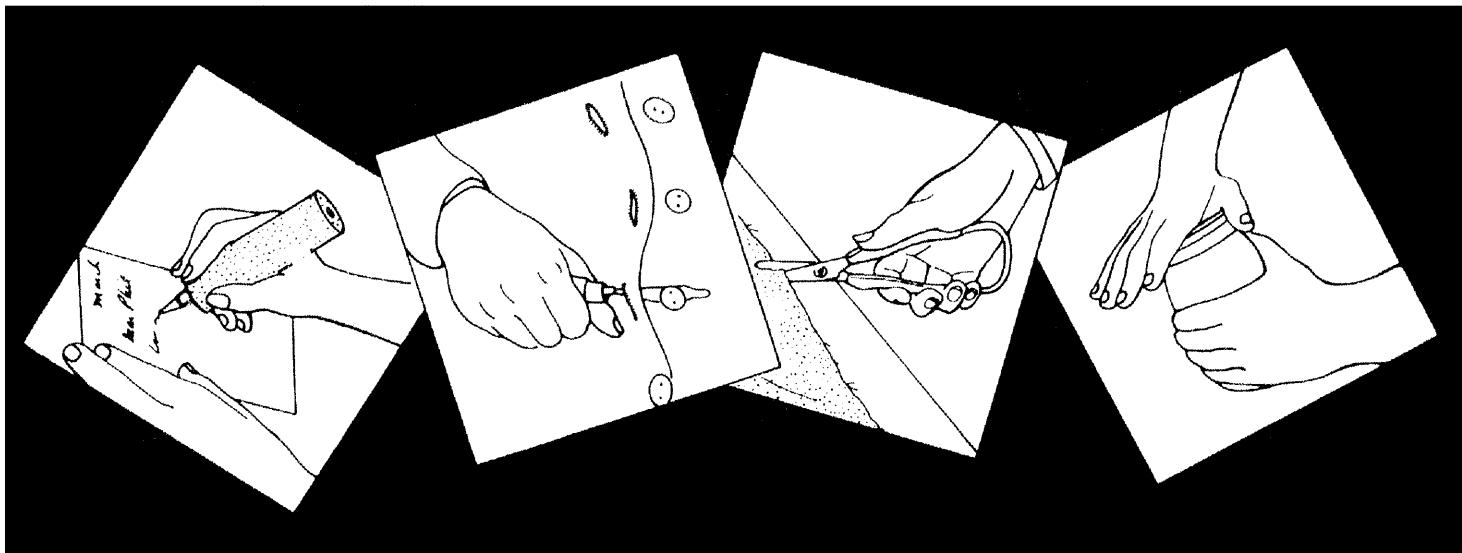

Joint Protection Program Handbook



For Persons with Arthritis



KLEINERT KUTZ
Hand Care Center

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Downtown Louisville, Kentucky
East Louisville, Kentucky
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JOINT PROTECTION PROGRAM

HANDBOOK

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PROVIDING COMPREHENSIVE CARE

Kleinert, Kutz and Associates Hand Care Center, PLLC, has grown steadily for more than four decades and is now staffed by 10 physicians with international standing as surgeons, scientists and teachers. In one location, the Hand Care Center offers comprehensive medical care for the upper extremity.

Known worldwide for their quality of care and for pioneering new techniques in hand and microsurgery, the physicians of *Kleinert, Kutz and Associates Hand Care Center* specialize in general, plastic, and orthopedic surgery, treating simple as well as complex hand problems.

We offer this Joint Protection Program Handbook as a resource of valuable information and exercises that promotes a high quality of life for people with joint disease. At the Hand Care Center we provide a full spectrum of medical care for the upper extremity, including a clinic, Hand Therapy Center, and a unique Orthotic Care Center for custom-designed and prefabricated orthotic devices. This enables your Hand Care Center physician to easily monitor all aspects of your treatment, saving you both time and effort.

At *Kleinert, Kutz and Associates Hand Care Center*, we can give you the medical assistance you need, help with a previously undiagnosed problem or offer a second opinion. You can call us directly at (502) 561-HAND (561-4263), or toll-free at 1-800-477-4263, or have your personal physician contact us.

We look forward to helping you lead a full and productive life.

THE JOINT PROTECTION PROGRAM

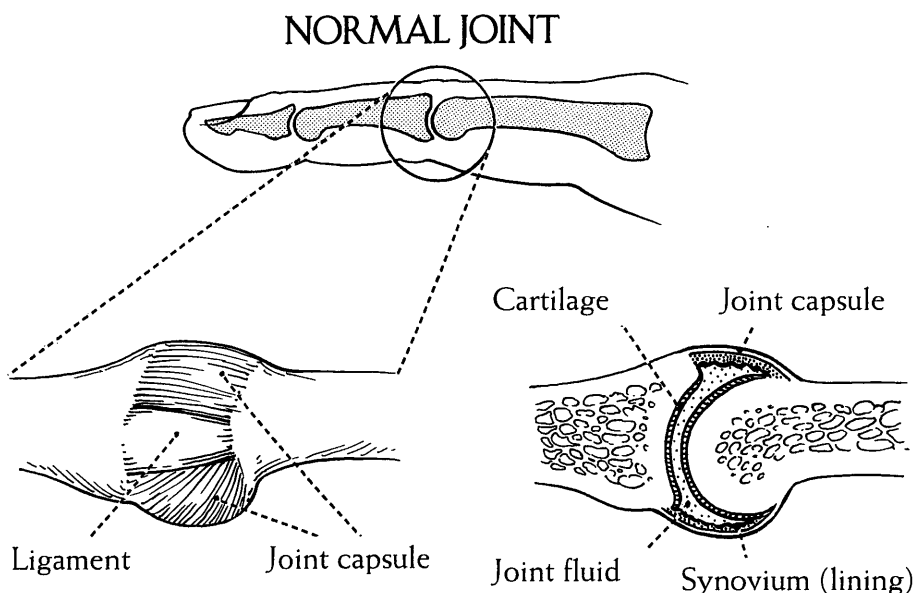
Physicians and surgeons realized some time ago that persons with arthritis can do much for themselves by consistently following a small number of simple principles to both improve the quality of their lives and help prevent flare-ups and further deformity.

