20 = Underweight

25-30 = Overweight

Over 30 = Obese

Clinician's Signature_____ Date_____

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ESTIMATION OF ENERGY REQUIREMENTS

Estimating energy requirements usually involves the use of mathematical formulas which are used to estimate energy needs at rest, called Basal Energy Expenditure (BEE). The most common formula used is the Harris-Benedict formula. Factors which consider levels of activity and stress such as illness or trauma are added to the BEE to estimate total calorie needs. The following are commonly used formulas for estimating energy requirements.

BEE represents the amount of energy expended when the body is at complete rest. BEE varies with age, gender and body size.

Men: $BEE = 66.47 + (13.75 \times W) + (5 \times H) - (6.76 \times A)$

Women: $BEE = 65.51 + (9.56 \times W) + (1.85 \times H) - (4.68 \times A)$

$W = \text{Weight in kg}$ $A = \text{Age in years}$ $H = \text{Height in cm}$

Activity Factor: 1.3 Normal

1.2 If confined to bed

Stress Factors: 1.2 Maintenance - Well, feeling good

1.5 Sick - Fever, not doing well

1.75 Very Sick - Major illness with multiple
Opportunistic Infections (OI)

Nonprotein Calorie Requirements = BEE X Activity Factor X Stress Factor

Recommendations for the estimation of calorie needs for people living with HIV must be individualized. The Harris Benedict Equation underestimates the energy needs of adults living with HIV by approximately 13%. Clinicians can consider adding a 1.13 stress factor when using this equation to estimate energy requirements for individuals with HIV infection.

In general, calculate a minimum daily intake of 16 calories for each pound of baseline weight before infection or wasting for men and 13-14 calories for each pound of weight in women.

Estimating Protein Requirements

Protein requirements may increase to 1-1.5 grams/kilogram/body weight. To maintain body protein stores, higher levels than normal (0.8 grams/kilogram body weight) may be required. (1 kilogram = 2.2 pounds).

HIV Medications and Nutritional Complications

Nutritional Side Effects of Selected Medications

The purpose for taking potent combination antiretroviral drugs is to suppress HIV replication, keeping viral load as low as possible for as long as possible. These drugs have been able to keep people healthier than before. The more you understand how to take your medications and how to control any potential side effects, the easier it will be to take your medications and the better they will work for you. Find the medications that you are taking on the HIV Medications and Nutritional Complications chart and become aware of their possible side effects and any dietary considerations you must take.

The protease inhibitor indinavir (Crixivan[®]) is one medication that has special dietary instructions. It must be taken on an empty stomach or with very little every 8 hours. For ideas of what to take with this medication, see "Additional Food List" for Crixivan[®] (indinavir sulfate) chart at the end of this chapter.

Daily Routine Chart for Medications and Meals

What you eat and drink with your medications, and when, do make a difference. It can make the difference whether you achieve consistently good blood levels of your medications or whether you don't and increase your risk of developing a resistance to your medication. Setting up a daily food and medication schedule to follow, as closely as you can seven days a week, will help a lot. Copy and use the Daily Routine Chart in this section to plan when to take all your medications and meals. Copy and use the next page on its back to note any concerns you have and share them with your health care team. Carry this form with you for easy reference.

HIV Medications and Nutritional Complications

HIV Medications and Nutritional Complications

x = Possible
Rx = Prescription
OTC = Over-the-counter

A = Appetite Loss
D = Diarrhea
C = Constipation

N = Nausea
V = Vomiting

Ft = Fatigue
H = Headache

Others = More concerns
Contraindication

| Medication | Rx | OTC | A | D | C | N | V | Ft | H | With Food | Without Food | Other Considerations |
|---|----|-----|---|---|---|---|---|----|---|-----------|-----------------------|---|
| STERIODS (INCLUDING ANABOLICS) + OTHER MEDS USED FOR WASTING | | | | | | | | | | | | |
| Dexamethasone (Decadron®) | x | | | | | x | | | | x | | Anabolics in general: • Skin problems, e.g. acne • Hair growth (hirsutism) • Menstrual irregularities • Change in libido and potency (altered desire for sex, ability to have erection and ejaculation) • Fluid retention • Abnormal liver enzymes/hepatitis (jaundice) • Altered blood glucose, even diabetes |
| Testosterone Injections: Testosterone cypionate, testosterone enanthate; (Depo-testosterone®); Patches: Testoderm®, Androderm® | x | | | | | x | | | | x | Take with food | Stomach upset/ulcers, indigestion, weight gain, increased urination, depression. Mood changes; increase in hemoglobin/hematocrit (red blood cell count=RBC) |
| Nandrolone (Deca-Durabolin®) | x | | | x | | x | | | | | | Not with severe hepatic dysfunction. |
| Oxandrolone (Oxandrin®) | x | | | x | | x | | | | | | Sore tongue, chills |
| Oxymetholone (Anadrol®) | x | | | x | | x | | | | | | Sore tongue. Masculinization, alterations in cholesterol |
| Pentoxifylline (Trental®) | | | | | | x | | | | | | GI (NVD); headache ¹¹ |
| Recombinant human growth hormone (Serostim®) | x | | | x | | x | | | | | | Musculoskeletal discomfort of hands and feet; increased blood sugar, triglycerides |
| Thalidomide (Thalomid®) | x | | | | x | | | | | | Take on empty stomach | Drowsiness, rash, dry mouth, edema, acne, insomnia, sedation. |

