

Backpack Weight Reducing Tips !

www.backpacking.net

This page focuses on the practice of packing light - necessary attitude, gear with multiple purpose, and, of course, backpack weight reducing tips - some of which you may already know and some you may not. Enjoy, and send in your tips.

THE CRFFD !

Tenacious Attitude:

Ruthless scrutiny of each piece of outdoor gear is key. First, evaluate each item of gear for its necessity and functionality -- some pieces of gear can serve multiple purpose, some are along for the ride, just in case. The longer you look at each piece with an attitude -- i.e., is it worthy of being in your pack, **ON YOUR AGING BACK** -- the more its value will increase or decrease. The only "just-in-case" pieces of gear that I carry fall within the "Fourteen-Essentials" category -- e.g., first aid/last aid kit, emergency fire starter, etc. Everything else is a critical piece of gear that provides at least one function, every day.

Once you've selected the items of gear that are absolutely necessary AND have unduplicated functionality, then start your search for its smallest and lightest manifestation. Here is where complications arise. You may have the attitude, but no bucks in your pocket. Compromise ! Buy (and/or make) the smallest, lightest, highest quality you can afford.

My experience has been that most of the high-end expensive items that I have purchased have endured much better than their low-end counterparts, such that, the expensive stuff is actually cheaper in the long run. Like I say, that's my experience. You'll have to engage in your own mental gymnastics for what you can justify and what you can't.

" The unexamined life is not worth living ! "

Socrates (470-399 B.C.)

" The unexamined gear may not be worth toting ! "

The Lightweight Backpacker (1946 - ?? A.D.)

MULTI-USE GEAR

Look for Multiple Functionality in Gear

Many items of backpacking gear can be used for multiple purposes. The practice of using one piece of equipment for more than one purpose will often allow you to leave other equipment items at home. Again, take the time to scrutinize each piece of gear as to the possibilities.

Multiple Purpose Gear:

- **Parachute Cord**--clothesline, securing splints, line for traction splint, food bag line,
- **Swiss Army Knife**--knife, scissors, saw, awl.....
- **Candles**--light for reading/writing, wax as fire starter, wax as waterproofing agent
- **Duct Tape**--moleskin substitute, bandage wrap, gear repair (packs, boots, poles...), splint wrap, emergency sunglasses
- **Sleeping Bag**--emergency stretcher or litter
- **Cooking Pot**--bowl for eating, cup for hot drinks

- **Water Bottle**--cup for hot drinks
- **Backpack Metal Stays**--splints
- **Ski / Hiking Poles**--avalanche probe, splints,
- **Snow Shovel**--sled for fun, sled runner for emergency litter,
- **Stuff Sacks**--pillows,
- **Socks**--hand warmers,
- **Safety Pins**--securing bandages and cloth slings, clothespins, fish hook, hook for hanging items,
- **Clothing**--slings, pillow stuffing, adds loft to sleeping system.
- **Stove Aluminum Wind Screen**--candle light reflector, funnel for pouring liquids.
- **Dental Floss**--sewing thread, ties,
- **Zip-Loc Freezer Baggies**--carry items, bowl for preparing & eating food, carry-out container for garbage.
- **Backpack w/weather shroud**--emergency bivy sack (for the lower half of the body).
- **Compass sighting mirror**--personal mirror, emergency signaling device.
- **Tent Pegs**--slender tent pokers with relatively sharp ends (like the titanium pegs sold by Simon Metals Company) can be used as a piercing tool- for instance, to pierce thick fabric or leather in order to run a cord through, to make a repair. Also, for grilling food over a flame.
- **(small, thin, flexible) Plastic Placemat**--sit pad, place for dirty boots in the tent, and to stand-on while washing. Other potential uses--stove windscreen (if you're careful), sunshade, fly swatter? (source: backpacker's basecamp weekly wisdom 8/25/97).

" Pay attention to the ounces & the pounds will follow "

The Lightweight Backpacker

THE TIPS !