The *Kleinert, Kutz and Associates Hand Care Center* Joint Protection Program was created by the Hand Therapy Center to help people use these principles in coping with arthritis. Our Joint Protection Program can help you, whether you have just discovered that you have arthritis or whether you have had the disease a long time and have already learned much about coping with it. Our Joint Protection Program provides:

- information on how arthritis affects any of the involved joints of your body;
- techniques you can use every day to protect your joints;
- knowledge of what to do during a flare-up;
- an exercise program designed around your unique needs.

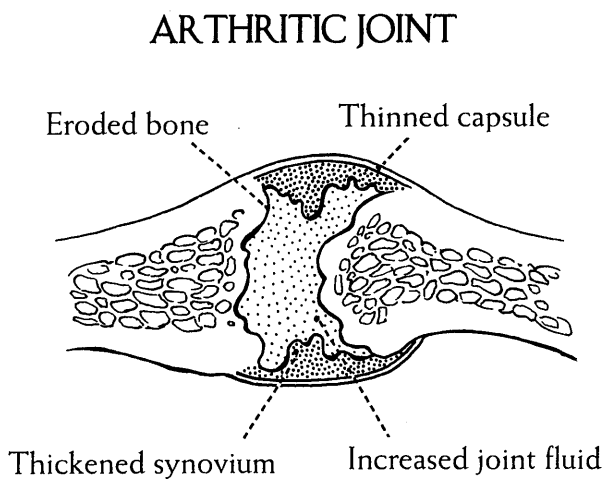
WHAT IS ARTHRITIS?

To understand arthritis and how it affects joints, one first needs to understand how a joint functions normally. A joint is the place where two or more bones come together. The various parts of the joint control the way the bones move in relation to one another. The joint capsule surrounds and encloses the place where the two bones meet. Ligaments are bands of fibrous tissue that hold the bones of the joint together. The ligaments of a joint also help form the outside of the joint capsule.



The joint capsule is lined with a thin layer of tissue called *synovium*. Normal synovium produces joint fluid that fills the joint capsule and lubricates the joint. The surfaces of the bones inside the joint capsule are covered with a material called *cartilage*. In a normal joint, the cartilage allows the bone surfaces to glide smoothly and easily on each other.

In arthritis, the synovium becomes inflamed and swollen. Inflamed synovium produces excessive amounts of diseased joint fluid. Trapped inside the joint capsule, this fluid builds up. The combination of excess fluid and thickened synovium causes the arthritic joint to swell. These enlarged joints are painful, hot, and red.



If excess fluid enlarges the joint capsule for an extended period of time, the ligaments that surround the joint are stretched and weakened. When they become loose, they cannot properly guide the movements of the bones. The diseased fluid inside the joint capsule slowly erodes the cartilage. Over time, the cartilage may wear away completely, exposing the bone tissue itself. This erosion of the cartilage makes movement of the joint painful.

Stress on joints in this condition can cause the bones of the joint to move out of alignment. When the bones are not in their normal positions, the muscles that move the joint become unbalanced and actually pull the bones farther out of alignment.

No one is fully able to explain why arthritis occurs. Research scientists have developed several theories in an attempt to account for the disease. These scientists, however, have established that *rheumatoid arthritis* is an autoimmune disorder. This means that the body reacts against its own tissue, as though that tissue came from outside the body. In rheumatoid arthritis, cells called macrophages produced by the body itself migrate to the joint. These macrophages actually attack the joint's own synovium, thus causing the inflammation. *Osteoarthritis* is a degenerative condition that commonly occurs in aging joints and may be exacerbated by trauma or disease. In any case, a medical evaluation is important for any type of joint pain to ensure proper diagnosis and treatment and help prevent further injury.

WHY JOINT PROTECTION?

Our Joint Protection Program helps you preserve the function of your joints, maintain their alignment, and thus keep deformities from getting worse, if possible. Once a joint is out of alignment, surgery is often the only way to prevent further damage or correct existing deformities.

Each individual principle and technique may have only a small effect on the management of your arthritis. If you implement several or all of the principles, however, this may have a dramatic effect over time on the quality of your life. Joint Protection often means changing old habits, and breaking habits takes perseverance, dedication, and time.

In reading this book, you should remember that the Joint Protection ideas described below are part of a complete medical program for arthritis. These principles are not a substitute for a doctor's care or for your medication. Likewise, applying the Joint Protection Principles cannot guarantee results for everyone. For many, though, the prolonged good functioning of their joints will more than repay them for the time they spend studying these principles and breaking old habits.

THE TEN JOINT PROTECTION PRINCIPLES

Many important joint protection ideas have been distilled into ten easy-to-remember principles by the surgeons and therapists at *Kleinert, Kutz and Associates Hand Care Center, PLLC*. This section shows you how to apply each principle to your daily life.

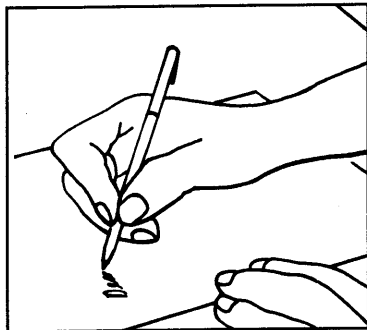
Principle
1

AVOID POSITIONS THAT FOSTER DEFORMITY

Four basic hand positions contribute to deformity. Most of us tend to use each of them many times a day. Be on the lookout for new variations on these old themes!