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| Medication | Rx | OTC | A | D | C | N | V | Ft | H | Without Food | With Food | Other Considerations |
|--|----|-----|---|---|---|---|---|----|---|--|--|---|
| ANTIRETROVIRALS | | | | | | | | | | | | |
| Nucleoside Analogue | | | | | | | | | | | | |
| Reverse Transcriptase Inhibitors (NRTIs) | | | | | | | | | | | | |
| AZT = zidovudine (Retrovir®) | x | | | x | | x | x | x | | Take more than 1 hour before meals or with low fat meal ⁹ | | Nausea; headache; dysphoria; bone marrow suppression (anemia, neutropenia); rash. ¹² |
| ddI = didanosine (Videx®) | x | | | x | | x | x | | | Take on empty stomach | Avoid alcohol | Peripheral neuropathy; pancreatitis; avoid antacids containing magnesium or aluminum; GI (NVD); abnormal liver function tests ¹² |
| ddC = zalcitabine (Hivid®) | x | | | x | | x | x | x | | Take on empty stomach | Avoid alcohol | Peripheral neuropathy; oral & esophageal ulcers; pancreatitis ¹² |
| d4T = stavudine (Zerit®) | x | | | x | | x | x | | | | Avoid alcohol | Peripheral neuropathy; CNS changes (agitation, dysphoria); pancreatitis ¹² |
| 3TC = lamivudine (Epivir®) | x | | | x | | x | x | x | | | | Nausea; malaise ¹¹ |
| AZT + 3TC (Combivir®) | x | | | x | | x | x | x | | | | See individual drugs above |
| Abacavir (Ziagen®) | x | | | x | | x | x | x | | | | Rash (may be part of hypersensitivity reaction—DO NOT RECHALLENGE!); GI (NVD); headache, fatigue ¹² |
| Non-Nucleoside Analogue | | | | | | | | | | | | |
| Reverse Transcriptase Inhibitors (NNRTIs) | | | | | | | | | | | | |
| Delavirdine (Rescriptor®) | x | | x | | | x | x | x | | No antacids | Do not take St John's Wort | Rash; headache; nausea ¹ |
| Nevirapine (Viramune®) | x | | | | | x | | | | | Do not take St John's Wort | Rash; headache; nausea ¹ |
| Efavirenz (Sustiva®) | x | | | | | x | x | x | | | Do not take if pregnant! Do not take St John's Wort | Rash; CNS changes (vivid dreams, dizziness, euphoria, dysphoria, hallucinations) ¹² |
| Nucleoside Analogue | | | | | | | | | | | | |
| Reverse Transcriptase Inhibitors | | | | | | | | | | | | |
| Adefovir dipivoxil = Bis-POM-PMEA (Preveon®) | x | | | x | | x | | | | | | Available through expanded access only; found non-approvable by FDA. Kidney damage (proximal renal tubular dysfunction = PRTD), decreases carnitine levels ¹² |

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| Medication | Rx | OTC | A | D | C | N | V | Ft | H | Without Food | With Food | Other Considerations |
|----------------------------------|----|-----|---|---|---|---|---|----|---|---|--|---|
| Protease Inhibitors (PIs) | | | | | | | | | | | | |
| Amprenavir (Agenerase®) | x | | | | | | | | | Take with no more than 67 grams of fat. | Not with Rifampin. Avoid extra vitamin E above a general multiple vitamin. Caution with: Amiodarone, Lidocaine, birth control pills, Viagra, Sustiva, tricyclic antidepressants, quinidine. Do not take St John's Wort | Because of potential toxicity due to the large amount of the excipient propylene glycol, AGENERASE Oral Solution is contraindicated in infants and children below the age of 4 years, pregnant women, patients with hepatic or renal failure, and patients treated with disulfiram or metronidazole PIs in general. ¹² <ul style="list-style-type: none"> Lipodystrophy syndrome: fat redistribution (increased fat in waist, neck, breasts; decrease in extremities, buttocks, face); elevated cholesterol or triglycerides, elevated glucose (or frank diabetes mellitus) Abnormal liver function tests (increased enzymes: SGOT=ALT; SGPT=AST; alkaline phosphatase, bilirubin, GGT) Hair and nail changes |
| Indinavir (Crixivan®) | x | | | | | | | | | Wait 2 hours after last meal/snack, take med., then wait 1 hour | Avoid grapefruit juice. Must drink excess water. | Rash; GI (NVD); fatigue; tingling around the mouth. Each 150 mg capsule contains 109 IU vitamin E, each mL solution contains 46 IU. High doses of vitamin E may exacerbate blood coagulation defect of vitamin K deficiency caused by anticoagulation therapy or malabsorption. |
| | | | | | | | | | | | | Kidney stones; abdominal, back or flank pain; elevated serum bilirubin (jaundice); GI upset |

