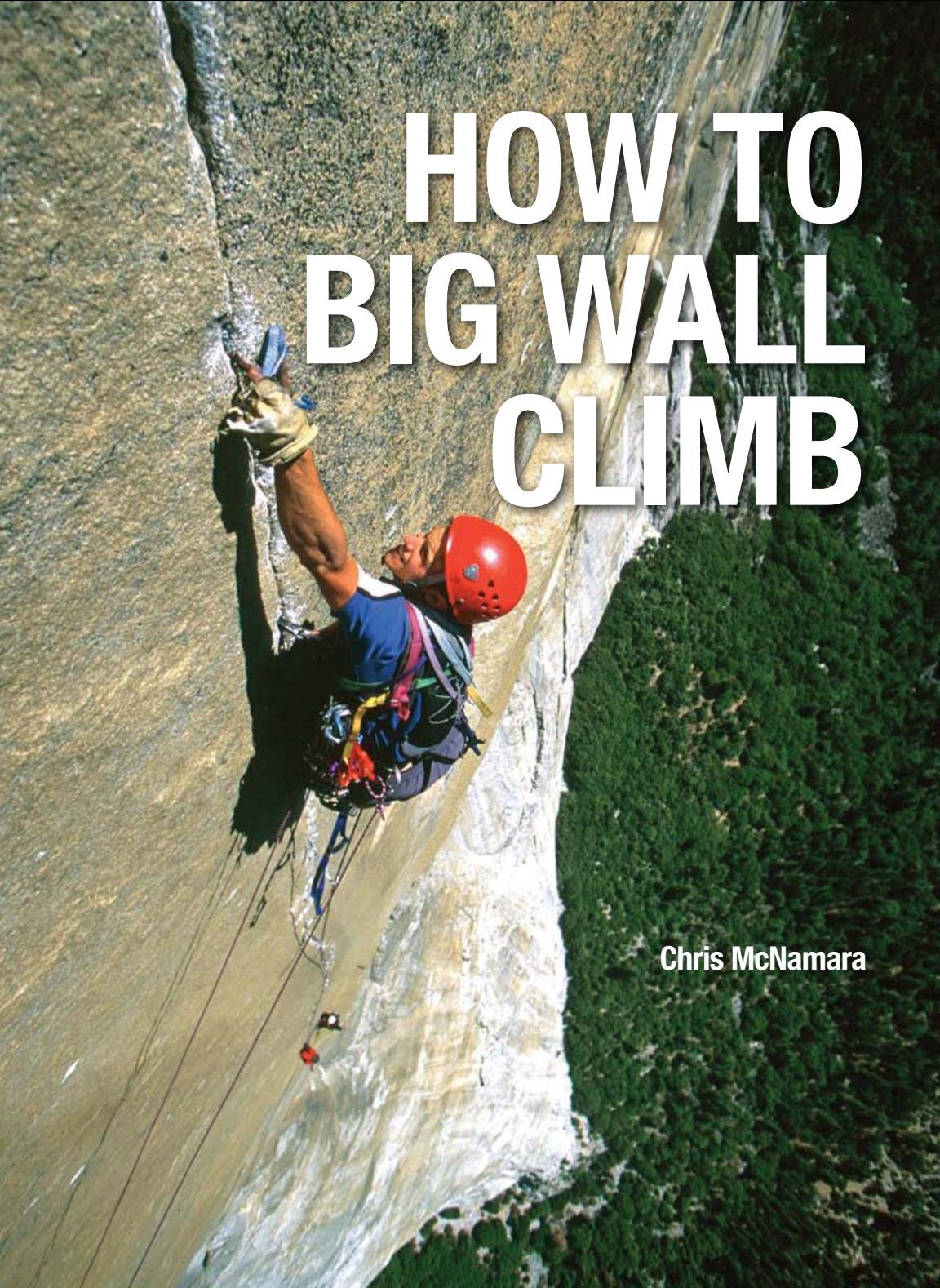


HOW TO BIG WALL CLIMB

Chris McNamara





Ammon McNeely makes
the first move on one of the
cleanest corners on El Capitan:
Pitch 13 of Horse Chute

Photo: Chris McNamara

How to Big Wall Climb

by Chris McNamara

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Climbing is an inherently dangerous sport in which severe injuries or death may occur. Relying on the information in this book may increase the danger.

When climbing you can only rely on your skill, training, experience, and conditioning. **If you have any doubts as to your ability to safely use any information in this book, do not try it.**

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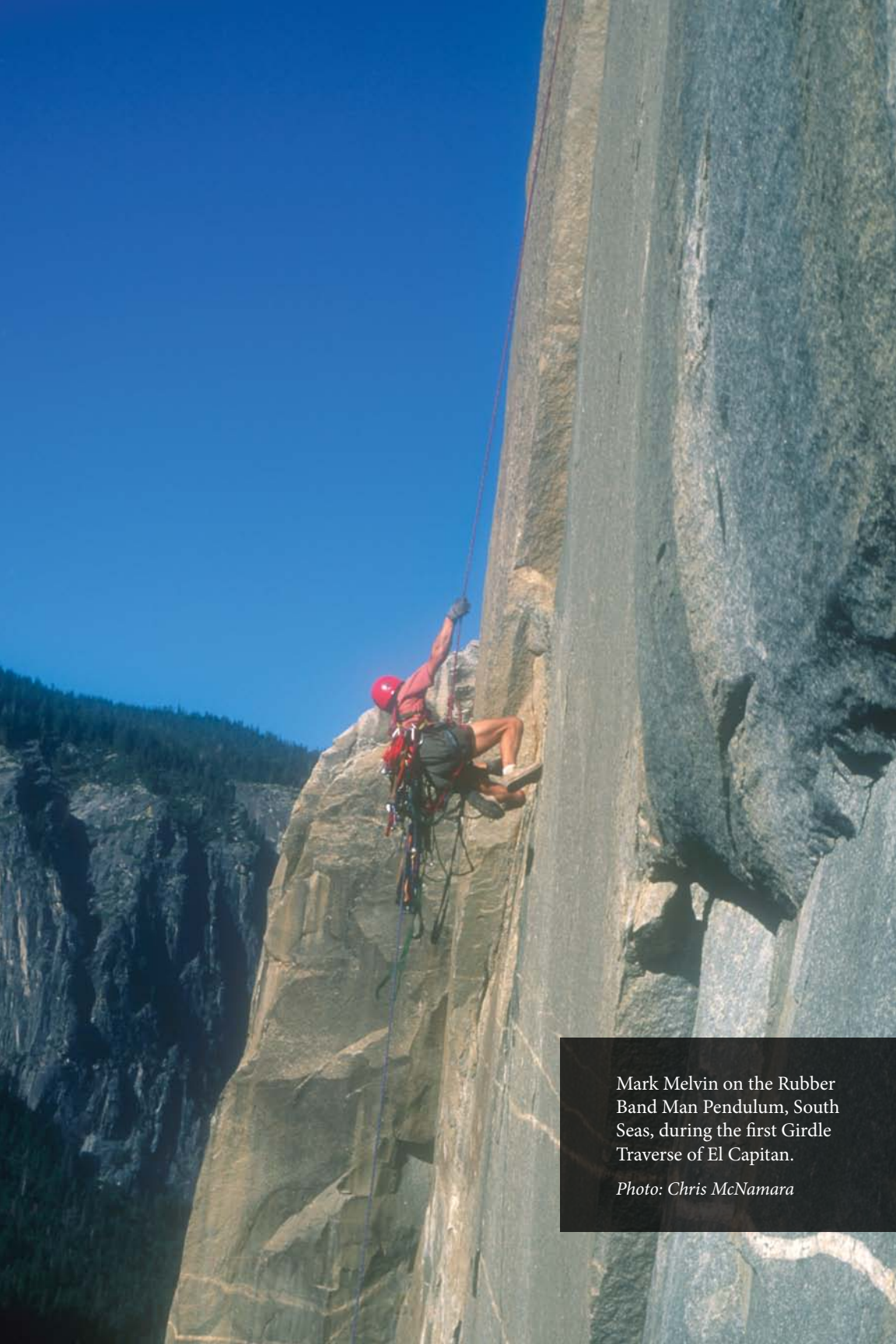
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Mark Melvin on the Rubber Band Man Pendulum, South Seas, during the first Girdle Traverse of El Capitan.

Photo: Chris McNamara

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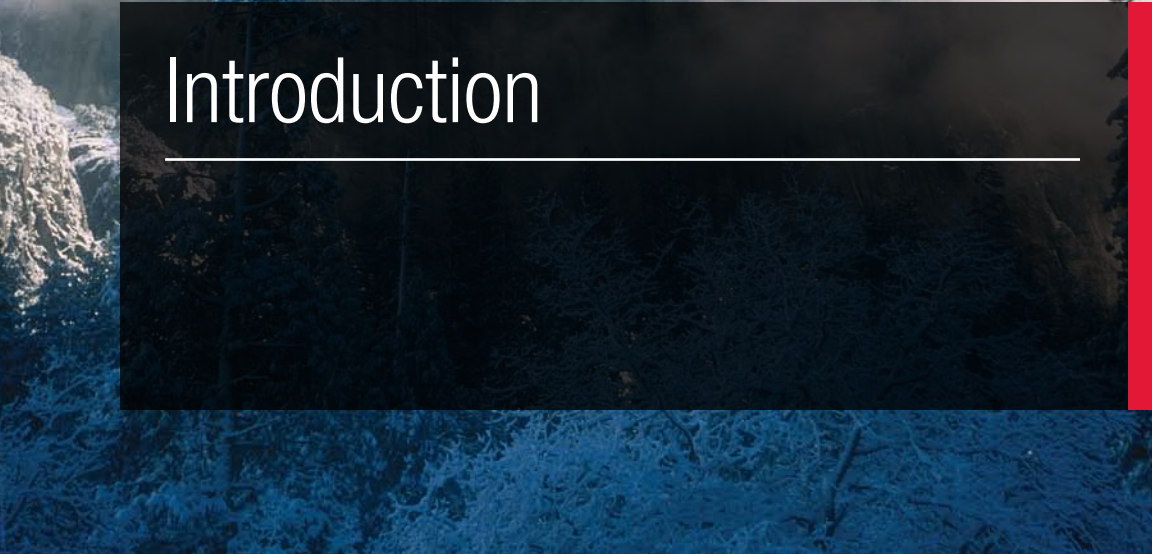
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Introduction