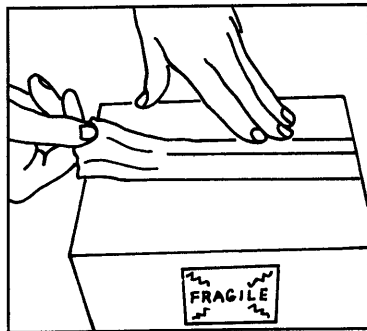
AVOID TIGHT PINCHING

-DON'T-



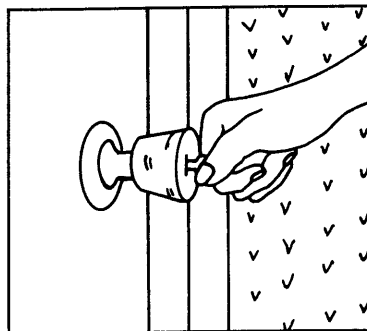
When writing, position yourself with your back straight in an area with good lighting.

Build up the pen with foam for an easier grip. A pen with a nylon tip will be less resistive and easier to use than a pencil or ball-point pen.



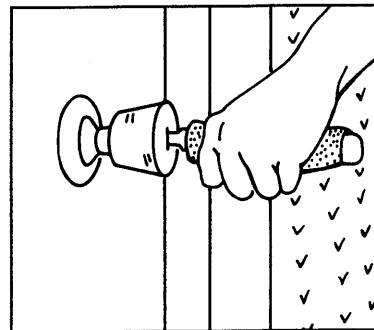
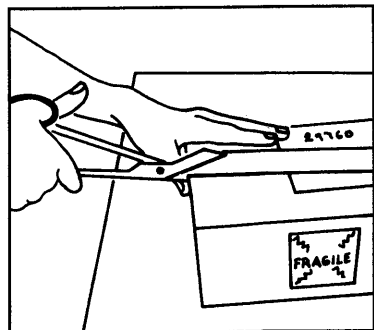
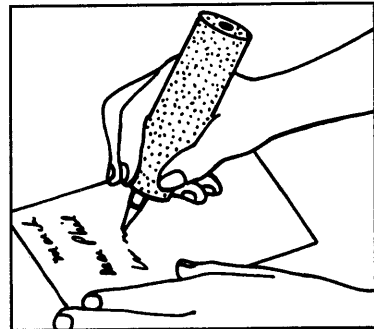
Don't struggle to open packages with your fingers.

Use appropriate tools, such as scissors or a knife.

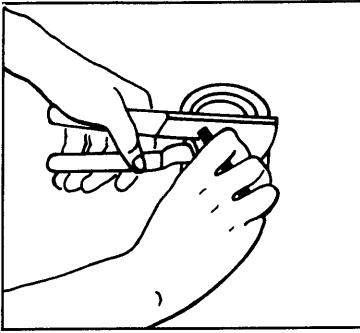


A built-up key holder is easier to hold than a key, especially when the lock is stiff. This kind of key handle gives you a larger lever arm. Rotate your arm to turn the key.

-Do

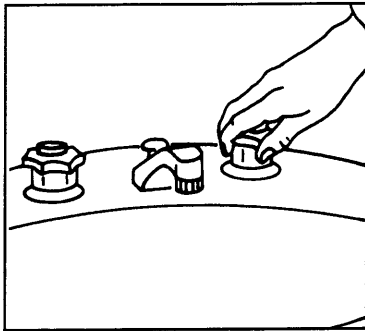
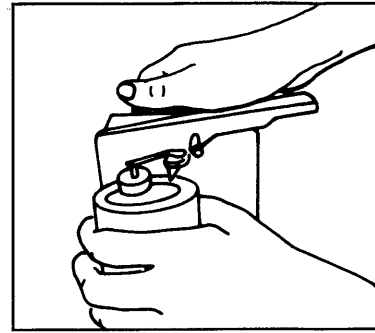


-DON'T-

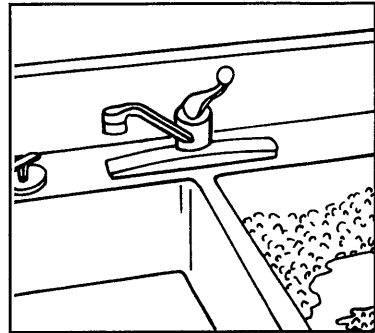


Use electric appliances whenever you can to avoid tight pinching. For example, use an electric can opener rather than a manual opener.

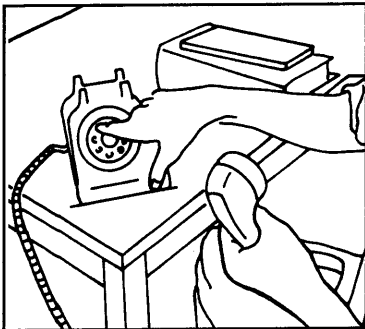
-Do-



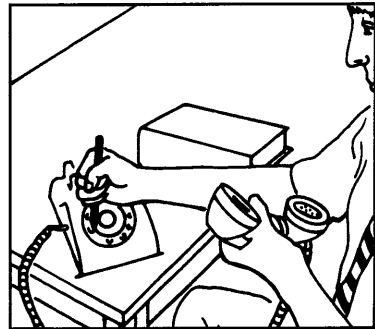
Replace small faucets having difficult-to-turn handles with the type of faucet that has a lever. You can then use the heel of your hand to turn the faucet on.