Look for Innovative Ways to Reduce Backpack Weight:

Take time--before, during, & after each hike--to peruse your gear, your packing habits, even the clothing you wear, for ways to reduce the weight that you must bear. You may be surprised at the amount of unnecessary weight that you inflict on yourself. Keep in mind, though, it is a process. A long-term commitment and challenge. You will, undoubtedly, think of something new practically every trip.

Weight Reducing Tips:

- **3 lb Pack, 2 lb Sleeping Bag, 3 lb tent**

This is, perhaps, your biggest opportunity to reduce backpack weight. Seek out a good 3 lb pack that is relatively comfortable with 35 to 40 pounds in it. Since, most of the time, you will be carrying *less* than that, the suspension of that 3 lb pack should be adequate for you. Get a good 2 lb, 20 degree, goose-down (or comparable synthetic) sleeping bag and a good 3 lb 3 or 4-season tent. Let's see, 7 lbs minus 3 lbs (pack), 3.5 lbs minus 2 lbs (bag), 5 lbs minus 3 lbs (tent)--that's a weight reduction of 7.5 pounds. SEVEN AND A HALF POUNDS !!!

- **Seek out TITANIUM products**

Pots, stoves, backpack stays, tent pegs, anything metal, if made of titanium, will be significantly lighter than any other metal. For example, my titanium cook pot (with lid & handles) weighs 6 oz. That compares to 14 oz. for comparable MSR or SIGG lightweight stainless steel and about 10 oz. for Traveling Light's Aluminum entry. For stoves, my titanium Primus butane/propane (with windscreen) weighs 3.4 oz, compared to MSR Whisperlite--12.7 oz, and Camping Gaz Micro Bleu--7 oz. (both without windscreen). So far, in my experience, strength and durability of titanium products seem to be more than adequate.

NOTE: Never mind the naysayers who scoff at those who purchase Titanium products. If they could afford it, they'd get some too. You can't eat titanium, but for a lightweight packer, it's as good as sliced bread.

- **Toothbrush / Tooth Powder / Dental Floss / Sewing Kit**

Assuming you use more than just your finger to clean your teeth, here's a tip or two.

First find a toothbrush with a short head, say 3/4 inch. Next, cut off the handle--leaving about two inches to hold onto--and finish it off by sanding-down the rough edges. Oh yeah, drill a few holes in the remaining handle -- if it's a fat handle, hollow it out with your drill. Be creative -- don't forget to show it to me, if we meet on the trail ! :-)

Tooth powder is lighter than paste, and can be meted out much easier. I measure a small palm-full for each day on the trail and store it in a very-small, very light plastic container which resembles a 35mm film container, but is about 1/2 the size and weight.

If you are going to carry dental floss, two suggestions. Take the floss, leave the plastic container behind. Rather than packing a sewing kit, use the waxed floss as emergency thread for gear repair. Put a sewing needle or two in your first aid kit or somewhere else safe.

- **Water Is Heavy**

So only carry what you need. Here are two potential ways to reduce the amount of H₂O you're packing (1) If you know the area you're in and can be sure there are watering holes up ahead, pack only enough to get to the next water hole. Also, (2) if you drink as much as your innards can hold before you hit the trail and at each water fill-up, thereafter, you won't need to carry as much, after you get going.

I follow these tips and now, most of the time, carry at least one pound less on my back because of it. (Caution: If you alpine scramble or otherwise navigate crosscountry - esp. if you desert hike - you may need to pack it all - plan carefully.)

- **Eliminate Map Edges**

Cut em off ! I know, I know. This is some kind of neurosis, isn't it. Actually, it's attitude. If it doesn't have AT LEAST ONE FUNCTION, I don't want it in my pack. I cut off map edges (leaving just enough room for bearing calculations, notes, longitude & latitude markings, and other important map attributes.)

- **About Stuff Sacks**

I carry much of my gear in color-coded stuff sacks and zip-loc freezer baggies. Where I use stuff sacks, I adhere to the following. (1) Use the right size sack--wasted space means unnecessary weight. (2) Cut off labels inside sack (3) Allow just enough drawcord so sack can have full opening--cut off the rest and melt the ends so they won't unravel (4) Use the strongest-smallest plastic cord-locks you can find. All this may seem insignificant, but it adds up after a while.