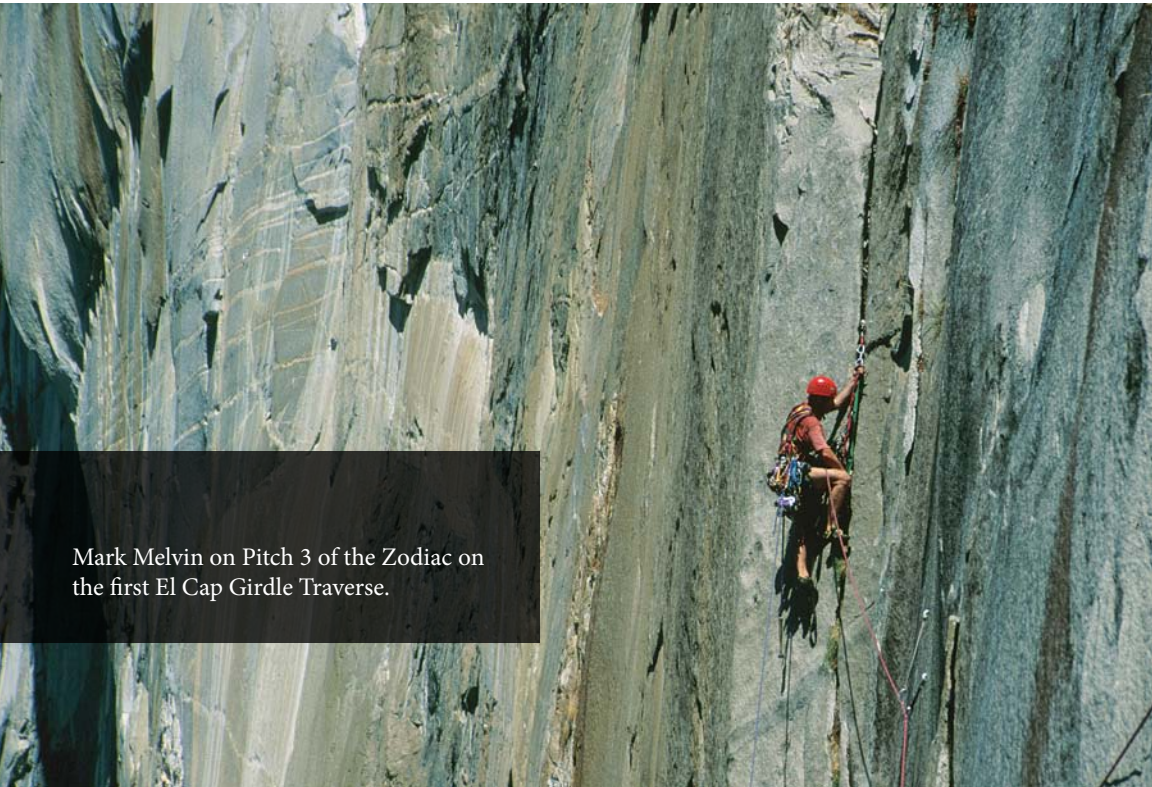
I wrote this book because big wall climbing has been the most rewarding sport in my life and I want to see more people succeed at it. The first time you climb El Cap can be the hardest and scariest event in your life. It can also be the most adventurous, exciting, and memorable. Eighteen years later, I still clearly remember my first trip up The Captain. And it's still the single most memorable day of my life. I would give anything to relive that experience again with the same level of heightened anticipation and adventure. But you only get one "first time." So the next best thing for me is to help other people succeed and to hear their stories. I love meeting people who dream of climbing El Cap and who exude that energy of half fear and half eager anticipation. You hear it in their voices. They know big wall climbing will step up their mental and physical climbing game – and they are clearly excited about it. I hope this book becomes a starting point for your own incredible adventure. And don't forget to email me your stories or post them on

supertopo.com so we can all live through them with you.

What is a big wall?

A big wall is a steep multi-pitch climb that takes most people more than a day to climb. Big walls are all about vertical exposure; climbing and sleeping with thousands of feet of air below you and thousands of feet of rock above you. There is nothing else like it. Big wall climbing is not about summit glory or pulling a single hard move or savoring the rush of adrenaline, although all three of those things will happen. The experience is much more complex and rich. You don't flirt briefly with gravity as you might while BASE jumping or doing a hard single pitch climb. You live with the pull of gravity and daunting exposure 24 hours a day.

Plus there are side benefits, plenty of them. All big wall climbs are in stunning mountain settings. Usually you share the experience with a good friend. There is lots of time



Mark Melvin on Pitch 3 of the Zodiac on the first El Cap Girdle Traverse.

to contemplate, even read, and generally experience the slow life.

On a more philosophical level, a wall like El Capitan is just so much bigger than we are. It's mysterious, massive, and unforgiving. While nothing is truly static, the surface of El Cap is about as unmoving as anything can be. Because the rock changes so little it becomes a mirror. Every fear, doubt, and joy comes right back at you. Climbing big walls is very hard, and that is exactly what engages the people who climb them. A big wall makes you dig deep, both physically and mentally.

But isn't aid climbing not much fun?

I have always loved the process of aid climbing. But I am a little weird. Among most of the climbers who have never climbed a big wall, aid climbing seems like cheating, or simply not fun. I've heard, "Aid climbing is like hitting your head with a hammer; it only feels good when you stop." Unlike my case, for most people aid climbing is a means to an end. Few of them aid climb because they love the process. And even I concede that nobody goes "aid cragging" or "aid bouldering" like they would free climb a crag or a boulder. Nearly everybody aid climbs for one basic reason: to get up big walls. Aid climbing is the tool for ascending the most wild, massive, and inspiring faces in the world. And once you are up there, aid climbing through the wildly overhanging last pitch of The Nose, you won't judge yourself on whether it is stylish to aid climb. You will be too busy relishing one of the coolest locations and experiences of your life.

Sixty percent of Nose climbers bail

From El Cap Meadow, photographer Tom "Ansel" Evans of elcapreport.com has probably watched more El Capitan ascents and failures than anyone. He estimates that about 60 percent of the climbers who start up The Nose bail. Why? "Most climbers think The Nose is Washington Column but bigger. It's not. El Capitan is way bigger than most people think," says Evans. "They jump on The Nose without practice, so when the first glitch arises – and one does on every wall – they just bail." On a one-pitch climb or even on a 10-pitch climb like Washington Column, you can make basic mistakes and still get your way up the wall. When you jump on a 30-pitch route, those little mistakes and inefficiencies compound and you have to bail. Anyone can climb The Nose, but they need to master the aid climbing basics and train hard.

Two key points

Like anything worthwhile, big wall climbing requires hard work. However, unlike climbing 5.13 or bouldering V8, big wall climbing doesn't take heroic strength. It just requires solid 5.9-5.10 multi-pitch skills and making thousands of easy moves efficiently. That is where this book comes in. It's the first How To Big Wall book specifically organized and clearly designed to address the process of building big wall skills, step by step.

I've climbed more than 100 big walls and have spent more than 400 days on El Capitan. During my time I've seen lots of people bail, myself included. In nearly all cases they missed the two main principles of this book:

- Keep it simple.
- Master the aid climbing basics.





1 Leader leaves the belay. 2 Leader nears the top of the pitch. 3 Leader sets up the belay and hauls the bag while follower prepared to clean the pitch. 4. Bags are hauled, pitch cleaned, and leader starts out on the next pitch. Dawn Wall, El Capitan.

*Photos: Tom Evans
www.elcap-pics.com*

I believe in reducing everything to the essentials, so that's all I include here. I offer the techniques that I have found helpful and omit the rest. Here's a taste of the sort of climbing myths I want you to deal with:

- Don't duct tape water bottles.
- Don't use four aiders (two work best).
- Don't use oval carabiners.
- Don't bother with 3-to-1 hauling systems.

My technique for hauling up huge loads of gear is this: don't bring huge loads. Instead, climb light and efficiently so you don't have to bring big loads. I keep the vertical baggage handling to a minimum. I spend time climbing lightly and quickly over the rock and spend minimum time moving luggage. If every moment an aspiring wall climber spent figuring how to set up a 3-to-1 system was instead spent mastering moving in aiders efficiently and learning to set up a simple belay, they would not need a 3-to-1 in the first place. And a lot more people would summit El Cap and enjoy the experience of getting there.

Wall climbing is easy... sorta

Technically speaking, big wall climbing is easy. Walking up a pair of aiders is not physically or technically demanding. Jumaring is pretty straightforward once you get the hang of it. Hauling is not that complex. Each component of big wall climbing is surprisingly easy. The challenge comes in two parts:

1. Big walls require putting together a lot of unfamiliar skills and logistics.
2. These skills must be put together extremely efficiently and everything must stay organized.

These two challenges can be overcome by one simple principle: master the aid climbing basics. That is what this book is all about, a step-by-step guide to mastering the basics. If

you do that, all the little aid climbing tricks will fall effortlessly into place.

Don't be a vertical baggage handler

Personally, I don't just want to get to the top of El Cap. I want to enjoy the climb and wall experience, spending as little time as possible dealing with haul bags and gear clusters. Maybe one day there will be a portable hot air balloon for wall climbers. All the gear, water, beer, and fish tacos you need will float just a few feet away from you and effortlessly follow you up the wall. But until that day arrives we must deal with a brutal fact: we need a lot of water to stay alive and water is heavy. Conservatively, we need a gallon per person, per day when wall climbing and a gallon of water weighs eight pounds. So on a five-day climb of El Cap:

$8 \text{ lbs.} \times 2 \text{ people} \times 5 \text{ days} = 80 \text{ lbs.}$

Add another two pounds per person per day for food, 20 pounds in bivy supplies and your haul bag might tip 120 pounds at liftoff. Can you say Sufferfest?