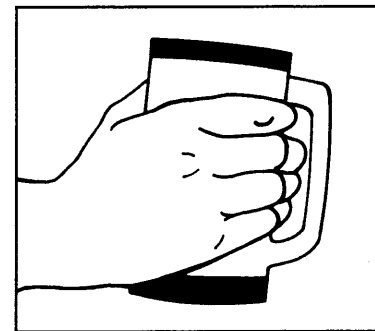
If you have round faucet handles, use the heel of your hand with your palm held flat to turn faucets on.



If you have a dial phone, keep a pen or pencil next to it to use instead of your finger when dialing.

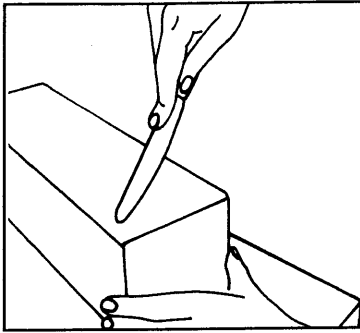


When you drink hot beverages, use a mug. Avoid coffee cups with small dainty handles because these are difficult to hold. When holding the mug or insulated coffee cup, wrap your hand around it as pictured. This gives you a larger, more stable grip.



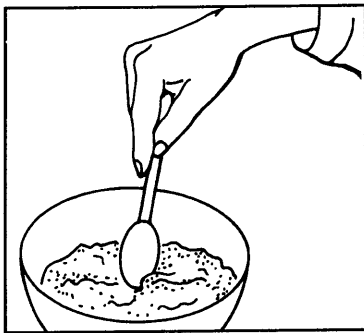
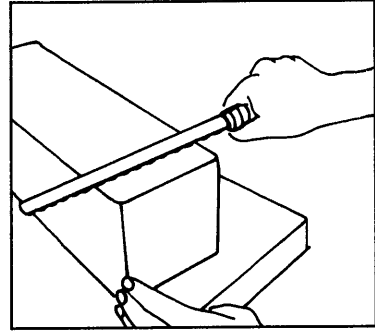
AVOID TIGHT GRIPPING

-DON'T-

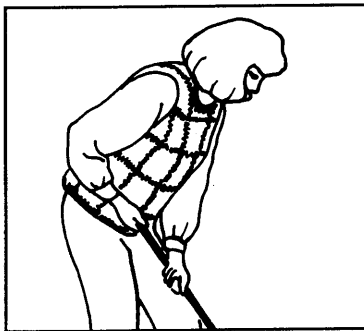
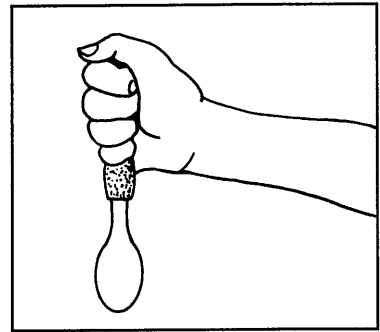


Avoid small-handled knives, especially when cutting resistive foods like cheese or meat. Use a knife with a large handle in a sawing motion, keeping your knuckles parallel to the handle. Make sure the knife is sharp. Sharp knives cut food more easily than dull ones.

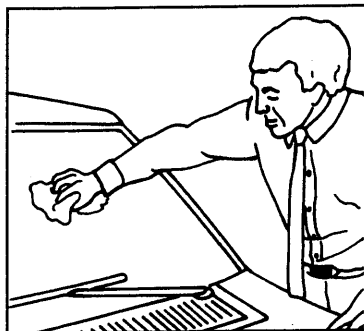
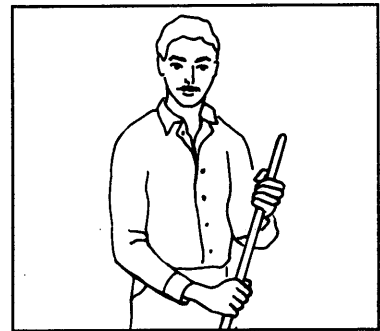
-Do-



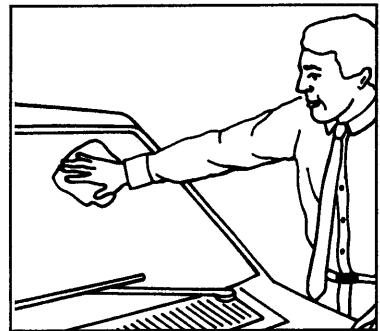
Build up the handles on your cooking and mixing utensils with a material that has "give" to it. You will find that you can use less effort to grip a handle that is large and soft than to grip one that is hard and unyielding.



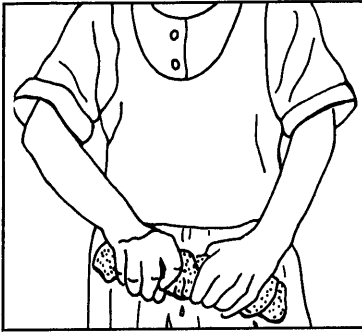
When sweeping, mopping or raking, avoid holding the handle below waist level. This leads to poor posture and unnecessary strain when gripping. Keep the handle out in front of you with your back straight as pictured. Your knuckles should be parallel to the handle.



When washing windows, counter tops, or other flat surfaces, do not grip the cloth or sponge tightly. Use a flat hand to clean instead.

