

What Volume Should Your Backpack Be?

What's on the agenda? Day trails? A new country exploration? A night on your favorite campground? Each of these different scenarios will naturally have different extents of how much you will have to pack up and bring with you on your backpack adventure.

And with that in mind, each varying amount of items that you bring on the trip will need a different backpack size. Backpacks are measured in volume by cubic liters almost exclusively, even here in the States instead of cubic inches. But should you need to convert, there are about 60 cubic inches in a cubic liter. Which volume should you go with? Let's break down a few factors.

What **T**ype of **H**iking **A**re **Y**ou **G**oing to **D**o?

Before you can answer what kind of car someone should buy, you need to know how it's going to be used. Looking for something to race on a track or to shuttle the entire soccer team? Tracking a minivan wouldn't be terribly fast nor is a Porsche going to ferry more than two people. The world of backpacks is the same. Once you've decided on hiking length, terrain type, season, and desired features, it becomes clearer as to what size backpack to get.

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Hiking by length

So, let's start with hiking length. A day hike or an overnight trip? Daypacks are meant for just what the name suggests. They have room for water, snacks, and perhaps extra clothing. You won't have a shelter, sleeping system, or cooking system with you; hence, it is a much smaller volume.

For an overnighter, on the other hand, you're going to need the shelter and sleeping system at the very least. (Cowboy camping not included.)

Hiking by terrain

Terrain; extremes will make a difference in the volume you choose for a hiking backpack. If you are doing a technical climb, you'll have harnesses and ropes to lug

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around. If you're mountaineering and staying above the snow line, you'll need warmer, bulkier, heavier clothing, and a sleep system. And then, there is the desert. If you're carrying 6L of water with you, it would be uncomfortable in an ultralight backpack unless all you're carrying is water.

Most of us do three-3-season hiking, and we're doing it below 10,000 feet. That's not to say you can have extremes. Mt. Washington (6,288') on the Appalachian Trail (A.T.) isn't even the highest point of the A.T. itself. Bbut it has a record low of 20* in August. The top 15 coldest days in August were 25°F or less. So, please know the terrain and the immediate forecast of the area you plan to hike.

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Hiking by season

This somewhat naturally ties into the very last note from above about knowing the forecast of your area, especially above regarding terrain. Season; the same goes for winter hiking. If the high for the day is going to be 15* and the low is sub zero,... well, you'd better pack some warm gear.

Hiking features

Features: this can be a long list of needs and/or wants. All backpacks have shoulder straps. Most are internal frames, although there are still some external frames out there.

Day-packs may have a hip belt and even a sternum strap but are one size fits all. They won't usually have pockets for a water bottle. It is also hHighly unlikely to findhave a load lifter strap (located at the top of the shoulder straps) or an ice axe loop.

These kinds ofare features exist in of the multi-day backpack. Sleeping bag compartment, suspension system, attachment points, adjustable harness, etc. are available in larger backpacks.

Hiking Daypacks Sizes (Half-D/2-day to Ffull-Dday Hhikes):

Often, daypacks are they are just a hydration pack and lightweight (a.k.a., ultralight). They don't have multiple main compartments, differences for gender, or any kind of ventilation. They only have room for the bare essentials since they range from below 10L to 30L. Such a size makes themThey are good as for carry-on luggage for airlines. Day-packs range from below 10L up to 30L.

If you're day hiking in the summer, you can get away with a small daypack. Taking just water and snacks will not require a lot of volume. But iif you're day hiking a mountain

starting at a low elevation and going to the summit, especially in the shoulder seasons (spring/fall), it would be wise to bring additional layers of clothing along withg. Perhaps a lunch instead of just snacks. Obviously, this will require a larger volume. Below is a selection of day-packs. The packs at the 30L end make great travel backpacks, but be sure to check with your airline for dimension requirements.

Daypack	Capacity	Weight
Sea to Summit Ultra-Sil Daypack	20L	72g (2.5oz)
Osprey Ultralight Stuff Pack	18L	90g (3.2oz)
Deuter AC LITE 14 SL	14L	860g (30.3oz)
Gossamer Gear Minimalist 19 Daypack	19L	273g (9.6oz)
Gregory Juno 30	30L	934 (32.9oz)



Osprey's Daylite pack. Photo by Bob Rogers

Overnight Backpacks (One4 Night to Six6+ Mmonths)

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Any overnight backpacking will require: shelter (tarp/tent/hammock), a sleep system (sleeping bag/~~sleeping pads~~sleeping pad/pillow), a cook system (unless you are cold soaking), and sleeping clothes. These are items the day hiker above will not need. Depending on the season and gear used, three of these item categories will require a fair bit of volume. That said, you still don't need to pack everything in the house but the kitchen sink.