Beyond suffering

Even beyond the suffering issue of moving bags up a wall, there are other reasons to climb efficiently

- Climbing efficiently keeps you safe from bad weather. You will be better able to "turn on the gas" and summit before an oncoming storm, or at least make it to a more sheltered bivy spot. Most climbers who die on El Cap do so because they get caught in storms, often just a few pitches from the top. Weather forecasts won't protect you because most weather forecasts in mountain areas are only good for a few days. Read John Dill's "Staying Alive" at <http://www.supertopo.com/topos/yosemite/stayalive.pdf>

- Climbing efficiently is more fun. You get to sleep on the ledge you want to, not the one forced on you by circumstance and vanishing sunlight. Or, worse, having to spend the night standing in aiders.
- Climbing efficiently is taking the right amount of water and food – not way too much or way too little.

Sneak Peak: Examples of efficient climbing covered in the book

- Use two aiders instead of four.
- Aid like you free climb.
- Spend your time at belays keeping things organized and visualizing what to do once the leader is ready to haul.
- When leading, always move to the top step or second step.
- Clean with two slings that can be handed to the leader, instead of handing over each piece one by one.

Efficient climbing, not speed climbing

Climbing The Nose in two bivies instead of four does not mean becoming a frantic speed climber. You don't have to rush every move, frantically scream at your partner to jumar faster, and take more chances when you're leading. You just need to streamline your systems and have the aid basics dialed. If you read and practice the techniques in this book, you will cut out the hours lost to inefficiency that the typical big wall team endures and instead wonder why you ever climbed walls any other way.

TWO CLIMBING SCENARIOS:

Just to drive home this critical point, let's look at climbing The Nose route on El Cap under two different scenarios.

First the Sufferfest Way, the surprisingly common way that it's done

Prep Day – Climb slowly to The Sickle with a few parties nipping on your heels, trying to pass you. Spend all afternoon and into the night bringing up heavy haul bags.

Day 1 – Get bogged down in the Stovelegs due to heavy loads. You're so tired from the hauling that you have to aid climb cracks that you had planned to free climb. Bummer. Make it to Dolt Tower after dark with little time to dial in a nice bivy, let alone kick back and appreciate the amazing ledge and location.

Day 2 – Wake up exhausted with worked hands from all the hauling. So far the climb hasn't been much fun. You and your partner each hope the other comes up with a good excuse to bail, as 60 percent of climbers usually have done by now. Climb all day and barely make it to Camp 4 by nightfall – an uncomfortable bivy site.

Day 3 – The Great Roof takes forever and antsy parties stack up behind you. You wanted to free the Pancake Flake (awesome 5.10a) but when you made a hand jam your arm cramped up, so you had to aid it. Now you have to let the party behind you pass and you deal with some gnarly belay clusters in the process. The passing team offers to fix a rope and you accept. You had wanted to climb every pitch but you are moving slowly and don't want to climb into the night again. You make it to a crowded Camp 5 and have to take the lame bivy sites and hope the team above doesn't pee on you.

Day 4 – At this point the haul bag is getting lighter but all the heavy hauling down low has wrecked your hands and drained your strength. You have to aid everything, even the easy free climbing, which makes you move even slower. The turd bucket is dangerously close to overflowing. You have

to bivouac on Camp 6 and another party catches up to you, creating another cluster.

Day 5 – You have to ration your food and water, which just adds to your malaise. You finally top out. You are relieved and feel proud to have summited. However – because of the hauling, bad bivouacs, and belay clusters – your climb of what is probably the best route in the world was not much fun.

Now, the Efficient (non-Sufferfest) way to climb El Cap

Prep Day

Start early and zip up the first four pitches in a half day. Return to the ground and have plenty of time to haul to Sickle or just do “the El Cap Lieback” in El Cap Meadow.

Day 1

Blast off and pass a party in the Stovelegs by climbing variations around them. With a light haul bag holding only three days of food and water, the hauling is easy and you have plenty of strength to free climb these classic pitches. Get to El Cap Tower with plenty of time to kick back and enjoy the view.

Day 2

Cruise through the King Swing and the Great Roof. With a light bag, easy hauling means you still have enough strength to free climb Pancake Flake: Oh it’s so good! And exposed! You have enough time to choose Camp 5 or Camp 6 (whichever has fewer people). At this point the bag weighs almost nothing.

Day 3

Pass that suffering party I described above. You give them a little water because even though they started with 80 pounds of water, they are almost out. Three pitches from the top you feel a potential afternoon

thunderstorm developing. You step on the gas and blast through the final pitches, topping out before the rain starts. There is plenty of time to pack up, walk down, and still buy a six-pack before the store closes.

Three Paths

So there you have it, there are essentially three paths:

- Get frustrated and bail low before Dolt Tower.
- Barely eke out an ascent and not enjoy the process as much as you could.
- Master the aid basics and climb The Nose confidently and have fun.

The basic equation of efficient climbing

A little time saved on an action, when multiplied by thousands of actions on a wall = giant time savings.

For example, on The Nose:

Lead a pitch ten minutes faster multiplied by 31 pitches = 5+ hours.

Save five minutes on a belay changeover multiplied by 31 pitches = 2.5+ hours.

Save three minutes when you lower out the bag and leave the belay multiplied by 31 pitches = 1.5 hours.

You haven’t done any fancy “speed climbing” and you have already shaved a day off the climb.

Now, imagine, after dialing the skills in this book you shave 20 minutes off leading each pitch and belay changeovers that used to take 12 minutes instead take two.

There are other things that can’t be quantified in time: hauling with less effort, over 31 pitches = more energy for free climbing the classic pitches and more fun.

How to use this book – The Master Checklist

This book is intended to be “active reading.” Print or photocopy the Master Checklist in Chapter 3 and take it with you on all your training. Every time you get to a major stage, celebrate!

Open up the first chapter on Aid Basics and go out and practice, practice, practice. Make sure you check off everything on the Master Checklist. Then you’ll move onto Chapter 2 and get that dialed and so on. If you have never aid climbed, you are lucky. You don’t have bad habits yet. If you don’t skip ahead, and instead master each section, one chapter at a time, you are on the path to cruising up El Cap.

OK, maybe skim through the entire book once. That’s allowed. But I encourage you to read this book slowly, dialing in each section before skipping ahead. Don’t skip around to pick things here and there.

Some folks out there may say, “But I already know the basics, I want to know how to stack pitons or set up a complex hauling system.” While I can’t call BS without actually seeing you aid climb, the vast majority of aid climbers I see on El Cap could still use a lot of help with the aid basics. So even if you are moderately experienced at aid climbing, please don’t skip ahead.

Videos explain technical parts of the text

I have free instructional videos available at <http://www.supertopo.com/gear/how-to-big-wall> There you will see chapter titles that match the chapter numbers in this book. Chances are, if there is a confusing technique mentioned in the text, I put a free video online to explain it. If there is not a video, email me and I may be able to go shoot and upload it for you and everyone else.

About the gear in this book

This book has many gear photos. I am not sponsored. At the time of publication, the gear shown is the gear I like to use. But while I like the products you see in the book, other gear might work better for you. The only way to know is to experiment for yourself. On this page <http://www.supertopo.com/climbingareas/bigwalls.html> is the gear I currently use. In addition, we have written a number of reviews on popular aid gear at <http://www.outdoorgearlab.com/big-wall>. There you can also see what other climbers find works best for them.

Before you start - get psyched!

Big walls are a big undertaking. If you are not genuinely psyched to wall climb, then you will suffer. If you just want to say you have climbed El Capitan but are not thrilled about the idea of being on the wall for days on a time, don’t bother. Wall climbing involves a ton of work. If you are just half-hearted about the endeavor, then all that work feels like suffering. If you are truly psyched, then all the work just feels like part of the adventure.

In addition, if you are not amped to be on the wall, you will get scared. Probably really scared. You’re more likely to bail when the first challenge arises. On my first El Cap ascent I was scared. But I was so pumped on the adventure that the fear just added a little spice to the experience. Compare that to an ascent seven years later when my heart was not into climbing El Cap at that moment. Despite having done 60+ El Cap ascents, I was actually more scared than my first time on the wall because I didn’t REALLY want to be up there. A year later, I had my psyche back and suddenly El Cap was a quarter as scary and four times as much fun. It’s all in the head.

So before you get too much into this book

or spend too much money on wall climbing gear, go to Yosemite or Zion or your closest big wall area. Spend a day walking the entire base of El Cap or your local big wall. Bring a book or watch a movie from the list at SuperTopo. Go to the back of El Cap Meadow with a pair of binocs and watch climbers up on the wall. If you can't get to a big wall area, read even more from my reading list.

If you are genuinely psyched, keep charging on this path of learning to climb a big wall. If you are not yet truly psyched, move forward, but maybe put off the purchase of that portaledge.

Winding up


By the way, this is the only section of the book where I am quite so long winded. After this rant, where I try and convince you to do things as simply as possible, I'll heed my own advice and write as simply as possible. I'm working at it – the first draft of this book was three times as long. Then I pared it down to just the essentials.

PS: I want to hear success stories! If this book helped you get to the summit of EL Cap, please email me: chris@supertopo.com. I would love to hear about it.



Ammon McNeely below the
Streaked Wall, Zion.

Photo: Chris McNamara

A young person, Chris McNamara, is shown climbing a massive, light-colored rock wall. The climber is wearing a blue jacket, a patterned knit hat, and sunglasses, and is smiling. They are holding a rope and a yellow device. The background shows a vast, green forested valley. The image is framed by a dark red border on the right side.