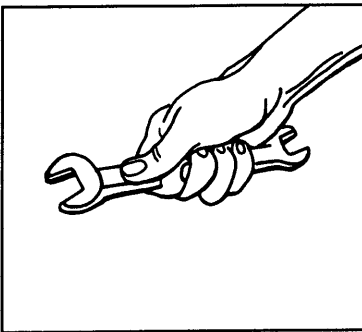
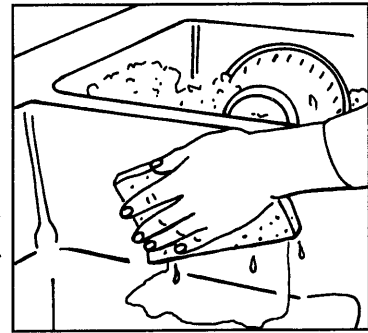


-DON'T-

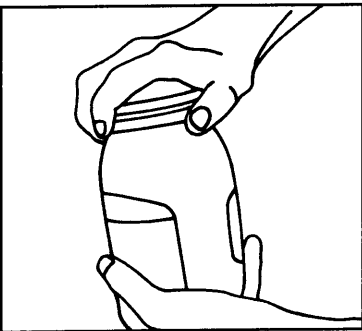
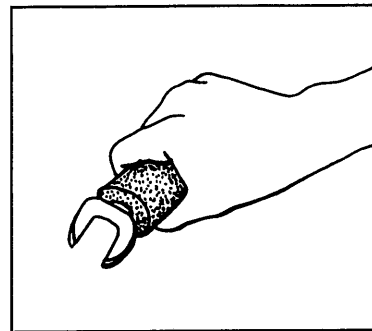


Do not remove water from a cloth by twisting it or wringing it out. Instead, fold the cloth over the faucet and use a straight grip to squeeze the water out. When you use a sponge, flatten it against the side of the sink with your palm to remove the water.

-Do-

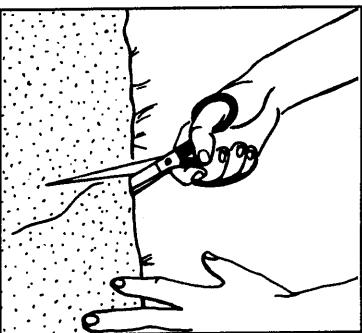


Avoid hard, narrow handgrips like those found on buckets, briefcases, tools, and shears. Building up handles with foam will make them both larger and softer. A soft grip can be held with greater comfort and less effort than one that is hard and unyielding.

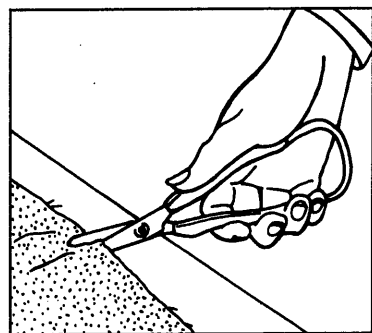


Use a flat hand to open jars. Open the jar with your left hand and close it with your right hand. In other words, when you twist the cap, turn it toward the thumb side of your hand.

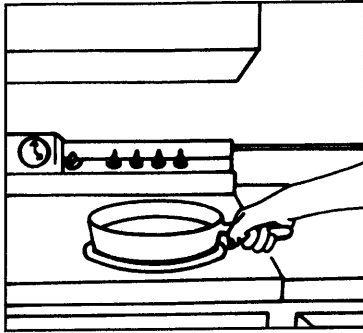
If you have difficulty opening jars, you can obtain assistive devices in many department stores. Ask your therapist for more information.



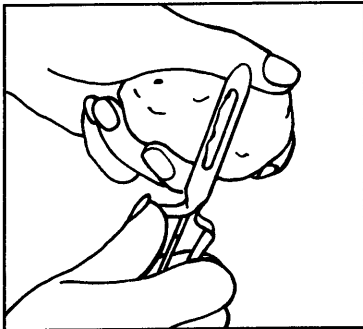
If you use scissors often for sewing or cutting, use an adapted scissors or utility knife rather than conventional scissors.



-DON'T-



Use lightweight utensils and cookware. Avoid heavy skillets, platters, and daily dinnerware. These items are even more difficult to grip when they have food on them.

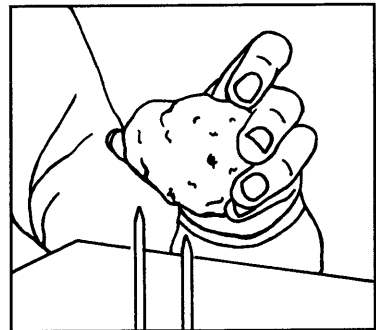
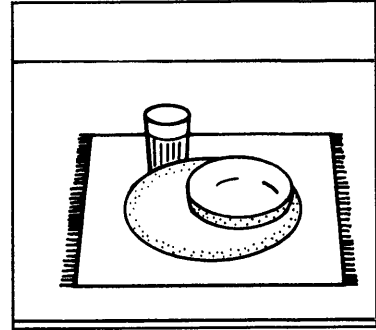


Avoid straining to hold small vegetables and fruits. Use a cutting board with prongs, which will stabilize the item while you cut or peel it.



When possible, put heavy or bulky objects on wheels or slide them instead of lifting them.

-Do-



AVOID POSITIONS THAT PLACE EXCESSIVE OR CONSTANT PRESSURE ON JOINTS

-DON'T-



When rising from a sitting position, use the heel of your hand - not your fingers - to assist yourself.

-Do-



Avoid resting your chin on your knuckles. If this is a habit you can't break, use the heel of your hand rather than your knuckles.



AVOID PROLONGED STATIC POSITIONS

Some activities such as typing, reading, desk work, and sewing require that you hold your joints in a single position for long periods of time. This can result in fatigue and pain. When you choose to engage in activities that require a single position, take frequent breaks during which you move or rest your joints. Each joint has its proper resting position. When resting a joint in its resting position, place no tension upon it. This handbook discusses proper resting positions in more detail under Principle 5.

-DON'T-



When driving a car for long distances, periodically relieve your grip on the steering wheel by resting or shaking out one hand at a time.

A foam steering wheel cover allows you to use a less forceful grip because it makes the wheel both larger and softer.

-Do-



If you enjoy talking on the phone, purchase a headset or attach a shoulder rest to the receiver to free your hands.