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| Medication | Rx | OTC | A | D | C | N | V | Ft | H | Without Food | With Food | Other Considerations |
|---|----|-----|---|---|---|---|---|----|---|--|---|---|
| | | | | | | | | | | approximately 2 liters daily Do not take St John's Wort | | |
| Nelfinavir (Viracept®) | x | | | x | | x | x | | | Avoid acidic food or liquid Do not take St John's Wort | Diarrhea; rash | |
| Ritonavir (Norvir®) | x | | x | x | | x | x | | | Do not take St John's Wort | GI (NVD); numbness around mouth (circumoral paresthesia) | |
| Saquinavir mesylate (Invirase®) | x | | | x | | x | | | | Avoid alcohol Do not take St John's Wort | GI (NVD) | |
| Saquinavir (Fortovase®) | x | | | x | | x | x | | | Avoid alcohol Do not take St John's Wort | As above | |
| OTHER MEDICATIONS USED TO Rx HIV | | | | | | | | | | | | |
| Hydroxyurea (Hydrea®) | x | | | x | | x | x | | | Caution with renal impairment & geriatrics. | BM suppression | |
| OTHER ANTIVIRALS | | | | | | | | | | | | |
| Acyclovir (Zovirax®) | x | | x | x | | x | x | | | | Ensure hydration | |
| Cidofovir (Vistide®) | x | | | x | | x | x | | | After meal | Kidney toxicity; neutropenia; fever ¹ | |
| Famciclovir (Famvir®) | x | | | | | x | x | | | | | |
| Foscarnet (Foscavir®) | x | | x | x | | x | x | | | Kidney disease | Electrolyte disturbances; kidney problems; seizures ¹² | |
| Ganciclovir (Cytovene®) | x | | x | x | | x | x | | | Take with food | Neutropenia (decreased WBC) | |
| Valacyclovir (Valtrex®) | x | | | x | | x | x | | | | Should not be taken by people who are allergic to acyclovir. | At high doses (8000mg/day) may reduce levels of neutrophils and white blood cells. |
| ANTIBIOTICS / | | | | | | | | | | | | |

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| Medication | Rx | | | | Without Food | | | | Other Considerations | | | |
|---|-----|---|---|---|--------------|---|----|---|--|-----------|--|--|
| | OTC | A | D | C | N | V | Ft | H | Without Food | With Food | With Food | Without Food |
| ANTIPROTOZOALS | | | | | | | | | | | | |
| Albendazole (Albenza®) | x | | | | x | x | | | Take with food | | | Abnormal liver function tests, abdominal pain, BM suppression ¹ |
| Ampicillin (Omnipen®), Unasyn® | | | x | | x | x | | | Take on empty stomach, ½ hour before or 2 hours after eating | | | Rash; heartburn; urinary tract infection in women |
| Amoxicillin | | | x | | x | x | | | | | | |
| Amoxicillin + clavulanic acid (Augmentin®) | | | | | | | | | | | | |
| Atovaquone (Mepron®) | x | | x | | x | x | | | Take with food | x | | Taste change; dyspepsia; abdominal pain; fever; insomnia; hypotension. ¹⁰ |
| Azithromycin (Zithromax®) | x | | x | | x | x | | | Take on empty stomach one hour before or after eating. Avoid magnesium or aluminum containing antacids | | Caution in people with impaired liver function. | Diarrhea; abdominal pain |
| Cephalexin (Keflex®) | x | | x | | | x | | | | x | | Rash; oral candidiasis; sore mouth/tongue |
| Ciprofloxacin (Cipro®) | | x | x | | x | x | | | Take on empty stomach | | | |
| Clarithromycin (Biaxin®) | x | | x | | x | x | | | | x | Caution with alcohol | GI (NVD); abnormal taste; headache ¹¹ |
| Clindamycin (Cleocin®) | x | | x | | x | x | | | Take with food | | | Diarrhea (may be pseudomembranous colitis); NV; rash ¹¹ |
| Clofazimine (Lamprene®) | x | | x | | x | x | | | Take with food | | | Skin and fluid discoloration, rash, dry eyes. ¹⁰ |
| Dapsone | x | | | | x | x | | | | | Do not use if deficient in enzyme G6PD | Anemia ¹¹ |
| Dicloxacillin (Dynapen®) | x | | | | x | x | | | Take with food | | May reduce the effectiveness of oral contraceptives. | Stomach upset, gas, loose stools, skin rashes, redness, itching. |
| Erythromycin | x | | | | x | x | | | Take with food | | Multiple drug interactions. | Abdominal pain, changes in appetite, abnormal liver function. |
| Ethambutol (Myambutol®) | x | | x | | x | x | | | Take with food | x | Not to use with aluminum- | Decrease in visual acuity, rashes, joint pain, stomach upset, abdominal pain, fever. |