Most guides will recommend backpacks in the 45~~L~~-55~~L-liter~~ range for one to three~~1-3~~ nights and 60L-75L for three to five~~3-5~~ nights. Some will go as far as to ~~suggest~~recommend 80L-100+L for trips longer than a week. I do NOT recommend anything larger than 60L for "normal" backpacking (see below for exceptions), regardless of length.

Thru hikers will pack the same amount of gear for a three~~3~~-day trip as they will for six~~6~~ months!! The only difference is the amount of food they will carry. The problem with larger packs is they are heavier. More material, more straps, more buckles,... more weight. More importantly, with more space, you'll pack more gear. "Just in case" and "maybe I'll use it" ~~becomes~~is **HEAVY quickly**. You don't need a hatchet, folding shovel, three~~3~~ pairs of shoes, clothes for every single day, or even deodorant (or maybe scratch this last part).



Gossamer Gear Murrmur 37L, Photo by Bob Rogers

If you own ultralight gear, you aren't likely reading this article anyway, but with serious thought put into gear selection, ~~it's possible to thru-hike~~ it's possible to thru-hike with 10lbs or even less baseweight. Ultralight gear is not just lighter but often less bulky. This only requires a backpack of 40L or less. The two pictures directly above are of the backpack that I will thru-hike the ~~Appalachian Trail (A.T.)~~ with in the spring of 2023.

A more realistic goal for beginner-to-intermediate hikers is 35lbs packweight. Pictured below is the ~~Osprey Eja 58L~~ Osprey Eja 58L (a VERY good option). While ~~it's~~ the Eja women's version, the only difference between it and the Exos (men's) is the color and measurements for S/M/L. I used the Exos to hike the first 167 ½ miles of the A.T. spring of 2021. I was on-trail for a full month. I was using intermediate-level gear, and my pack weight was 33lbs-35lbs. Anything more than 45lbs pack_weight and you should reconsider what you're taking and why you're taking it.

[Here is a quick chart that recaps all of the overnight backpacks:](#)

- "Normal" backpacking - three-3 season hiking, night temps >20°F, water readily available.
- Baseweight - all the gear in the backpack minus consumables (food, water, toothpaste, etc.).
- Pack_weight - includes baseweight and consumables (everything in the pack).
Neither of these weights include items being worn (clothes, shoes on your feet, pocket knife if it's in your pocket, etc.)

A note on ultralight packs:~~s:s...~~ They typically have a load limit of 20lbs-25lbs. If your pack_weight is higher than that, an ultralight pack is likely to be uncomfortable. If they have a hip_belt, it's going to be very thin belt. It will not transfer the weight to your hips and will pull at your shoulders. For pack_weights greater than 25lbs, get a traditional 40L-60L backpack.



Osprey Eja 58L. [Photo by Bob Rogers](#)

Backpack	Capacity	Weight
Gregory Focal 58	58L	1.17Kg (2.58lbs)
Osprey Levity 60	60L	.884Kg (1.95lbs)
Deuter AIRCONTACT ULTRA 50+5	70L	1.21Kg (2.67lbs)
Gossamer Gear Mariposa 60 Backpack	60L	.892Kg (1.97lbs)
Kelty Redwind 50	50L	1.79Kg (3.59lbs)

~~Ginormous Backpacks (80L-+110L)~~ Ginormous Backpacks (80L-+110L)

If you are mountaineering, winter hiking in extreme cold (sub-zero temps), snow shoeing, or hunting big game, you may have a need for these behemoths of the backpacking world. These [scenarios](#) are the only times you should even consider backpacks this large.

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The movie [Wild](#) starring Reese Witherspoon is based on a true story of Cheryl Strayed who decided to hike a thousand miles of the Pacific Crest Trail (PCT). There's a scene in the beginning of her with one of these backpacks. She falls over backwards and "turtles." She can't get back up from the sheer size and weight of the backpack. Later in the movie, she reaches an outfitter that provides a "shake down" service. This is having a professional go through your backpack item by item, making recommendations on what to keep, what to ditch, and what to replace.