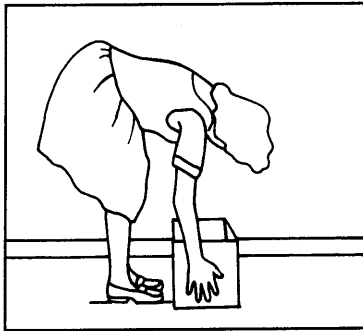
Principle

2

USE PROPER BODY MECHANICS

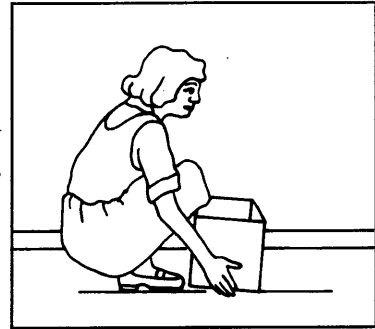
When you lift an object, the bones of your body work just like a mechanical system of levers. Just as you can prolong the life of a machine through proper use, certain ways of lifting and holding will help you avoid unnecessary stress on your joints and thus prolong their healthful functioning. The closer the weight of the object is to the center of your body and to the joint that supports it, the less effort you need to use and the less strain you put on your joints.

-DON'T-

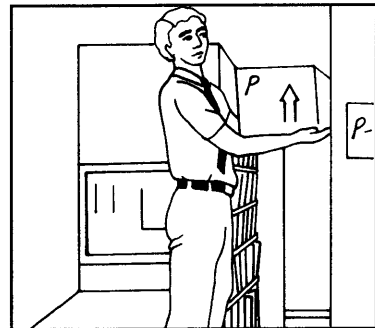


When lifting objects from below waist level, bend your knees and keep your back straight.

-Do-



Don't lift heavy or bulky objects over your head. Use a stool to reach high places.



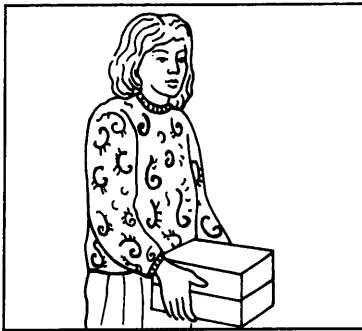
Principle

3

USE THE LARGEST, MOST STABLE JOINT FOR A TASK

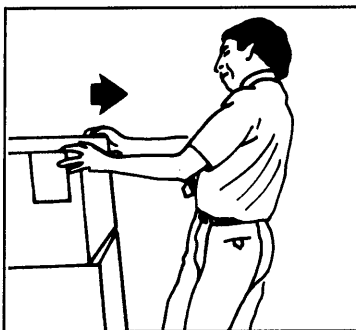
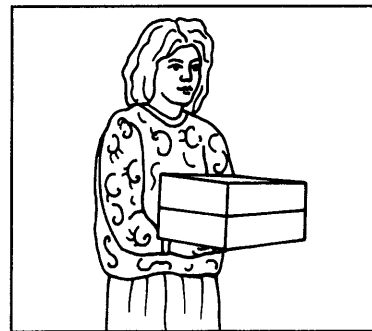
Any amount of stress is better tolerated by the larger joints. Generally, the closer you get to the ends of your arms and legs, the smaller the joints become. In other words, finger joints are smaller than wrist joints, which are smaller than elbow joints, which are smaller than shoulder joints.

-DON'T-

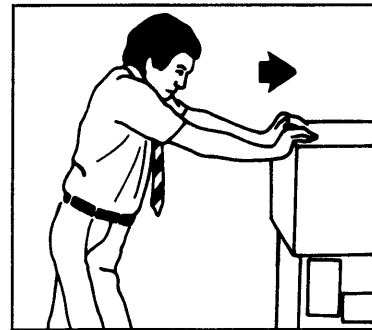


Lift an object with both hands. Use both forearms to carry it close to your body instead of gripping its handles or sides tightly with your fingers. When you carry an object correctly in this manner, the larger shoulder and elbow joints take the stress rather than the smaller wrist and finger joints.

-Do-



Push objects with your weight rather than pull them with your fingers. This uses your hip and leg joints to do the work instead of your arm and hand joints.



Carry your purse on your shoulder or forearm rather than on your hand. Lighten your handbag or briefcase as much as possible by purchasing light-weight varieties of cosmetics and other objects.



Principle

4

ORGANIZE TO REDUCE WORK EFFORT

You can budget your energy in a more efficient manner for any job if you think through the steps ahead of time and plan your work space accordingly. Use adaptive devices for difficult tasks you do often. Ask your therapist to provide you with a list of such adaptive devices and sources where you can obtain them.



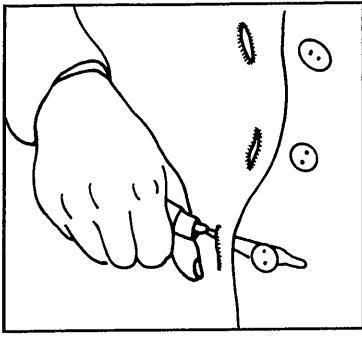
Change tools and methods you use for a job if doing so will make it easier. Long-handled versions of items such as dustpans and shoehorns can reduce or even eliminate bending and stooping.



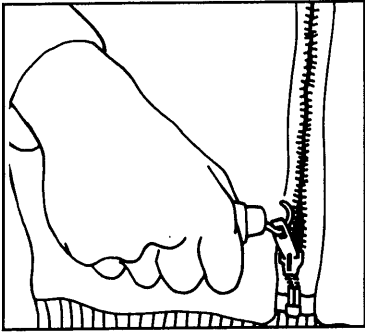
Plan work spaces for maximum efficiency. Keep frequently used items handy. Adjust table or chair heights to minimize joint stress. A high kitchen stool with a swivel seat, for example, can decrease standing time at a work bench or counter.