My road to big wall climbing

Chris McNamara, age 16, reaches the Glowering Spot on a one-day ascent of The Nose.

Photo: Mark Melvin

When tackling a new challenge there are two main ways to go about it. One is to find a mentor and follow in his or her footsteps. The other approach is to wing it, finding your way all by yourself or with a partner who also learning. I prefer the first way – finding a mentor. That’s how I learned to climb El Cap, although in the process I also tried winging it... with not-so-good results. Here’s how it went for me:

I was dragged up my first few ascents of El Cap, thought I saw how everything worked, went back and trained hard, and eventually started leading my share of the pitches. If they take the other path, climbers will connect with a partner of equal or less ability, creating much more uncertainty plus better stories about how unprepared they were but pulled it off anyway. Their path will take longer and involve more self-sufficiency but in the end it will take them to the same spot: the summit of El Capitan.

I started climbing in seventh grade at a friend’s birthday party at a local climbing gym. My parents later said that five kids went into the gym, four came out normal and I came out as a climbing addict. That’s about right. I started doing as many pull-ups as I could manage and worked on the hardest gym routes I could handle. I could barely wait to climb outdoors. That was a challenge; my mom had to take me because I was too young to drive.

The first climbing magazine I remember seeing had the story of Lynn Hill free climbing The Nose, the first person to do it. Such a big deal was made that I figured this was where the action was. So that year on a family trip to Tuolumne Meadows I asked mom to take a detour to see Yosemite Valley and El Capitan. I jumped out of the car and ran to the base with climbing shoes and a chalk bag. I climbed up about ten feet of what I thought was the start of The Nose (it wasn’t). I wanted to be able to say I had climbed on El Cap, never mind how far up.

Standing at the base, the granite wall in front of me overwhelmed my field of vision. I felt small. Only the Pacific Ocean rivaled El Cap in scale. I had no thoughts of ever climbing to the top of this wall. I knew people climbed it, but I didn’t see how it was possible, especially for me. It was just too big!

That was my start. Here’s my diary of how it went from there, the point being to suggest how my experiences can offer lessons for you.



Photo: Justin Colsky.

Age 14 – First big adventure climb: Golden Gate Bridge

A friend and I convinced our parents that we were camping in the Marin Headlands above the Golden Gate Bridge. That night we hiked down a hill, got on the bridge cable and walked/climbed to the summit. NOTE: This was pre-9/11. Try to climb the Golden Gate Bridge today and you will get a \$10,000 fine if you are lucky and if you are unlucky maybe get shot.



SuperTopo of our climbing adventure on the Golden Gate Bridge.

Lesson:

For me, climbing is about the adventure first. Doing a hard boulder problem or free pitch is fine. But for me, climbing technique and strength is for getting to the truly big adventures in wild places.

Age 14 – First aid climb

Thirty-foot sport climb at Mickey’s Beach near San Francisco. On top rope I tie slings together to make aiders and place the occasional nut to get between bolts. I am instantly hooked on aid climbing. Not because I love it, but because this obscure art has now been demystified and I feel I am on the path to climbing El Cap.

Lesson:

Improvise! Eventually you will want the right gear for the job. But at first make do with what you have. A few slings can be your first pair of aiders. Don’t wait for the “perfect moment.” Just go out and do it.

Age 14 – Tree climbing days

I set up an aid practice course on my backyard tree. Make two aid moves up, a free move, then five aid moves horizontally out a branch. I time myself to see how long it takes to lead, set an anchor, and follow.

Lesson:

Practice the essentials over and over. I don’t live near any good cliffs on which to practice aid climbing so with just a tree all I can do is practice the basics over and over. This is a blessing in disguise. Most people’s problems with big walls come from the fact that they never master the basics of moving efficiently in aiders, setting up an anchor, and jumaring. That is ALL I could do after school, so I quickly was able to walk up ladders faster than I could free climb.

Age 15 – First outdoor aid lead

Winter rainstorm in Yosemite Valley. Head to the first pitch of Zodiac and find I am dry while rain falls just a few feet away. I'm under-equipped. I lead up, and after 30 feet take a whipper when a rolling nut (an extinct piece of gear, like a sliding nut but less effective) pulls on me. Ten feet higher I take another fall. I have my friend Nick tie me off to a boulder, go into the trees, find a stick and I make myself a cheat stick so that I am able to finish the pitch.

Lesson:

Start the “real aid leads” with a better rack. With a poor rack I took whippers. But it was good to get on the rock and push myself. Also, if I hadn't improvised a cheat stick and instead had used a bunch of pins, I would have unnecessarily nailed. If you are missing the right clean gear from your rack, use a cheat stick instead of nailing.



Starting up Pitch 1 of Zodiac in a rainstorm (sheltered by the roof above). Photo by Nick Telischak.

Age 15 – West Face, El Capitan. First big wall

At a high school Outdoor Ed Club meeting, a teacher who knows of my climbing addiction gives me a business plan for a proposed climbing gym: Mission Cliffs. I don't care about the investment merits at the time; I just want a lifetime membership. So after meeting Mark Melvin, the climber behind the project, and seeing the space he has in mind, I immediately hand over my life savings earned from years of working as a Little League umpire, grounds keeper, and snack shack operator.

Perhaps as thanks for investing in his gym, Mark invites me up the West Face of El Capitan. I imagine that the preparation for the climb will be a serious undertaking. We'll spread out all our gear and go through a detailed check, right down to rationing the number of M&Ms to take with us. Right?

I am so wrong. After parking the car Mark just heaps a bunch of biners, ropes and other climbing gear into a backpack and we head off for the West Face. I think this casual approach is fun until we arrive at the base of the route and discover a big problem. One of us has forgotten his climbing shoes. On a one-day ascent you try to slim down your gear to move as fast as possible but you never forget the climbing shoes! The only thing more crucial is the rope.

My first reaction: “This is great news.” I think this way because when we get to the base of the cliff I'm terrified by this 2000-foot wall and am hoping that something will go wrong so we won't actually have to climb it. It looks like my prayers have been answered. But Mark doesn't see it that way. He just looks up at the wall and says, “Guess I'll tie the shoes to the rope and zip them back to you every 100 feet and then lead some of the 5.7 pitches barefoot.”

Amazingly, this actually works. The first 1500 feet go smoothly. However, with 500 feet to go we run into another problem. We have brought only about two liters of water, not nearly enough. We run dry right when the sun hit us and the wall begins to bake. I feel sick but Mark just keeps on leading. A few hundred feet from the top we find some water that has been left on a ledge. It's hot from lying in the sun and has insects floating on the top. We pitch the bugs and gladly drink it. Then, after eight hours and 2000 feet of climbing, we make it to the top.

It can't overstate how much this climb changed me. It's the most intense, raw, and terrifying experience I have ever had. The wall was vertical so there was often nothing but a thousand feet of air between my feet and the ground. From that high in the air the 200-foot trees at the base looked like little clumps of broccoli. And because we were climbing so hard with little water or food I was having minor hallucinations. It was the most difficult and draining thing I had ever done in my life.

All I could think about was doing more of it.

Lesson:

Get a mentor. Mark Melvin accelerated my big wall career by years by showing me the ropes and letting me borrow a lot of his aid gear for my first summer in Yosemite. While there is a certain pride in doing everything yourself and/or doing a wall with a climbing equal, you learn much faster and more safely if you start with a good climber.



Pulling up to the Glowering Spot on my first time climbing The Nose. Photo by Mark Melvin.

Age 16 – First one-day ascent of El Cap via The Nose

Mark and I agree to trade pitches. Mark leads the first four pitches. I lead the next two and realize that I am in way over my head. I hand the lead over to Mark and he takes us to the top. While this is technically the first time I climb The Nose, I only lead a few hundred feet and jug the rest. I know I need to get better, return, and properly climb it.

Lesson:

Routes like The Nose are long and demanding. At this point I was ready to take on a short aid route, but not the 31 pitches of The Nose.

Age 16 – Prow bail

I ditch the last day of sophomore year of high school and head to Yosemite for the summer. I have little gear but Mark loans me his haul bag, Gramicci portaledge and a bunch of other stuff. I don't have a partner so I decide to solo The Prow. After two pitches I get scared. The climbing is not the problem. It's my head that is the problem. While I had climbed the South Face with a partner, the Prow's steep walls feel ominous and make me wonder if I am really ready to be up there alone.

Lesson:

Take it one step at a time. While soloing a wall early in your career is proud, it is not the best way to go. I set myself up for failure by taking such a giant mental leap to soloing.

Age 16 – First multi-day Big Wall, Zenyatta Mondatta

My dreams of big wall glory are crushed when I bail on The Prow. I make up a variety of excuses, both to myself and to others: my portaledge wasn't working and I didn't bring enough water and it was too hot and... In truth, I was plain terrified by that massive expanse of granite. Who was I kidding? On my first couple of walls I had been dragged up. I wasn't a wall climber.

My dreams having evaporated, I spend the next day walking the base of El Cap to look for fallen gear and ogle routes that I would certainly never climb. At the base of the southeast face I plant myself on a boulder, arch my head back and take in the infinite granite ocean above me. I don't have to climb El Cap to feel its power.

Moving my attention to the west I spot a soloist on Zenyatta Mondatta. At the time it is rated A5. Fucking A5! That means that whoever is up there is either suicidal, an aid

climbing god or has just broken up with his girlfriend. Maybe all three. Then a strange thing happens. For reason still not clear I yell up to the soloist, "Need a partner?"

Looking down at me from his height I'm just a spec in the talus. He can't tell that I'm sophomore in high school or that The Prow has just humiliated me or that I have never climbed a true big wall. But as it happens this soloist is probably in the "zone of doubt," that mental space where one is equally torn between the painful and challenging prospect of El Cap solo glory or the readily available dip in the Merced River and pints of Ben and Jerry's. After a moment of hesitation the soloist calls down, "Sure I could use a partner. Go get your stuff and we'll start up the day after tomorrow."