- **Mete-Out Appropriate Portions !**

Sunscreen, bug-juice, toothpowder/paste, condiments, prescription medicine, antacid, vitamin I (ibuprofen), toilet paper, and anything else for which you can measure usage according to time (weeks, days, hours). Mete out portions of these items that will be appropriate for the time you'll be in the backcountry. For some items, estimate conservatively so that you'll have a little extra if conditions turn out to be differently from what you anticipated -- (for example, worse bugs, more sun, bigger headache,

etc.). I use little plastic vials that are similar to film canisters but smaller -- but have same tight-fitting lids.

NOTE: I don't use film canisters because of the chemicals used on film & possible residual in the canisters.

- **Clothes**

Cut off unnecessary labels and lengths of cord. If garments have cord locks, replace them with lighter versions, or instead, use small doubled-up patches of light-weight leather with slits. I've noticed that some manufacturers have been doing this, also.

If you carry extra clothes for emergencies, cut off pockets, cords, tags, unneeded linings, etc.

I have saved some weight on hats by cutting out labels and replacing plastic adjusting straps with elastic. It feels better and won't break in the field as easily as the plastic ones.

- **Backpacks**

Shorten nylon webbing straps wherever possible. I once saved a quarter pound (4 oz) by removing the hypalon crampon patch from the top of my pack's lid and the nylon belt loop with foam backing from the inside (which allows the lid to double as a hip sack when removed from the pack). In addition, I removed a couple of plastic loop fasteners on the sides of the lid used as part of the hip sack configuration. Most of the time, I don't need those parts (and their corresponding 1/4 pound !).

For the times I was taking a long trip which included some day-hiking or I needed the heavy-duty hypalon patch, I purchased a second lid.

- **Remove Manufacturer's Labels**

I couldn't believe it. I just bought this ultra, ultralight, high-tech tent and here's this big (5 1/2" x 3 3/4") label on the outside of the door advertising the tent makers name. The label's weight was added to by the waterproof tape applied to its opposite side, on the inside of the tent. Needless to say, I removed the label and the waterproof tape, then sealed the needle holes with a light bead of SeamGrip. That label, itself, was not waterproof and, in fact, soaked up water like a sponge. In the field, that label would have added two to three ounces of weight to my pack (depending on whether it was dry or wet).

Remove labels & apply a light bead of SeamGrip onto the needle holes, wherever possible--tents, packs, bags, clothes, even on boots (where they put those useless metal gore-tex tags).

- **Boots, Shoes & Laces**

Two tips here. The first, definitely do it. The second, consider it a potential way to significantly reduce relative pack weight, but don't take it as gospel. Analyze your own situation, experiment, and do what's safe and healthful.

Firstly, on shoes and boots, I cut off excess shoe lace--for two reasons (1) excess shoelace means unnecessary weight and (2) excess shoelace means safety hazard in the bush. Ever have a big lace-loop catch on an exposed root or tangly bush ? After you cut them, scorch/burn/melt the ends so they won't unravel.

And secondly, as your pack weight goes down, your requirement for heavy boots is reduced, as well. Since each pound on your feet is supposedly equivalent to 5 pounds on your back, you can reduce the relative weight of your pack by getting a pair of lighter weight boots.

If you have, as one lightweight packer terms it, entered the new paradigm where your pack weight is really low--25 pounds for four or five days--you might even want to consider going with a sturdy pair of 2 pound cross-trainers or running shoes. Like I said, though, there's potential here, but experiment. What works for me, may not work for you.

Consider the implication. Assuming the "1 pound on the foot is equal to 5 pounds on the back" theory is true, trading-in the 4 pound boots for a pair of 1 3/4 pound running shoes (with vibram soles) would decrease your relative pack weight approximately 11 1/4 pounds ! It's at least worth a second thought !

- **Pillows**

Instead of carrying a pillow, stuff your clothes in one of your larger stuff sacs--makes a dandy pillow. Your clothes will be dry & maybe even warm in the morning.

- **Scouring Pads for dirty Pots & Pans**

Use sand, dirt or moss instead of a scouring pad. No soap suds in the water & no dirty pad to mess with.