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While I have no idea if the scene of her falling over is true or not, I do know first-time hikers ALWAYS bring too much gear (myself included). The "shake down" is a real thing; many outfitters will do this for you. If you think you need a backpack of 100L for normal backpacking, then I strongly suggest you find a friend, guide, or previous thru-hiker to evaluate your gear. If you don't know anyone, I'll be glad to help. [\(See me down at the bottom of this article's trail at the conclusion.\)](#) ~~can be reached using this profile link: <https://www.curated.com/experts/bob.rogers>.~~

Now, if you are mountaineering, in severe winter weather, [and the like, etc.](#) here are a few packs in this largest of packs category.

Backpack	Capacity	Weight
<u>Gregory Denali 100</u>	100L	3.0Kg (6.61lbs)
<u>Osprey Xenith 105</u>	105L	2.5Kg (5.51lbs)
<u>Deuter AIRCONTACT ULTRA 50+5</u>	95L	3.37Kg (7.42lbs)
<u>Kelty Red Cloud 110L</u>	128.7L	5.00Kg (11.02lbs)



Kelty Eagle 128L Backpack. [Photo by Kelty Eagle](#)

What Size to Get in a Backpack **Fits:**

Now that you've decided what volume pack to get, let's talk about what size to get in the context of **s**Small, **m**Medium, or **l**Large. Each manufacturer will have a different definition of what a **s**Small, **m**Medium, or **l**Large backpack is, but fortunately they all use **T**Torso **L**Length. In order to accurately determine this key spec, you'll need a friend and a flexible tape measure.

Tilt your head forward and feel for the bony bump at the base of your neck where the slope of your shoulders meets your neck. This is your **seven**th cervical (or C7) vertebra—and the top of your torso length.

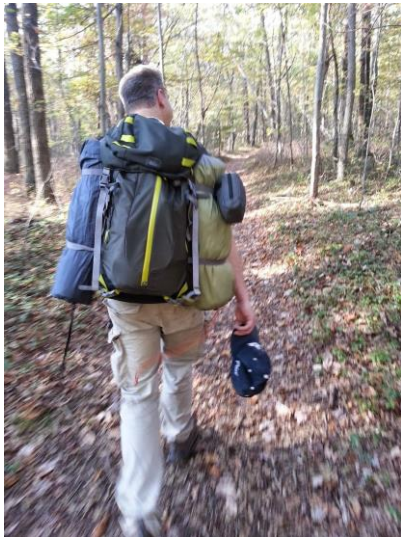
On each side of your body, slide your hands down the ribcage to run the tape straight down your spine until you reach your Iliac Crest. This is the point in the center of your spine that aligns with the highest point on your hip bone. With index fingers pointing forward and thumbs pointing backward, draw an imaginary line between your thumbs. This spot on your lumbar is the bottom of your torso measurement. The line from your index fingers should align with your belly button. This will be higher than your waist line on pants.

Stand up straight and have your friend measure the distance between the C7 and the imaginary line between your thumbs. That's your torso length.

The End of Today's Trail Conclusion:

I own three of the four groups of backpacks mentioned here: the day-pack, ultralight, and large backpack. I do not own one of the extra large monster backpacks. If I'm out foraging mushrooms, I'll use the daypack. If I'm doing a long trail or a trip with multiple resupply points, I'll use the ultralight pack. If I'm doing a 10-day trip with no resupply, I'll use the large backpack (Exos 58L). I hope to never look like the Kelty Eagle guy pictured above. Just looking at that hurts.

So, before spending hundreds of dollars on a backpack, have a serious conversation with yourself. What are your needs and wants? The answer may be that you need more than one backpack and that's okay, too. Just get out there and do some hiking.



Somewhere along the A.T. circa 2014(?) prior to going UL. [Photo by Bob Rogers](#)

If you have more questions on backpacks and which may be right for you [for your next hike or trail](#), feel free to reach out to me or our other [Hiking Experts](#) at Curated. Like myself, these folks are real people with real backpacking experience and can help you navigate the many aspects of [daypacks, overnight packs, and ginormous backpacks](#) as well as other [hiking](#) gear.

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