Ecstatic but terrified, I feel like a T-ball player just drafted to the major leagues. Later, as I gather my stuff and walk to the base, the gravity of the situation descends upon me. What the hell was I thinking!?

Blast off day. A fixed line leads to my partner's highpoint on the second belay. Staring up at the fixed line two words come to mind: dental floss. The rope runs upwards, gradually getting smaller and smaller to where it seems so small it could slide between my teeth.

For the next 30 minutes I delicately slide up the rope, taking great care to bounce as little as possible. Reaching the belay I prepare to haul my bag. You would think I was handling plutonium the way my hands tremble as I grab a carabiner, open the pulley and place the rope inside. One 60-meter rope stretches from me to the ground but the exposure is so great that it feels like I am at least a thousand feet off the ground. I tremble to think what exposure is actually like an actual thousand feet off the ground.



Jugging up the STEEP first two pitches of Zodiac. The rope felt the diameter of tooth floss.

My partner leads the next pitch and then I face my first lead of the climb: Pitch 4, A3. Looking upwards, a few shallow cracks run upwards for 15 feet, then 15 feet of blankness to the first good feature.

I put in a nut for the first piece. Then I have to place a pin. Ugh. I have never before placed a piton on a real climb. My ineptitude shines through as I give tiny little baby taps to the pin, like I don't want to hurt its feelings. I do the same with the next piton placement and give it a few pseudo bounce tests where I don't actually put any weight on the piece. I stand up on it...for a second. Then: PING! The distinct sound of jangling pitons and carabiners is followed by a jolt on my harness. I look up and see that I've fallen to ten feet below my belayer. My first ten minutes as a hard climber have seen me progress negative ten feet.

In a way I'm relieved. I have an excuse to bail on leading the pitch. After all, if I keep leading I'm bound to kill myself.

Strangely, my partner sees it differently: "You got it, Chris. It's no big deal, but next time try bounce testing those pieces!"

I regain my highpoint, placing the same pitons and this time wielding the hammer with a heft that would make Thor proud. The pitons hold! Above, I move onto a series of hooks and feel my confidence grow. Suddenly I'm having fun as I gain more control over the placements. After 130 feet I pull myself onto a ledge and triumphantly scream, "Off belay!" Right then I just about lose it, jumping up and down like a five-year-old on Christmas morning. My body feels light and tingly and I wear a grin that stretches from El Cap Tower to Horsetail Falls. I'm hooked for life.

Lesson:

Hang in there through the tough sections. Don't get discouraged. It's great to have a partner who knows what they are doing and who can encourage you on.

Age 16 – First El Cap route without a mentor, Zodiac, El Capitan

I convince my 13-year-old brother Morgan that I am qualified to take him up El Cap. This despite the fact that I have not even swapped leads on an El Cap route. I teach him to jumar in the same backyard tree I started on. We show up at the base of Zodiac and meet two Swedish guys. After dreaming of the proudness of El Cap, they are bummed to be behind a couple of teenagers. We later become friends and they tell us their first thought was, "Oh, no! The kindergartners have beaten us!"

On the second pitch of the route, I don't leave Morgan enough rope to lower out. I tell him to just cut loose and he takes a violent swing. Somehow I end up more shaken than he is. The rest of the climb goes smoothly until my brother is following and the rope starts grating over an edge... I am terrified and so is he. But the rope does not get damaged despite some horrible noises. We top out after one night on the wall and everything goes fine.

Lessons:

Protect your follower because he is often at the mercy of how you run the rope. Have tape ready for sharp edges and be mindful of the rope on traverses. For me, it was best that my first big wall where I led my share of the pitches was like the Zodiac: shorter and with no time pressure to make it to a certain ledge at a certain time. Even though we did it in one bivy, we had enough food and water for another night, which lowered the stress level.



My brother Morgan (age 13) jugging down low on Zodiac. He's using Jumars!

Age 17 – First true Nose ascent

The next year I return to The Nose with my brother. This time on The Nose I am leading every pitch so I need to have my skills dialed. No hiding behind a partner. After one day of fixing, and a morning rainstorm, we cruise up to Camp 4 for an uncomfortable bivy. The next day we top out, right as it gets dark.

Lessons:

All my aid practice in my tree had made me a solid enough climber to do the Zodiac and a few other walls. But it took two years until I got the speed and free climbing ability to do The Nose. By traveling light the hauling is easy but the tradeoff is that we don't sleep well. A worthwhile tradeoff.

Final Lesson:

By committing months to wall climbing, and intensively focusing on it, I learned a lot fast. If you can move to Yosemite for a summer... do it! However, most people can't commit that kind of time. So it's possible to make do where you are. Just about anything can be aid climbed, even a tree in your backyard.



Master checklist



Question: “How do I know when I am ready to climb The Nose?”

AnsWER: Complete this 30-session course over 4-6 months. That’s enough time to have rests between practice days but not too much time so that you lose momentum. It is important to not skip steps. If you skip the low-angle environment and go straight to vertical or overhanging terrain, you will get frustrated and develop bad habits.

How many times should you practice each routine?
When do you know if you are climbing efficiently?

Practice each skill until you have it so dialed you don’t see any more improvement. Every time you do your first lap, time yourself to establish your baseline time. At regular intervals after that, time yourself and compare yourself to earlier times. At first you will see big improvements. Over time the increments will get smaller and smaller. If you can’t get any faster, you are probably going as fast as you can.

You don’t *have* to do each activity the listed number of times. However, make sure you err on the side of over-practicing each technique. Too many people get bored with a technique when they only have it 70 percent dialed. It can help to practice next to a friend and have friendly speed competitions. Or have speed competitions with yourself. That usually takes out the boredom.

Each session takes about 2-3 hours.

1. Get Psyched

- o Get psyched. Read a bunch of books from the recommended reading list in the Appendix. Check out some inspiring movies like “El Capitan” or “Vertical Frontier.” If you are not REALLY

motivated to climb El Cap, it’s hard to get through the inevitable challenging moments on the wall.

2. Acquire Basic Aid Climbing Gear

- o Use what you have, borrow, or if you are going to buy, check out <http://www.supertopo.com/gear/htbw-list>

3. Leading 1: Low-Angle Terrain

Sessions 1 and 2

Set up a practice bolt ladder on a low angle wall.

- o Aid it once, timing yourself to get a benchmark.
- o Now aid it five times. Focus on smooth but consistent movement.
- o Time yourself on the fifth time. Aim to be 50-75 percent faster by the fifth time than on the first.
- o Now aid five times where you focus completely on smooth movement. Try to never stop moving up the aiders from one piece to the next. Remember, “Slow is smooth. Smooth is fast.”
- o Now go another five times, focusing on both smoothness and speed. Try to get 20 percent faster than your last timed lap.
- o Overall, aim to do at least 25 laps over the course of two days.

4. Following 1: Low-Angle Terrain

Sessions 3-4

Set up a rope on a less than vertical 30-50 foot cliff.

- o Jug once, timing yourself to get a benchmark time.
- o Jug five times. Focus on smooth but consistent movement.
- o On the fifth time, time yourself and try to get 50-75 percent faster than on your first benchmark time.

- o Now adjust the length of the daisy chain and go five times. Time the fifth one and compare it to the time before. Go with the daisy length that is most comfortable and gives the best time.
- o Now adjust the height of your feet in the aiders and go five times. Time the fifth lap and compare it to the time before. Go with the aider height that is most comfortable and gives the best time.
- o Once you figure out the best place for your feet, do another five laps. Time yourself on the last lap and try to get 25 percent faster than your tenth time.
- o Overall, aim to do at least 25 laps over the course of two days.

5. Leading 2: Vertical and Overhanging Terrain

Sessions 5 and 6

- o Find a 30-50 foot vertical cliff. Slightly overhanging is okay. A gym with a bolt ladder is ideal.
- o Aid once, timing yourself to get a benchmark time.
- o Aid like you free climb: Aid three times, trying to use as many face holds as possible (and grabbing the aider as little as possible).
- o Introduce the fifi hook. Do three laps with the fifi at different lengths to figure out the right length.
- o Introduce the daisy chains. Do three laps.
- o Top stepping – do three laps where you top step every piece using holds or features on the wall for balance (when possible).
- o Top stepping – do three laps where you top step every piece without using any holds or features on the wall for balance.

6. Following 2: Vertical and Overhanging Terrain

Session 7

Where: Set up a free hanging rope at a cliff, climbing gym or tree.

- o Jug once, timing yourself to get a benchmark time.
- o Jug five times. Focus on smooth but consistent movement.
- o On the fifth time, time yourself and try get 50-75 percent faster than your first benchmark time.
- o Now adjust the length of daisy chain and go five times. Time the fifth one and compare it to the time before. Go with the daisy length that is most comfortable and gives the best time.
- o Now adjust the height of your feet in the aiders and go five times. Time the fifth lap and compare it to the time before. Go with the aider height that is most comfortable and gives the best time.
- o Once you figure out the best place for your feet, do another five laps. Time yourself on the last lap and try to get 25 percent faster than your tenth time.
- o Get a good arm pump.
- o Recover for two days.
- o Anchor a free-hanging rope 20-30 feet up with rope length that is at least 200 feet. Build your jugging muscles so they won't lock up with cramps on Day 3 of a big wall.

7. Acquire Clean Aid Protection

- o Borrow, buy or improvise whatever gear to enhance your free climbing stock. If you are going to buy gear, check out reviews at <http://www.outdoorgearlab.com/big-wall-gear>

8. Leading 3: Placing Gear

Sessions 8 and 9

Where: A 30-50-foot-tall C1 and slightly low angle cliff.