[Alternate tips for pot cleaning](#) (submitted by Rich Hawes, 6/23/04)

- **Camp Shoes**

Although camp shoes are considered a luxury item for neurotic minimalists, they have multiple uses, most notably, a haven of rest for weary feet. If you carry them -- and I sometimes do -- look for lightweight water shoes, rather than lugging along your much heavier tennies or running shoes. I used to carry a pair of Speedo Surfwalkers which are several ounces lighter than the Nike Aqua Socks.

Another solution, if you want something just for shuffling around camp, get a cheap pair of cloth night slippers from one of the local chain department stores. The slippers are practically weightless, and if you're lucky, they may even last an entire season.

NOTE: If I'm on a venture which includes river crossings or swimming in shallow lakes, I'll still carry my Speedo Surfwalkers.

- **Batteries are Heavy--use Candle or Oil Lamps Instead**

Because batteries are heavy, I use my headlamp only for night travel or answering the midnight call.

Otherwise, for in-tent activity, I use a candle lantern or, more recently, a candle-lantern converted to oil (it's lighter, cleaner, and lasts longer). Both can be purchased at just about any outdoor shop. In addition to providing light for reading and writing while in the tent, they are excellent for starting fires, even if the wood is damp.

Keep in mind, this may not be advantageous to you. It depends on how long you're in the outback and how much light you require after dark. The longer you are out there and the more you require artificial light in your tent, the more advantage and relative weight saving you will realize by using the lantern.

NOTE: A tip I saw in *Backpacker Magazine*: If you carry an aluminum stove windscreen, use it as a light reflector placed behind your candle. Another example of multiple functionality.

- **Replace your Alkaline Batteries with Lithium**

Replace the AA Alkaline batteries in your flashlights with AA Lithium batteries. Lithium AA batteries **weigh 50% less** than alkaline and **last about 3 times longer**. They only cost about \$5.00 for two, so you actually come out ahead in the long run. One reader at *The Lightweight Backpacker* website says he doesn't carry a candle lantern because the lithium batteries are so light and last so long - he just uses his Petzl Micro headlamp for everything.

- **Thermal Mugs**

If you use an insulated mug (hopefully a lightweight one, like the ones sold by REI, LLBean, Campmor, *Backpacker Magazine*, etc.), do you need to take the lid during the summer ?

Actually, other than during the Winter when a thermal mug is important to keep your hot drink warm, do you need a mug at all ? You can save four or five more ounces by leaving the whole mug at home and using your cooking pot or water bottle for hot drinks.

- **Water Filter**

After using your water filter, pump it to flush out remaining water.

- **Using Your Gear for Emergencies**

Rather than carry triangular bandages, SAM splints, bunches of medical tape and such, consider the following:

You can fashion a sling by using a safety pin (or pins) to (1) attach a shirt sleeve or front shirt-tail to the top of the shirt or (2) attach two legs of a pair of fleece pants or thermal underwear bottoms which have been draped around the victims neck.

Improvise a splint by using (1) a closed-cell foam, self-inflating sit-pad or sleeping-pad (2) backpack aluminum stays or (3) ski and/or hiking poles.

Improvise an emergency litter or stretcher using (1) a sleeping bag with hiking staffs or wooden branches for carrying handles or (2) a closed-cell foam, self-inflating mattress.

Use parachute cord to fashion traction devices for traction splints and for securing improvised splints.

Duct tape is also useful for securing splints, as well as holding protective bandages in place and as an effective alternative to moleskin.

If your sunglasses break, especially if you are in the snow, cut small peep holes in duct tape or paper and secure to your head. If you happen to be carrying cardboard, that works well, also.

NOTE: I've mentioned the above for the purpose of illustrating the multi-functionality of gear. To learn more about HOW to use your gear for medical emergencies, take a mountaineering survival or first-aid course or study the appropriate literature and practice with a friend.

- **Eating Utensils**

Select ultra-lightweight - yet strong - lexan utensils. As with the toothbrush, cut off as much handle as possible and sand down the cut corners. Do you really need anything other than a spoon ?

NOTE: I've looked at the new titanium utensils & the lexan utensils appear to be, at least, equally lightweight and strong, for my purposes.