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| Medication | Rx | OTC | A | D | C | N | V | Ft | H | With Food | Without Food | containing antacids. | Other Considerations |
|----------------------------------|----|-----|---|---|---|---|---|----|---|--|---|---|---|
| Iodoquinol (Xodoquin®) | | | x | | | x | x | | | Take with food | Take on empty stomach 1 hour before or after eating; add B6 supplements | | dizziness, mental confusion. |
| Isoniazid=INH (Nydrazid®) | x | | | x | | x | x | | | | | Avoid alcohol | Noninfectious hepatitis, B6 deficiency |
| Metronidazole (Flagyl®) | x | | x | x | | x | x | | | Take with food | | Avoid all alcohol. | Dry mouth, metallic taste, dizziness, confusion, rash. ¹⁰ |
| Minocycline | x | | | | | | | | | Take with food | | Should not be taken with antacids or mineral supplement | Dizziness, drowsiness. ¹⁰ |
| Paromomycin (Humatin®) | x | | | x | | x | | | | Take with food | | Not to use with aminoglycosides | Abdominal cramps |
| Pentamidine (NebuPent®, Pentam®) | x | | x | | | x | x | | | | | kidney or liver disease | Metallic taste; dyspnea; hypoglycemia and hyperglycemia (diabetes); hypotension; rash. ¹² |
| Penicillin V (Pen. Vee® K) | x | | | x | | x | x | | | Take with food for more consistent blood levels. | | Should not be taken with fruit juice or carbonated beverages. | Rash; stomach upset; black, hairy tongue, less frequently: allergic skin reactions and anaphylactic shock. ¹ |
| Primaquine | | | | | | x | x | | | | | | Anemia; abdominal pain; GI (NV) ¹¹ |
| Pyrimethamine (Daraprim®) | x | | x | x | | x | x | | | Take with food | | Caution with liver or kidney impairment. | Megaloblastic anemia, tongue tenderness, taste loss, abdominal cramp, bone marrow suppression. ⁹ |
| Pyrazinamide | | | | x | | x | x | | | Take with food | | | Muscle/joint aches; GI (NV) |
| Rifabutin (Mycobutin®) | x | | | | | x | x | | | Take with food to reduce upset stomach | Take on empty stomach | High fat meals slow absorption ¹⁰ | Discolored urine, stomach upset, rashes, taste changes. ¹⁰ |
| Rifampin (Rifadin®, Rimactane®) | | | x | x | | x | x | | | | Take on empty stomach 1 hour before or after eating. | | Discolored urine; neutropenia; rash ¹¹ |
| Streptomycin (ONLx INJECTION) | x | | x | | | x | x | | | | | | Toxicity to kidney, nerves, ears ¹¹ |
| Sulfadiazine (Microsulfon®) | x | | | | | | | | | Take on empty | Take on empty | Caution in | Fever; itching; rash; photosensitivity; |

HIV Medications and Nutritional Complications

| Medication | Rx | | | | | | | | | | Other Considerations | |
|---|-------------------|--------------|------------------|------------|--------------|--------------|---|-----------------------|------------------------|--------------|----------------------|--|
| | A = Appetite Loss | D = Diarrhea | C = Constipation | N = Nausea | V = Vomiting | H = Headache | Ft = Fatigue | 6" = Contraindication | Others = More concerns | Without Food | With Food | Other Considerations |
| Tetracycline (Achromycin®), Tetracycl® | x | x | | x | x | | Take on empty stomach 1 hour before or 2 hours after meals. | exposure to sunlight | | | | dizziness; headache |
| Trimethoprim-sulfamethoxazole-TMP-SMX = cotrimoxazole (Bactrim®, Septra®) | x | | | x | | | | | | | | Stomach upset, rash, hairy tongue, itching, fevers, chills, anemia, skin discoloration |
| ANTIFUNGALS | | | | | | | | | | | | |
| Amphotericin B | x | x | | x | x | | Take on empty stomach | | | | | Rash; allergic reaction (may rarely be serious Stevens-Johnson syndrome—fever, nausea, sloughing of mucous membranes of mouth); neutropenia ¹² |
| Clotrimazole (lotion, cream, solution, troches) | x | x | | | | | | | | | | Kidney toxicity, anemia, fever, altered blood pressure. |
| Fluconazole (Diflucan®) | x | | | x | x | | | | | | | Topical administration may cause itching, rashes, redness, stinging, blistering, peeling, swelling, burning. |
| Flucytosine | x | x | | x | x | | | | | | | Nausea; rash; diarrhea ¹¹ |
| Itraconazole (Sporonox®) | x | | | x | x | | Take with food | | | | | Dry mouth, abdominal pain, rash confusion, anemia. |
| Ketoconazole (Nizoral®) | x | | | x | x | | Take with food | | | | | Nausea ¹¹ |
| Nystatin (Mycostatin®) | x | x | | x | x | | | | | | | Nausea; vomiting; itching; abdominal pain |
| ANTIDEPRESSANTS / ANTIANXIETY TX | | | | | | | | | | | | |
| Amitriptyline (Elavil®) | x | | | x | x | | Take with food | | | | | GI distress, stomach pain. ¹⁰ |
| Amoxapine (Asendin®) | | | | | | | | | | | | Dry mouth, taste changes, increase risk of dental problems, sedation, weakness, edema, rash. ¹⁰ |
| Bupropion (Wellbutrin®) | x | | | | | | | | | | | Weight loss, restless, agitation, anxiety, insomnia, confusion, hyperactivity, feeling of elation, delusions, hallucinations, or impaired mental function. |
| Desipramine (Norpramin®) | x | | | x | x | | Take with food | | | | | Increase appetite, increase wt, dry mouth, drowsiness, blurred vision, weak, hypotension, hypertension, confusion. |
| Fluoxetine (Prozac®) | x | x | | x | x | | | | | | | Dry mouth, taste changes, dyspepsia, tremor, insomnia, drowsiness. ¹⁰ |