- o Aid once, timing yourself to get a benchmark.
- o Now aid five times. Focus on smooth but consistent movement.
- o Time yourself on the tenth time. You want to be 50-75 percent faster than the first time.
- o Now try five times where you a little slower but focus on fluidity. Try to never stop moving up the aiders from one piece to the next.
- o Time yourself again, focusing on speed. Try to get 20 percent faster than your last time.
- o Overall, aim to do at least 25 laps over the course of two sessions.

9. Following 3: Cleaning Gear

Sessions 10 and 11

Where: A 30-50-foot-tall, slightly low angle C1 cliff.

- o Clean once, timing yourself to get a benchmark.
- o Now clean five times. Focus on smooth but consistent movement.
- o Time yourself on the tenth time. You want to be 50-75 percent faster than the first time.
- o Now try five times where you are a little slower but focus on fluidity. Try to never stop moving up the aiders from one piece to the next.
- o Time yourself again, focusing on speed. Try to get 20 percent faster than your last time.
- o Overall, aim to do at least 25 laps over the course of two sessions.

10. Building Anchors and Basic Aid Course

Session 12

Where: Any place where you can stand on the ground and have 3-5 pieces at about chest level.

- o Build an anchor of 3-5 pieces of gear using a cordelette. Break down the anchor and rebuild it a couple more times.
- o Now use different pieces and build and break down a few more anchors.
- o Build one more anchor with pieces that are spread out (use shoulder-length slings with the cordelette).

Sessions 13 and 14 – Basic Aid Course

Where: Ideally, you will have an 80-degree route that is 30-80 feet. I started in a tree. Not ideal. But work with what you got. The important thing is to get out there as much as possible.

With the skills dialed, it is time to learn to transition between them efficiently. The best way to do that is to build a course and time yourself. The course has five parts: lead, build an anchor, clean, break down the anchor, repeat.

- o Do the aid course once and time yourself to get a benchmark.
- o Do the course five times or until you can't do it any faster.

11. Leading 4: Traversing Terrain

Session 15

Where: Find a traversing lower angle cliff 30-50 feet tall.

NOTE: For this session, you need a belayer.

- o Lead up at least 20 feet, then build a lower out point (1-2 bomber pieces), then have the belayer lower you 10 feet and pendulum over to a crack or face hold. Continue up to the top of the pitch or re-

practice the pendulum.

- o Repeat, the above but this time wear free climbing shoes and practice tension traverses. Especially work on communication with the belayer.

12. Following 4: Traversing Terrain

Sessions 16 and 17

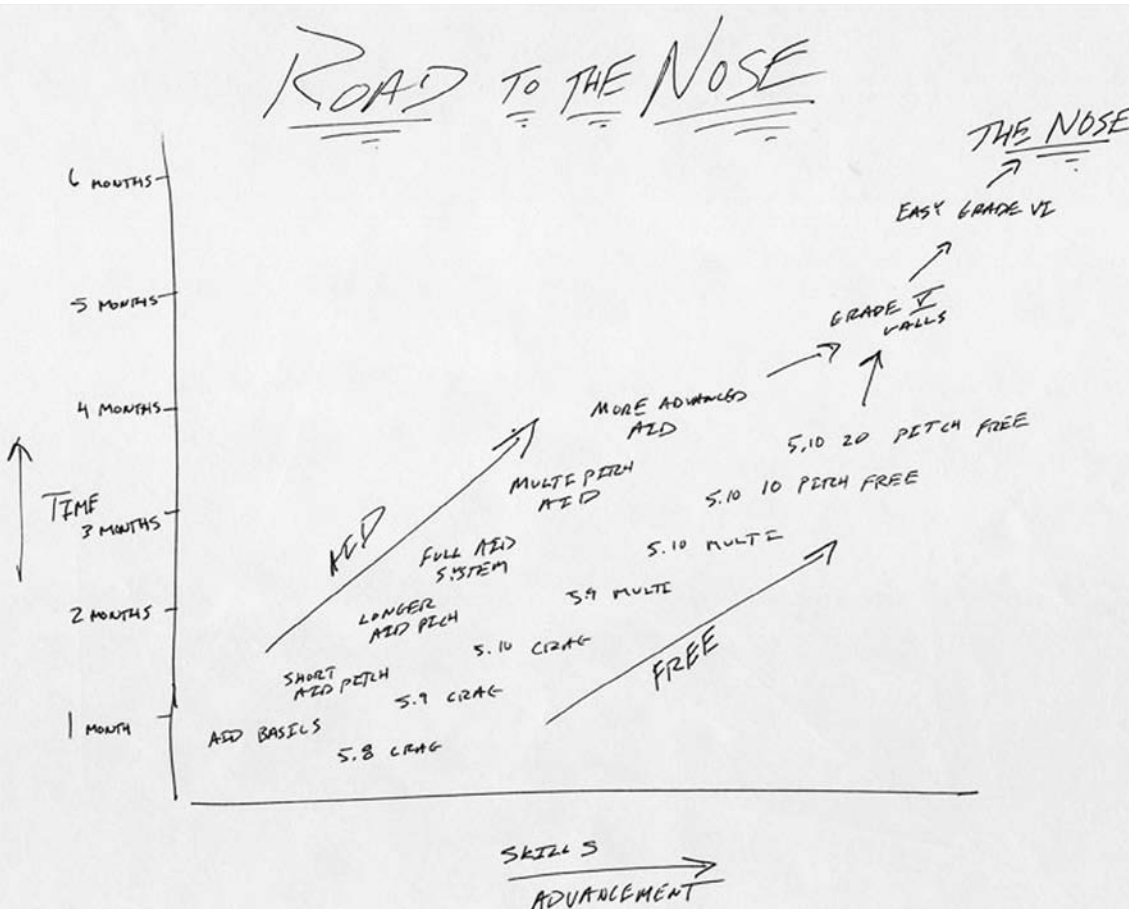
Where: Find a traversing lower angle cliff 30-50 feet tall.

- o Before you get to the a cliff, slinging something at eye level and passing the lead rope through a carabiner connected to it. Practice lowering out five times
- o Once you have the lower out dialed on the ground, set up a traversing rope. Anchor a rope to the top of a cliff, clip it through a piece at least ten feet to the side of the anchor point, and at least ten

feet off the ground. Practice lowering out five times.

- o Set up a traversing rope. Anchor a rope to the top of a cliff, clip it through at least five pieces that run diagonal up, hopefully at a 30-45 degree angle. Clean it five times. Remember to tie backup knots.
- o Try to find a traversing crack that takes 3-5 pieces in. Jug up to the first piece, then switch to re-aiding mode. Practice re-aiding five times.

Congratulations, you are now an aid climber! You are about half way through the process of climbing El Capitan. And you are 95 percent closer to achieving that goal that most climbers. If you have done all the items on this checklist, you are proficient on the basic techniques of aid climbing. Even some climbers who have crawled and scratched their way to a big wall summit can't say that.



13. Acquire More Gear: Haul bags and Hauling Gear

- o Borrow what you can or, if you are going to buy gear, check out reviews at <http://www.outdoorgearlab.com/big-wall-gear>

14. Hauling and Belay Management Plus Advanced Aid Course

Session 18

Where: Ideally do this on your small practice cliff after first setting up the systems on flat ground.

- o Set up a hauling anchor at least five different times (incorporate both the lead and haul rope into the anchor).
- o Space haul 15 times.
- o If you think you can do it safely, body haul 15 times.

Session 19 and 20 – Advanced Aid Course

Do the Basic Aid Course on a longer, more sustained pitch (hopefully at least 100 feet long). Each time try to set up the anchor a little differently and alternate hauling techniques.

It is important to find a long and sustained pitch so that you learn to deal with these big wall issues:

- o How to maintain speed and fluidity over a longer pitch.
- o How to conserve gear by mixing up what size piece you leave so you have a full selection at the end of the pitch and extra for anchor.
- o Time yourself the first time to get a benchmark.



- o Every ten times you do a lap on the course, time yourself and try to improve your time 10-20 percent every ten times.
- o After the first ten laps, introduce hauling for another ten laps. For the first five times, use the body hauling technique. Once you can body haul safely, try out the space haul first on the ground and later on the wall. **DANGER:** Remember body hauling only works if your haul bag weighs close to your own weight. Otherwise: Danger!).
- o Do 20-30 laps total over two sessions.

Congratulations, you are now a proficient aid climber. If you took the time to master all the lessons, then you have the basics dialed. Now take your solid set of skills to the multi-pitch environment. When the exposure kicks in on Day 2 and your partner wants to bail because

“it doesn’t feel right,” you can confidently draw from your mastered skill set and push on through!

15. The Bivy

Session 21

- o On the ground, put the portaledge together five times.
- o Hang from a wall and put the ledge together five times.
- o Put the ledge together twice while using a headlamp.
- o Try camping on the side of a cliff for a night (optional).
- o Set up the rainfly and turn the hose on full blast. Spray it up from below the ledge. See how dry you stay.



16. Rescue and retreat

Session 22

- o Practice rappelling with a haul bag.
- o Learn the basics of self rescue; how to escape the belay, etc. (material not covered in this book).

BONUS: The Road to the Nose – Free Climbing Skills

1. Training at the Crag

Sessions 23 and 24

Where: After becoming a solid 5.10b trad climber, go a crag with 100+ foot tall pitches. The El Capitan base is perfect but most people only have their local crag.

- o Climb five 5.9 trad pitches carrying a Nose rack [see page http://www.supertopo.com/rock-climbing/route_gear.php?r=ybelnose].
- o Climb five 5.10 pitches carrying a Nose rack.
- o Now add in a haul line and hang some ascenders and a wall hauler off your harness. If you still climb 5.10b, you are in good shape. Try to climb pitches longer than 100 feet.
- o Practice moving from aid to free five times climbing out of your aider, and five times climbing out of a shoulder length sling.

2. Training on the Big Climbs

Sessions 25-28

Where: Any place with long multi-pitch climbs.

- o Climb five or more multi-pitch free routes.
- Key skills to pay attention to:
- o Fast belay changeover (2-5 minutes).
 - o Rope and belay management (practice seeing rope snags before they happen).