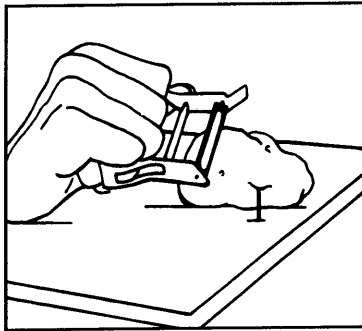
Put what you can on wheels. Kitchen and shopping carts can transport a wide variety of items. Laundry baskets, suitcases, and briefcases can all be moved more easily when put on wheels.



A buttonholer is inexpensive and easy to use and can save sore joints unnecessary pulling and struggling.



A zipper pull can be used to zip and unzip small, hard-to-grasp zippers. The large handle is easy to hold and allows you to exert greater force with less effort.



Buy utensils that are designed to reduce work effort. This potato peeler is easier to use than the conventional type and doesn't require a complete grip to hold onto it.

Principle

5

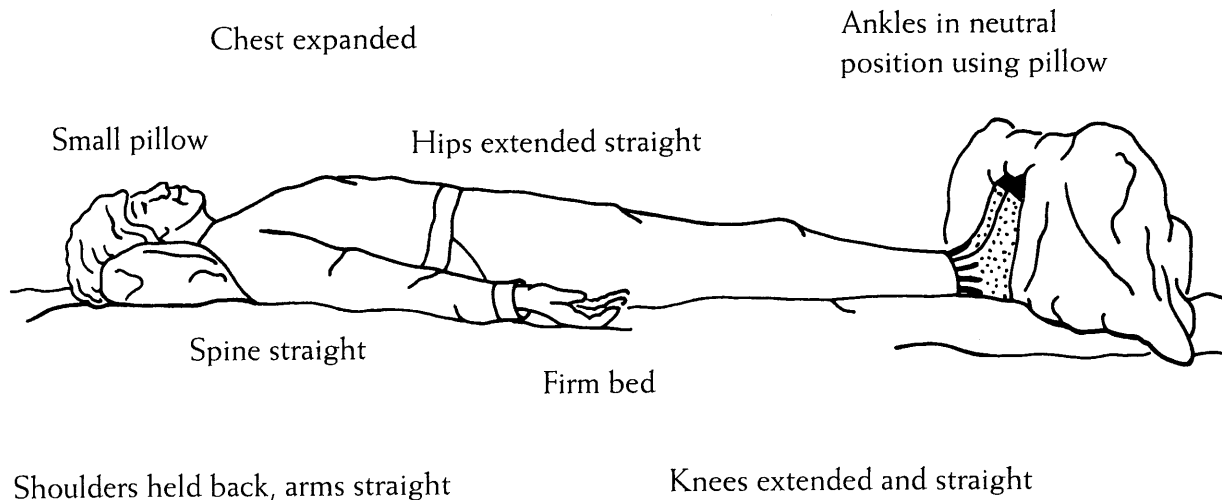
RESPECT PAIN, RECOGNIZE FATIGUE

Learn to distinguish between the usual arthritis *discomfort or fatigue* that diminishes after you finish an activity from the *pain* that persists longer than one hour after the activity ends. Stop an activity as soon as you notice the signs of fatigue. Eliminate activities from your life that result in persistent pain.

Get enough rest. Sleep at least ten to twelve hours each night and take naps during the day. Rest has been shown to have a significant effect on how you and your joints feel.

When your joints are painful or in a flare-up, rest them in their deformity-preventing resting positions. These positions keep the joints in good alignment and help prevent tightening and the loss of range of motion.

DEFORMITY-PREVENTING JOINT RESTING POSITIONS



Principle**6****PRIORITIZE ALL ACTIVITIES**

Arthritis is something you can learn to live with. To keep the quality of your life high, make sure you spend the most time on things you really enjoy. Depression is common among people who have arthritis. A period of grieving over abilities you have lost is normal. However, if this grieving turns into depression you cannot control, seek the assistance of a counselor. The counselor can teach you many skills for combatting depression. You must take care of your mind as well as your body. There are so many things in life for you to enjoy. Enjoy them!

Develop realistic expectations of what you can accomplish. Don't set your sights so high that you find yourself repeatedly discouraged. Set achievable goals.

This quick exercise will help you determine which activities are best for you, activities you enjoy that put the least stress on your joints. Simply follow these eight steps in filling out the Activity Rating Chart on the next page:

1. List the activities you enjoy doing the most.
2. Add to the list activities you do often, such as chores and job-related tasks. Don't list an activity more than once.
3. In the column labeled "Enjoyment Rating," write for each activity the number from the Enjoyment Rating Scale that corresponds to the amount of enjoyment you get from the activity.
4. In the column labeled "Physical Effort Rating," write the number from the Physical Effort Rating Scale that corresponds to the amount of physical effort that each activity requires.
5. In the column labeled "Total," write the result obtained when you add the two ratings for the activity together.
6. Those activities that have the smallest scores are the ones you should do most. Avoid activities with high scores.
7. Divide your activities into two groups: activities that you will make high priority on the basis of your rating and activities that you will avoid or make low priority on the basis of your rating. Write the activities in the space provided for each group.
8. List those activities that you want to do or must do that will require planning on your part. (See Principles 4 and 7 for more information on planning activities.)

Principle

7

PLAN FREQUENT REST PERIODS; ELIMINATE ACTIVITIES THAT CAN'T BE STOPPED IF YOUR JOINTS GET TIRED

As a person with arthritis, you may find resting to be one of the most beneficial things you can do for your long-term health. Deep relaxation, a relatively complete release of bodily and mental tension, may sometimes be even more beneficial than sleep. But most of us must learn to relax, odd as this sounds. Most of us carry tension in our bodies of which we are unaware, but which affects us physically. Becoming aware of this tension and releasing it takes practice and persistence.