HIV Medications and Nutritional Complications

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 Ft = Fatigue
 H = Headache
 * = Contraindication
 Others = More concerns

| Medication | Rx | OTC | A | D | C | N | V | Ft | H | With Food | Without Food | Other Considerations |
|--|----|-----|---|---|---|---|---|----|---|-----------------------|---|---|
| Lorazepam (Ativan®) | x | | | | | | | | | | | Drowsiness, confusion, habit-forming (1 st line agent) |
| Nefazodone (Serzone®) | | | | | | | | | | | | |
| Nortriptyline (Pamelor®) | x | | x | | | x | x | | | Take with food | | Sedation, drowsiness. ¹⁰ |
| Paroxetine (Paxil®) | x | | x | x | x | x | x | | | Take with food | Not with tryptophan supplement | Dry mouth, taste changes, weakness insomnia, drowsiness, sweating, edema, hypertension, tremor, rash. ¹⁰ |
| Sertraline (Zoloft®) | x | | x | x | x | x | x | | | Take with food | Avoid alcohol | Dry mouth, dyspepsia, insomnia, dizziness, tremor. ¹⁰ |
| Trazodone (Desyrel®) | x | | | | x | x | x | | | Take with food | Avoid alcohol | Increase or decrease appetite, dry mouth, increase risk of dental problems, drowsiness, blurred vision. ¹⁰ |
| Venlafaxine (Effexor®) | x | | x | x | x | x | | | | Take with food | Do not use with MAO inhibitors. | Drowsiness, dry mouth, insomnia, weakness, sweating. |
| ANTIEMETICS & APPETITE STIMULANTS | | | | | | | | | | | | |
| Diphenhydramine (Benadryl®) | | x | | | | | | | | | | Dry mouth, sedation, dizziness, urinary retention |
| Prochlorperazine (Compazine®) | x | | | | | | | | | | | Abnormal movements; hypotension; dizziness ¹¹ |
| Promethazine (Phenergan®) | x | | | | | | | | | | | Same as above |
| Trimethoprim (Tigan®) | x | | | | | | | | | | | Same as above |
| Metoclopramide (Reglan®) | x | | x | | | | | | | | | Diarrhea, weakness; restlessness ¹¹ |
| Dronabinol (Marinol®) | x | | | | | | | | | | | Drowsiness; confusion; habit-forming |
| Medical marijuana | x | | | | | | | | | | | Drowsiness; confusion; habit-forming |
| Megestrol acetate (Megace®) | x | | x | x | x | x | x | | | Caution with diabetes | | Changes in menstrual flow; anorexia; edema |
| Ondansetron (Zofran®) | x | | | | x | | | | | | | Constipation; diarrhea; headache; fever ¹¹ |
| CHEMOTHERAPEUTIC AGENTS | | | | | | | | | | | | |
| Bleomycin sulfate (Blenoxane®) | x | | x | x | x | x | x | | | | Ensure adequate fluid intake | Pulmonary toxicity; fever, rash, chills. ¹⁰ |
| Cyclophosphamide (Cytoxan®) | x | | x | x | x | x | x | | | | Not for people with depressed BM function | Bladder inflammation/bleeding; temporary hair loss; GI (NVD); BM suppression ¹ |
| Cytarabine (Cytosar-U®) | | | x | | | | | | | | | |
| Daurubicin = liposomal adriamycin (DaunoXome®) | x | | x | x | x | x | x | | | | Risk of serious, drug-related birth | Congestive heart failure; BM suppression; hair loss; fever; difficulty breathing, abdominal or |

HIV Medications and Nutritional Complications

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 = Contraindication
 Others = More concerns

| Medication | Rx | OTC | A | D | C | N | V | Ft | H | With Food | Without Food | defects | Other Considerations |
|--|----|-----|---|---|---|---|---|----|---|-----------|--|--|---|
| Doxorubicin (Adriamycin®) | x | | x | | | x | x | x | | | | Avoid alcohol | back pain, anorexia, Dry mouth, glossitis, stomatitis, GI ulceration, esophagitis, fever, rash. ¹⁰ |
| Etoposide (VePesid®) | | | x | x | | x | x | | | | | | GI (NVD); BM suppression ¹¹ |
| Interferon-alpha (Intron-A®) | x | | x | x | | x | x | x | | | | | Abdominal pain, fever, muscle weakness dizziness, coughing, depression ¹ |
| Methotrexate (Reumatrex®) | x | | | x | | x | | | | | Take two hours after meal and one hour before next meal or snack | | Liver damage, lung damage, anemia reduced white blood cell counts, stomach ulcers, GI (NVD). ¹¹ |
| Paclitaxel (Taxol®) | x | | | | | x | x | | | | | Not to combine with other neuropathy- inducing drugs. | Irregular heart rhythm, hair loss, diarrhea, skin rashes, stomach irritation, seizures. |
| Vincristine (Oncovin®) | x | | | x | | x | x | x | | | | Do not use with mitomycin-C. | Peripheral neuropathy; hair loss, reduced white blood cell counts, GI (NVD). ¹¹ |
| Vinblastine (Velban®) | x | | x | x | | x | x | x | | | | Ensure adequate fluid intake. ¹⁰ | Stomatitis, sore throat, abdominal pain, hypertension. ¹⁰ |
| IMMUNE BASED THERAPIES + BONE MARROW BOOSTERS | | | | | | | | | | | | | |
| Cyclosporine (Cyclosporin®) | x | | | | | | | | | | | | Gum disease, kidney & liver toxicity, high blood pressure |
| Erythropoietin (Procrit®, Epogen®) | x | | x | | | x | x | x | | | | Not for people with uncontrolled high BP or anemia Vitamin B12 supplementation may be needed | Hypertension; fever; bone or muscle pain; cough. ¹⁰ |
| Granulocyte-colony stimulating factor (G-CSF) = filgrastim (Neupogen®) | x | | | | | | | | | | | | Bone pain |
| Granulocyte macrophage colony stimulating factor (GM-CSF) | | | x | | | | | | x | | | | Chills, elevated liver enzymes, rash, muscle pain. |
| Interleukin-2 (Proleukin®) | | | x | | | x | x | | F | | | Abnormal or lung function | Fever, chills, malaise, fatigue (flu-like illness) ¹¹ |