Congratulations, you are ready for your first wall! If you have not skipped any sections, if you have checked every box, and graduated to each level honestly, you know where your weaknesses still lie...or you are ready to charge.

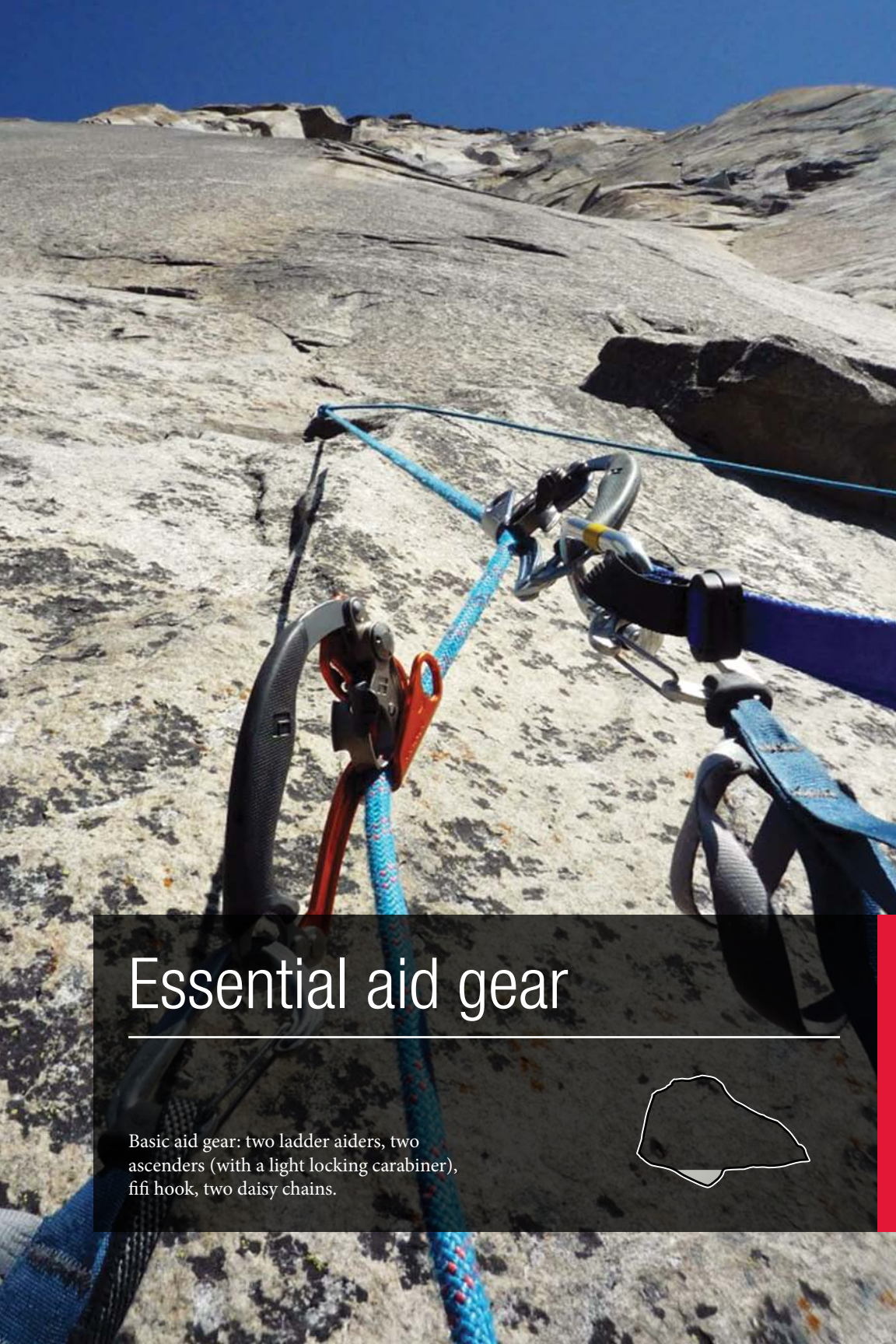
3. Climb 3 Grade V Walls

Session 29-30

Where: Yosemite, Zion, Black Canyon or any other big wall area.

- o Climb two or more grade V walls.

4. Climb An El Cap Grade VI!



Essential aid gear

Basic aid gear: two ladder aiders, two ascenders (with a light locking carabiner), fifi hook, two daisy chains.



Basic Aid Gear

Two basic principles of good aid gear:

- Use the best gear you can get. The right gear is essential. But buying brand new all at once would cost \$5,000. Don't be discouraged. Borrow gear and improvise where possible until you fill out your rack with the best gear you can get. I was lucky that my aid mentor, Mark Melvin, basically let me borrow his haul bag, portaledge, and rack for my first season in Yosemite. See *Dirtbag Options* at the end of the chapter for ways to improvise and the *Do-It-Yourself Big Wall Thread*.
- Use the lightest and simplest gear. I use the lightest gear possible as long as it does not compromise safety or functionality. Aid racks are heavy. If you compare the difference between a standard rack and a rack that uses lightweight biners and slings, the difference can be more than five pounds. Psychologically, I feel much better standing on marginal aid placements with a lighter rack. And when it comes time to free climb the *Stovelegs* and *Pancake Flake on The Nose*, 5.9 can feel like 5.11 if you have a really heavy rack.

My exceptions to using the lightest gear possible: ropes, cams, aiders, and harness. I will describe why later.

WARNING: While I encourage using whatever you can latch onto at first, never use worn out gear, especially such critical equipment as a harness, daisy chain or rope. Todd Skinner's death on the Leaning Tower when his worn belay loop broke reminded us all of how important it is to check your harness carefully and retire it if there is any question about its safety.

Aiders

There is no one-size-fits-all aider. What you buy will depend on the type of wall you are doing.

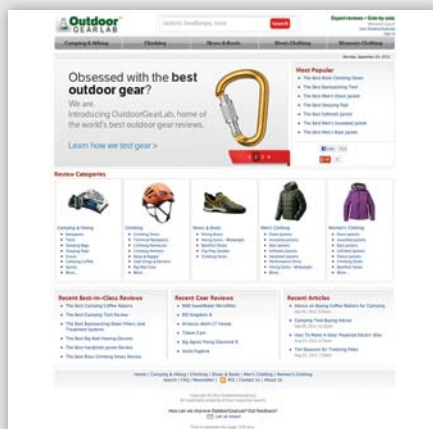
Length and Number of Steps

If you are doing a wall with lots of free climbing, you want a shorter aider that will be less bulky when clipped to the side of your harness. If you are doing an aid-intensive route, you want a longer aider that will give you more bounce-testing options.



MORE AT OUTDOORGEARLAB.COM

This chapter features excerpts from our *Buying Advice* articles at OutdoorGearLab.com. There is more detail, photos, and general sweetness over at OutdoorGearLab.com. And while some of this info is timeless, some of it will be much more current at OutdoorGearLab.com when you read this.



When considering length, it is much more important to look at the overall length than the number of steps. All manufacturers count steps differently. For example, the Petzl WallStep 7 Step Etrier is the same length as the Metolius 5 Step Aider because Metolius has sub steps that are not counted. More important than the number of steps is where they are located. If possible, you want to try walking up a pair of aiders with you harness and fifi so you can see if the aider steps are where you want them when resting on a piece.



These aiders are all about the same length even though their names imply otherwise. From left to right: 7 Step Petzl Wallstep Etrier, Metolius 8 Step Ladder, Metolius 5 Step Aider.



This shows how the upper steps on the Metolius 8 Step Ladder (left) get squished together when weighted while the Yates Aid Ladder stays open. This makes it easier to get your feet in the upper steps of the aid ladder.

Hopefully one day manufacturers will name their aiders by length rather than by step numbers. That will make it much easier for climbers to compare and contrast them.

Types of Aiders

There are three common types of aiders to consider:

Aid Ladder

And aid ladder has two vertical pieces of webbing down the sides connected by horizontal pieces in the middle (so it looks like a ladder). This is my favorite type of aider for more aid-intensive walls such as Zodiac, The Prow, or The Shield for three reasons:

- 1) It is much less prone to twists and “going inside out” than standard aiders.
- 2) You don’t have to orient the aider step to the correct side when you are stepping into it. This is especially helpful for

beginners, which makes this style aider the best for climbers learning to aid climb.

- 3) Because the steps are closer together at the top, you can often rest two feet in the aider at the same time.

The downside for aid ladders is that they are a little heavier than standard aiders and generally have more material, which means they are more likely to get stuck in the crack – which really sucks when moving from aid to free.

When buying a ladder-style aider, try to get one with a beefy plastic spreader bar at the top. Without a spreader bar the aider will be difficult to walk up once you weight the bottom step. As you can see in the photo on Page 37, the upper step on the aider without the spreader bar (left) gets compressed.

Standard Aiders AKA Etriers

This is the most common type of aider. I prefer it on walls with lots of free climbing (The Nose, South Face of Washington Column, Touchstone Wall) over aid ladders because it is lighter weight and less bulky when you clip it to the side of your harness and free climb. The downside is that it gets twisted, the steps get turned inside out, and you always have to orient them properly (left foot into a step oriented left of center). That means more dealing and declustering time, which adds up over the course of a wall and disrupts the “aid climbing flow.” Make sure there is a grab loop at the top. I prefer models where the top and second step have sub steps. The webbing should be at least one inch wide and have some type of reinforcement on the bottom of each step.

Lightweight Aiders AKA Alpine Aiders

This is best for mostly-free routes where you occasionally need to use aiders. Very light weight but uncomfortable if you are standing for more than a few minutes. If I am doing The Nose in a day, I will usually bring one of

these and one mid-weight aider such as the Petzl WallStep. However, this is a bad choice for learning to aid climb.



Showing aider step width. From top to bottom: Yates Aid Ladder, Metolius Aider, Petzl WallStep, Petzl GradiStep.