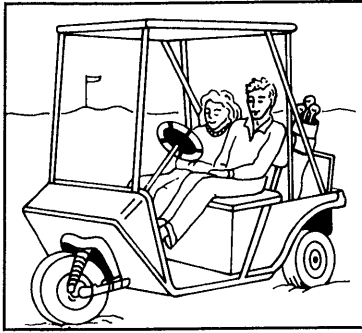
When we learn to relax deeply, we may find that we seem to do so easily at first. Then, after a time, we find that there is a deep layer of tension that we can't seem to let go. Such "learning plateaus" are normal. If you keep at it, you will eventually find yourself making good progress again, reaching another plateau, making progress, and so on. Each phase of this process will improve your ability to relax.

Some people find that various kinds of music help them to relax more deeply. Meditation and relaxation tapes specifically designed for this purpose are available from many sources. Some persons also find that biofeedback devices may help them become more sensitive to the experience of tension and relaxation in their bodies and more able to control these states. Imagery, the directed use of the imagination, may also have a profoundly relaxing effect. There are numerous approaches to imagery. Some are taught through books and some require a specially trained therapist.

Whatever approach you choose to help yourself relax, the important thing is to use it frequently!

<u>Mon</u>	<u>Tues</u>	<u>Wed</u>
Read	Water plants	Watch talk show
grocery shopping	doctor's appt.	Run errands -
Nap	Sue comes to clean	dry cleaners
Call Aunt Mary	Nap	shoe repair
Vacuum two rooms	Two loads of wash	Bank
Dinner with Dan		Nap.
		Order pizza for <u>kids!</u>

Keep a chart or diary of daily activities and the effort needed to do each one. Use this chart to plan your days and weeks so you can accomplish everything you need to without overdoing it.

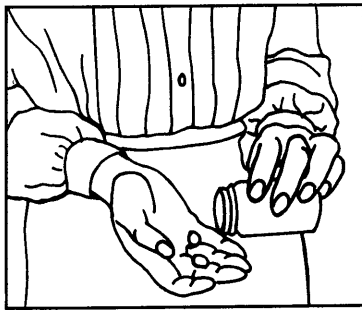


Activities such as canning and freezing foods, driving long distances, golf, bike riding, and skiing are difficult to stop should you become too tired. Plan such activities carefully, and make sure you have an opportunity to rest before and after them.

Principle

8

FOLLOW THE MEDICAL PROGRAM RECOMMENDED BY YOUR DOCTOR

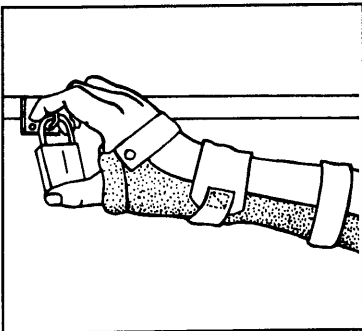


By following the advice of your hand care professional, internist or rheumatologist, you can keep the disease at a manageable level. Take medications exactly as prescribed. Make sure you are taking them correctly. Never change the dosage on your own, but ask if there are any changes each time you see your doctor. Know why you are taking the medication and what its common side effects are. Report side effects you experience to your doctor.

Principle

9

FOLLOW A PROGRAM OF PROTECTIVE SPLINTING IF RECOMMENDED BY YOUR DOCTOR



Splinting positions your joints in such a way as to avoid deformities and preserve function. Make sure you understand exactly when and how to use all of your splints or braces. If you are not clear about this, ask your physician or therapist.

Principle

10

EXERCISE FOR MUSCLE STRENGTH AND RANGE OF MOTION

Your therapist will outline a program of exercise specifically designed to help you maximize muscle strength and range of motion. Such a program must be followed regularly and faithfully for it to be of greatest benefit. Be sure you go through your program as often as the therapist recommends - no more, no less.

After a flare-up has passed, when you are beginning to feel better, do isometric exercises. Isometric exercises contract the muscles around a joint *without moving the joint*. In this stage, always exercise the joints in a position within their *pain-free range of motion*.

When you are feeling good, bring each joint through its full range of motion, and observe the guidelines provided for all ten Joint Protection Principles.

One of the best forms of exercise is swimming. In swimming you may bring joints through their full range of motion without the weight of gravity being placed upon them. Ask your therapist which strokes would be best for you and how much time you should spend in the water.

A final and very important message concerns *keeping your weight down*. Find out the range of body weight recommended for a person of your height and build, and then make sure you keep your weight within that range. Every extra pound of body weight places more strain on your joints, especially on the joints of your spine and legs. Extra body weight thus increases the potential for flare-ups and further deformity. So stay trim to feel full of energy!

EXERCISES AND NOTES

Photocopy this page for yourself and your friends. Put the copies in places where you will see them often, such as on your refrigerator or on a bulletin board at work.

JOINT PROTECTION PRINCIPLES FOR PERSONS WITH ARTHRITIS

- Principle 1** Avoid positions that foster deformity:
- tight pinching
 - tight gripping
 - excessive or constant pressure on joints
 - prolonged static positions
- Principle 2** Use proper body mechanics.
- Principle 3** Use the largest, most stable joint for a task.
- Principle 4** Organize to reduce work effort.
- Principle 5** Respect pain, recognize fatigue.
- Principle 6** Prioritize all activities.
- Principle 7** Plan frequent rest periods; eliminate activities that cannot be stopped if your joints get tired.
- Principle 8** Follow the medical program recommended by your doctor.
- Principle 9** Follow a program of protective splinting if your doctor recommends this.
- Principle 10** Exercise for muscle strength and range of motion.



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