HIV Medications and Nutritional Complications

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6 = Contraindication
Others = More concerns

| Medication | Rx | | | | | | | | | | | Other Considerations |
|--|----|---|---|---|---|----|---|--------------|----------------|--|--|---|
| | A | D | C | N | V | Ft | H | Without Food | With Food | | | |
| Intravenous immune globulin (IVIG) | x | | | | | | | | | | | Fever, chills, faintness |
| Leucovorin calcium | | | | | | | | | Take with food | | | |
| Prednisone (Deltasone®) | x | | | | | | | | Take with food | | | GI (NVD, ulcers) Mood changes Hair growth (hirsutism) Long term use: osteoporosis, cataracts ¹¹ |
| ANALGESICS | | | | | | | | | | | | |
| OPIOIDES/ANTAGONISTS | | | | | | | | | | | | |
| Codeine | x | | | | | | | | | | | Opiates in general: ¹² Decreased level of consciousness; sedation; lightheadedness; disorientation; dry mouth; constipation |
| Fentanyl (Duragesic®, Sublimaze®) | x | | | | | | | | | | | |
| Hydrocodone Bitartrate | x | | | | | | | | | | | |
| Methadone | x | | | | | | | | | | | |
| Morphine | | | | | | | | | | | | |
| Oxycodone (Percodan®, Percocet®) | x | | | | | | | | | | | |
| NSAIDs (Non-steroidal anti-inflammatory agents) | | | | | | | | | | | | |
| Ibuprofen (Motrin®) | x | | | | | | | | | | | NSAIDs in general: ¹² • GI irritation (pain, decreased appetite, ulcers, bleeding) • Allergic reactions |
| Indomethacin (Indocin®) | x | | | | | | | | | | | |
| Naproxen (Naprosyn®) | | | | | | | | | | | | |
| Sulindac (Clinoril®) | x | | | | | | | | | | | |
| CNS STIMULANTS | | | | | | | | | | | | |
| Methylphenidate (Ritalin®) | x | | | | | | | | | | | Severe low blood pressure, respiratory arrest shock, heart attack, dizziness, sedation, cramps, dry mouth, taste alterations, sweating ¹ |

HIV Medications and Nutritional Complications

"Additional Food List" for Crixivan® (indinavir sulfate)*

by HIV/AIDS Dietetic Practice Group of The American Dietetic Association

These snacks were selected to meet the following requirements: at or below 2 grams of fat, 5.6 grams of protein, 65 grams of carbohydrate and less than 300 calories in total.

Sabina Beesley, MS, RD, Joya Melissa, RD and Marcy Fenton, MS, RD, members of the HIV/AIDS Dietetic Practice Group of The American Dietetic Association developed this list for Merck & Co. Inc. The FDA approved it in August 1997.

Some comments and clarifications have been added and these are in *italics*.

| Food | Serving | Grams of Fat | Grams of Protein | Grams of Carbohydrate | Calories |
|---|---|--------------|------------------|-----------------------|----------|
| Nabisco™ Newton Cobbler Bars | 3 bars | 0 | 2.4 | 54 | 180 |
| Fig bars and juice | 2 fig bars, 1 cup juice (not grapefruit) | 2.5 | 1.5 | 50 | 224 |
| Cream of rice with skim milk, raisins, and brown sugar | 1 cup cooked cream of rice 1/2 cup skim 2 Tbs. sugar 1 Tbs. raisins | 0.4 | 5.6 | 36 | 168 |
| Snack well™ wheat crackers with fat free cream cheese and juice | 8 Snack well™ crackers 2 Tbs. fat free cream cheese 1/2 cup juice (<i>not grapefruit</i>) | 0.1 | 6 | 34 | 161 |
| Pretzels and soda | 1 cup pretzels (<i>non fat</i>) 1/2 can of soda or cup juice (<i>not grapefruit juice</i>) | 2.0 | 4.4 | 59 | 275 |
| Jello™ with canned fruit And Nabisco™ ginger snaps | 1 cup Jello™ 1/2 cup canned fruit 3 Nabisco™ ginger snaps | 2.1 | 4 | 31 | 158 |
| Apple sauce and Nabisco™ ginger snaps | 1 cup apple sauce 2 Nabisco™ ginger snaps | 1.9 | 1.3 | 62 | 252 |
| Bagel and juice | 1 <i>small</i> bagel (no seeds or nuts) 1 cup juice (<i>not grapefruit</i>) | 0.8 | 3.7 | 55 | 241 |
| Spaghettios in tomato sauce and soda | 1 cup Spaghettios 1/2 can of soda or cup juice | 2.1 | 5.3 | 61 | 282 |