- **Carry Less Stove Fuel**

Test how much fuel your stove uses to cook your favorite meals & drinks, plan accordingly, and only take the necessary amount of fuel. If you are using white gas, factor in extra for priming purposes. Also, regardless of what kind of fuel you use, factor in a little extra if you are going to higher altitudes where the air is thinner.

Always cook with a lid on your pots. This enables better heat retention, so the water boils faster, which uses less fuel, which reduces the weight on your back !

Also, try to take foods which don't require cooking. Lunches and snacks, especially. This will reduce the amount of stove fuel you will need to carry.

- **Blacken Your Pots !**

Another tip for using less fuel is to blacken your cooking pots. A blackened pot will absorb heat faster than a shiny surfaced one.

Most pots do not come pre-blackened, but over time may become that way, especially if you use them in an open fire. Of all the pots in the "kitchen inventory" section of my "gear closet", my SIGG Innoxal pots are the only ones that actually came with a black outer surface. However, no matter, I always paint my pots with flat-black stove paint, as soon as I get them. I recently did this with my Evernew Titanium pots. The black surface absorbs and distributes heat faster than a shiny surface.

[3/25/97, Marshall Croy submitted his black pot experience:](#)

".....a blackened cook pot disperses and retains heat better. Therefore, I went down to my local Wal-Mart and bought a spray can of Black Bar-b-que grill paint and coated the outside of all my cook pots with it. It (the paint) is rated up to 2000 degrees....."

NOTE: Heat resistant black paint can be procured at hardware stores - look for stove paint - and at automotive supply stores - look for engine block paint.

Here's a couple other cooking pot tips that help maximize the efficiency of your stove:

ROUNDED BOTTOM EDGES:

Flames/heat from your stove can more easily move up the sides of the pot, thus more surface area is covered.

TIGHT-FITTING LID:

A tight-fitting lid is critical in order to maximize the efficiency of your stove. If you have a tight-fitting lid, the contents of the pot will heat faster and, thus, you'll consume less stove fuel.

- Use Sugarless Drinks !

Use energy drinks, hot chocolate, etc., either unsweetened or lightly sweetened. Sugar is very heavy. Gatorade powder--laced with processed white sugar--weighs 2.3 oz per quart. By contrast, the drinks that I now use weigh .4 oz (sweetened with fructose) and .22 ounce (unsweetened). A significant difference !

I switched from *Gatorade* to *E.mer'gen-C*. It is produced by Alacer Corporation, and is a "super energy booster with staying power" containing 25 different electrolytes and has more potassium than Gatorade. Although each foil packet's net weight is only .21 ounce (6 grams), it contains 1000 mg of Vitamin C as well as Vitamins B1, B2, Special Niacin Complexes, B6, B12, Folic Acid, Pantothenic Acid, Calcium, Magnesium, Zinc, Sodium, 200 mg of Potassium, and Manganese. It is significantly lighter than Gatorade. It is sweetened with fructose, and tastes good ! There is also the *E.mer'gen-C Lite* version, which is without sweeteners, but weighs even less--50% less. Each packet weighs .11 ounce (3 grams). I use one or two packets per quart of water. It works great for me!

Just a caution, brought up by Rob Kelly, that before using a vitamin and mineral supplement make sure your body is okay with the dosages contained in each package that you consume. Ten miles into the backcountry is no place to have adverse physical reactions. Like with the Alacer *E.mer'gen-C* that I use - don't just take my word for it, do your own research and make your own judgement as to whether the stuff is right for you.

Another perspective, submitted by Travis Moulton on 5/16/03. "Whatever happened to Multi-function? You need carbs to keep hiking, and getting a few simple carbs every time you take a drink gives the body a (relatively) continuous flow of calories without waisting the energy to digest complex carbs. If you go for sugarless drinks all you are really doing is making yourself carry those extra ounces (and probably more) in the form of snacks and/or lunches."

- Eat Heavy Foods, First !

Foods such as, mealpack bars, fresh fruits & veggies, canned foods, semi-dried sausages, etc., add the most weight to your pack. Eat them first to lighten your load.