* AIDS Project Los Angeles fact sheet (8/15/97, 9/3/98). Adapted from The American Dietetic Association's Additional Food List for Crixivan® (indinavir sulfate), Merck & Co, Inc

HIV Medications and Nutritional Complications

| Food | Serving | Grams of Fat | Grams of Protein | Grams of Carbohydrate | Calories |
|--|---|--------------|------------------|-----------------------|----------|
| | <i>(not grapefruit)</i> | | | | |
| Corn tortilla with steamed rice and salsa | 1 corn tortilla 1/2 cup rice (prepared without butter or oil) 3 Tbsp salsa | 1.5 | 4.1 | 35 | 169 |
| Citrosource™ or Resource™ Fruit Beverage supplement | 1/2 box = 1/2 cup | 0 | 4.4 | 18 | 90 |
| Rice cakes with jam and juice | 2 rice cakes with 2 Tbs. jam 1 cup juice <i>(not grapefruit)</i> | .08 | 1.4 | 79 | 324 |
| Tomato soup, oyster crackers, tea with milk and sugar | 1 cup tomato soup(w/ water) 6 oyster crackers 1 cup tea 2 Tbs. skim milk 1 tsp. sugar | 2.2 | 3 | 25 | 126 |
| PowerBar™ with Gatorade™ | 1/2 bar 8 oz Gatorade™ | 1.3 | 5.0 | 36 | 173 |
| Cereal with skim milk and banana | 1 cup dry cereal* 1/2 cup skim milk 1 medium banana | 1-2 | 4-5 | 31-45 | 150-180 |
| Spaghetti (prepared without butter or oil) with tomato sauce and juice | 1/2 cup cooked spaghetti 1/2 cup tomato sauce 1 cup juice <i>(not grapefruit)</i> | 0.9 | 4.9 | 65 | 279 |
| Toast (no added butter or margarine) with jam and tea or coffee with skim milk and sugar | 1 slice bread 2 Tbs. jam 8 oz tea/coffee 1 tsp. sugar 2 Tbs. skim milk | 1.2 | 3.8 | 57 | 250 |
| Plain popcorn (fat free, no butter or oil added, air popped or microwavable) and soda | 3 cups popped pop corn 1 can soda or 1 cup juice <i>(not grapefruit)</i> | 0 | 3.0 | 53 | 226 |
| English muffin (no butter or margarine) with jam and regular or herb tea with sugar | 1 English muffin 1 Tbs. jam 1 cup herb or regular tea 2 tsp. Sugar | 1.0 | 4.4 | 49 | 226 |
| Rice (prepared without oil, | 1/2 cup prepared rice | 0.5 | 5.6 | 28 | 136 |

* Cereals include those that contain less than 2 grams protein or fat per 1/2 cup serving. Examples include Corn Pops™, Fruit Loops™, Golden Grahams™, Chex™, Rice Puffs, Corn Flakes™, Wheaties™ Special K™, Cocoa Puffs, Cheerios, Frosted Mini Wheats™, Raisin Bran™, Total™, Shredded Wheat™. Does not include cereal with added nuts, granola, or Cracklin Oat Bran Cereal™.

HIV Medications and Nutritional Complications

| Food | Serving | Grams of Fat | Grams of Protein | Grams of Carbohydrate | Calories |
|--|--|--------------|------------------|-----------------------|----------|
| butter or margarine) with vegetables and soy sauce | ½ cup steamed vegetables 1 Tbs. Soy sauce | | | | |
| Angel food cake with canned fruit or berries and coffee | 1 medium slice angel food cake ½ cup berries or canned fruit 8 oz coffee 2 Tbs. Skim milk 1 tsp. Sugar | 0.7 | 5 | 50 | 218 |
| Fruit (not coconut or avocado) | 1 cup or 1 medium | 0 to 0.5 | 0 | 20 to 50 | 73 |
| Miso soup with a rice ball | 10 oz soup 1 plain rice ball (1/4 cup rice) | 0.9 | 5.7 | 33 | 164 |
| Noodles (prepared without oil, butter or margarine) and steamed vegetables | ½ cup cooked noodles ¼ to ½ cup steamed vegetables | 1.5 | 4.9 | 25 | 130 |
| Low- or fat-free vegetable soup# and bread (no butter or margarine) | 1 cup soup 1 slice bread (no nuts or seeds) | 2.1 | 4.6 | 19 | 120 |
| Quaker™ lowfat chewy granola bar | 1 bar | 2 | 2 | 22 | 110 |
| Dried fruit (no coconut, nuts, seeds or banana chips) | 1/2 cup dried fruit | 0 | 2 | 52 | 220 |
| Snack Well™ cereal bar | 1 bar | 0 | 1 | 29 | 120 |
| Fruit roll up | 1 roll up | 12 | 0 | 1 | 50 |
| Toast with jelly (no butter or margarine), apple juice and coffee with skim milk and sugar | 1 slice of bread, 1 Tbs. jelly 1 cup apple juice 1 cup coffee 2 Tbs. skim milk 1 tsp. sugar | 1.1 | 4 | 57 | 250 |
| Jello™ Snack Cup | 1 snack cup | 0.4 | 5.1 | 23 | 89 |
| Fat free pudding cup | 1 pudding cup | 0.4 | 3 | 21 | 90 |
| Popsicle (water based only) | 1 each (2 fl. oz) | 0 | 0 | 11 | 43 |
| Cortido: Corn tortilla with cucumber, tomato, lime juice and green onion | 1 corn tortilla 1 medium tomato 1 medium cucumber (peeled) 1 green onion 3 Tbs. lime juice | 1.2 | 4.2 | 30 | 130 |
| Matzo and salsa | 1 Matzo board | 0 | 3.5 | 23 | 120 |

Includes vegetarian soups, which contain less than 1 gram fat and less than 3 grams protein per 1 cup serving.

HIV Medications and Nutritional Complications

| Food | Serving | Grams of Fat | Grams of Protein | Grams of Carbohydrate | Calories |
|--|--|--------------|------------------|-----------------------|----------|
| | $\frac{1}{4}$ cup salsa | | | | |
| Baked potato and salsa | 1 medium baked potato (no skin) $\frac{1}{4}$ cup salsa | 0.3 | 3.5 | 36 | 162 |
| Jicama, raw | 1 cup | 0.2 | 1 | 10 | 46 |
| Pita bread (white, not whole wheat) | 1 whole white pita | 1.1 | 5.4 | 33 | 165 |
| Health Valley™ Fat Free Breakfast Bar and juice | 1 bar 8 oz juice (<i>not grapefruit</i>) | 0 | 2 | 50 | 210 |
| Kellogg's Rice Krispies Treats™ crispy marshmallow squares and juice | 1 square = 0.78 oz 8 oz juice (<i>not grapefruit</i>) | 2 | 1 | 45 | 200 |

HIV Medications and Nutritional Complications

DAILY ROUTINE CHART

Name: _____

Date: _____

| TIME | MEDICATIONS | MEALS/SNACKS | COMMENTS |
|--------------|-------------|--------------|----------|
| —:— am/pm | | | |
| —:— am/pm | | | |
| —:— am/pm | | | |
| —:— am/pm | | | |
| —:— am/pm | | | |
| —:— am/pm | | | |

HIV Medications and Nutritional Complications

YOUR COMMENTS

QUESTIONS TO ASK YOUR TREATMENT ADVOCATE

QUESTIONS TO ASK YOUR REGISTERED DIETITIAN

QUESTIONS TO ASK YOUR PHYSICIANS

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The Right Foods

A Guide to Daily Food Choices for People Living With HIV



Benefits, Safety, and Efficacy of Unconventional Remedies

| | FOOD GROUP | EXAMPLES OF FOOD CHOICES |
|---|--------------------------------------|--|
| E n e r g y | Complex Starches: | Whole grains: wheat, rye, corn, oat, rice, bulgur, kasha, quinoa; whole grain breads, hot and cold cereals, and other grain products like pasta, crackers, ; potatoes, winter squash. |
| G r o w t h | Animal Protein: | Beef, chicken, fish, duck, pork, turkey, lamb, eggs, milk, cheese, egg or milk-based protein powders |
| | Plant Protein: | Dried beans (cooked): black, pinto, red, navy, lima, garbanzo, etc., green peas, split peas, lentils, soy foods (soybeans, tofu, soy-based protein powders, tempeh), seeds, nuts and nut butters (peanut, sunflower, sesame, almond, Brazil nuts, etc.) |
| | Animal Calcium | Milk, cottage cheese, yogurt, hard cheese, ice cream, canned salmon (with bones), canned sardines (with bones) |
| | Vegetable Calcium: | Tofu processed with calcium, broccoli, Chinese cabbage, almonds, dried figs, greens (chard, mustard, collard), calcium fortified orange juice or soy milk |
| P r o t e c t i o n | Vitamin A rich foods: | Carrots, red peppers, sweet potato, oranges, strawberries, tomatoes, spinach, pumpkin, cantaloupe, watermelon, greens (collard, arugala, turnip), winter squash |
| | Vitamin C rich foods: | Guava, red and green bell peppers, papaya, orange and grapefruit and their juices, broccoli, Brussels sprouts, kohlrabi, strawberries, kiwi, cantaloupe, tomatoes and tomato juice, spinach, cabbage |
| | Other Fruits & Vegetables | Apple, banana, pear, prunes, eggplant, onions, lettuce, zucchini, raisins, peaches, celery, mushrooms, turnips, radishes, asparagus, |
| E E x t r a g y | Simple Sugars: | White table sugar, brown sugar, honey, molasses, corn syrup, sodas, candy |
| | Fats: | Mono-unsaturated oils: olive, canola, flaxseed, and peanut oils, olives, avocado Poly-unsaturated fats: safflower, corn, soybean, cottonseed, sesame, and sunflower oils, and in liquid or soft margarine Saturated fats and oils: butter, hard margarine, coconut and palm oils, beef fat, chicken fat, bacon, pork |
| E P r o t e c t i o n | Supplements: | <ul style="list-style-type: none"> Vitamin/Mineral – A “One-a-day” type, around 100% RDA – take two each day <i>one in the morning and one in the evening</i> Vitamin E – 400 IU each day Vitamin C – 500-1000 mg each day B-complex – one each day |