Comfort

The most comfortable aider is going to be the one with the widest webbing in steps with the most reinforcement that does not crush your feet from the side. I find aiders with urethane-like coating on the steps are usually the most comfortable because the extra structure digs into the bottom and sides of your foot less.

Ease of use free climbing

Everything that makes an aider comfortable and easy to walk up tends also to make it cumbersome with which to free climb. This is because the features that make an aider comfortable also make it bulky and likely to get stuck in cracks. When doing a lot of free climbing, you want an aider that bunches up small on the sides of your harness.



Showing the bulk of aiders when bunch up (for clipping to the side of the harness for free climbing). From top to bottom: Petzl Gradistep, Petzl WallStep, Yates Aid Ladder, Metolius Aider.

Features that are Important and Not Important

Important

It is important in a ladder-style aider to have a spreader bar.

It is important to have a grab loop up top (pretty much every aider has one).

Not Important

It is NOT important for there to be a loop at the bottom of the aider for clipping a weight. Many manufacturers design this for high wind situations. I have climbed in a lot of high winds and never felt the urge to use this feature. And even if I did feel the need, it's almost as easy to clip a weight to the bottom of the aider itself.

It is NOT necessary to have extra elastic to keep your feet in the aiders when cleaning. Yes, at first when cleaning your feet will come out more than you like. But over time you will learn to keep your feet in. Using the elastic takes extra time and makes it harder get your feet out when you want to.

Daisy Chains



Showing a daisy chain with reinforced end

What is The Right Length?

All daisy chains I have seen work, so the most important thing is to get the length right. You don't want the daisy chain to come tight before you get to your maximum reach.

When shopping in the store, put one end at belt level and hold the other end as high as you can above your head with fingers outstretched. There should be to four to eight inches of extra daisy beyond your fingers. If between sizes, err on the size of being too long. If shopping online, raise your hand, measure from your waist to the tip of your fingers, and add a few inches. For most people, 55 inches is the right length.

Durability

Durability comes down to how you use your daisy chain. If you are just free climbing, it will last for five-plus years. If you are aid climbing and bounce testing a lot, it will wear out much faster. Unless you are unlucky and blow a bar tack, the point on the daisy chain that wears out first is the point that you clip to the biner that you then clip to the aider and piece you are standing on. If you

aid climb a lot, get a daisy chain that has this critical point reinforced like the Metolius Monster Daisy Chain. If you don't aid climb a lot this does not matter as much.

There is some debate about how long the bar tacks last on nylon vs. Dyneema. The thought is Dyneema bar tacks rip out faster. I have not been able to test this but if you have experience, send an email.

Dyneema or Nylon?

I usually recommend Dyneema or Dyneema/nylon mix because they are lighter than regular nylon daisy chains. However, the nylon stretches more than Dyneema and therefore will absorb more force during a short daisy fall. How much does this matter? It is very debatable. It is important to remember that a real world climber falling creates force equations much more complex than simply dropping a weight in a lab test.

I personally have only taken a handful of daisy falls in 100-plus big wall ascents and whether it was nylon or Dyneema I was connected to my last piece with, it usually held and I could never tell much difference. I am not sure how much difference there is between nylon and Dyneema in a real world environment where your harness, your body, friction against the rock, "penduluming" and other factors add in fall absorption (read our Climbing Sling and Runner Buying Advice article to learn more). If I was on a scary hard aid route, I would go with nylon just for the psychological value of thinking it would absorb more force. But for most walls I do, lightness and ease of use are much more important to me and I go with Dyneema or a Dyneema/nylon mix.

Adjustable or Regular Daisy Chains?

There are two types of daisy chains: adjustable and regular. I have always used regular daisy chains and most aid climbers prefer them. I have only used adjustable daisy chains a little so I can't give a detailed

review. What I do find is that most of the adjustable daisy chains do not have very smooth one-handed extension. The one that does extend nicely is the Metolius Adjustable Daisy Chain. However, these are for body weight use only and I hear that they have broken during small falls. Even if Metolius fixed that issue I still find that regular daisy chains are faster and require less management. With adjustable daisy chains you have to keep them untwisted or they don't slide as well.

Ascenders

Ascenders are often called Jumars or just jugs. Jumars were the first popular ascender in Yosemite. Almost nobody uses the Jumar brand anymore but people still use the term "jumaring" or "jugging" to describe moving up the rope with ascenders because the term "ascending" is just too generic and "ascending a rope using ascenders" is a mouthful.

Unlike a harness, where you can get a sense of how well it will work based on hanging around in it, there is no easy way to test ascenders in a store. The reason is that ascenders are not intuitive to use at first. They take practice to move efficiently and get on and off the rope. So more important than holding these in the store is asking the opinions of experienced big wall climbers.

Left and Right Ascenders

Ascenders are sold individually, not in pairs. So make sure you are buying one right ascender and one left ascender.



Black Diamond nForce ascenders on Wall of Early Light, El Capitan.

Ease of sliding up the rope

Of all the features to look for an ascender, this is the most important: It is how easily the ascender slides up the rope that will determine how tired your arms get over time. If the device slides up effortlessly, your arms will thank you.

Ease of taking on and off the rope

This is the second most important feature in an ascender. Remember that no ascender is perfectly intuitive to use at first; it takes practice to be able to quickly get them on and off the rope. So if you are testing ascenders head-to-head in a store, make sure you use them a LOT. For example, at first I could not get the nForce ascender off the rope quickly and my friend Tim could not get the Petzl off the rope quickly. Then we both practiced a lot. In the end, after lots of practice, we found them both about the same to get off the rope.

Weight

Weight is not a big deal when you are using ascenders. But you will notice the difference in weight when they are clipped to the side of your harness. Since big wall racks already weigh so much, it is nice to have a light ascender on your harness when leading. Also, if you are alpine climbing, the lighter the ascender the better.

Belay Device

An auto-assist belay device like the Petzl [GriGri 2](#) or Trango Cinch is mandatory on a wall. There are times when you need to take your brake hand off the device to clear a rope snag or dig into the haul bag. Also, it is often hard to stay perfectly alert during a multi-hour belay. I have used the GriGri a lot and love it, especially because it is also a great belay device at the crags as well. However, I prefer the Cinch on big walls for one reason: it automatically slides up the rope when you are jugging up whereas the GriGri does not unless there is a ton of weight on the rope and everything is aligned just right. This means that between backup knots, you have a nice extra backup with the Cinch.

Carabiners

I only climb with lightweight wire gate biners. With a big rack and hundreds of biners, using lightweight biners saves pounds of weight. My current favorite is the [CAMP Nano 23](#) because it is the lightest carabiner out there. However, many wall climbers want something a little bigger and easier to handle, in which case I would recommend the [Black Diamond Oz](#), [CAMP Photon](#) or [Wild Country Astro](#). By the time you read this, there may be better carabiner options so be sure to check out my review at <http://www.outdoorgearlab.com/Carabiner-Reviews>

NOTE: Stop Buying Ovals

Oval carabiners like the Black Diamond Oval were the old aid climbing standby. They are what everyone used on walls in the 60-70's (there were not many alternatives) and they don't make the scary "biner shift" noise. But oval biners are heavy and have some of the lowest strength ratings of any biners out there. I don't use them. FYI: the "biner shift" noise occurs when three biners are clipped to each other and the load changes between biners. A biner can then shift position and make a noise eerily similar to a piece pulling out. If you are using the simple systems in this book, biner shift won't happen much and is not a big deal when it does. If you are going to use an oval biner, I would go with something lighter than the standard oval, like the Black Diamond Oval Wire or Omega Pacific Doval.

Locking Carabiners

I like to have four to eight locking carabiners. Again, light ones are best such as the Petzl Attache 3D. I also bring a few larger locking carabiners for attaching the haul bag to the haul line and for using as the master point at the belay. A good big locking carabiner like the Black Diamond Rocklock is also good to have. Again, my recommendations may have changed by the time you read this so go to www.outdoorgeralab.com for the latest recommendations.

Quickdraws

I prefer six-inch or 10-inch Dyneema draws with any of the lightweight carabiners mentioned above.

Climbing Slings and Runners

Just like carabiners, it is hard to bring too many slings. I bring 15 lightweight shoulder-length slings on a wall. The Dyneema ones are the best because they are so light, like the Mammut Contact Dyneema. However, I also bring 2-5 non-sewn nylon slings so that I can leave one behind at a pendulum point or just have something more versatile.

Helmets

It is especially important to wear a helmet on a wall for two reasons: 1) If you get a bad head injury on a wall, rescue will be many hours away. 2) When bounce testing, pieces will pull and hit you squarely in the head.

Most helmets made by major manufacturers work. I use the lightest I can find with the requirement it must allow me to attach a headlamp for night climbing. Two helmets I have used and like are the Petzl Elios and Petzl Meteor III. (I take the Meteor on one-day ascents and the Elios on ascents that take more than a day. But there are a lot of great helmets available. Read our complete Best Climbing Helmet Review to see how the top helmets compare. <http://www.outdoorgeralab.com/Climbing-Helmet-Reviews>

TIP: To avoid bad farmer's tan and skin cancer, wear a bandana under the helmet so it covers your neck and ears. Or, for maximum ventilation, duct tape the bandana to the back of your helmet.



Ammon McNeely on the first
move and anchor (!) of Rodeo
Queen, Zion.

Photo: Chris McNamara

Fifi Hook

There are a few different manufacturers of fifi hooks. The important thing is the length of the half-inch webbing that connects the fifi hook to your harness. The length is usually shorter than you think—usually about six inches or just long enough to be able to girth hitch to your harness. If the fifi hook comes with pre-sewn webbing like [Black Diamond Fifi Hook](#), you may need to cut off the webbing and tie on your own in order to get the right length.

Big Wall Harness

Get a harness with decent padding that is well padded at the waist and leg loops. Because I don't like heavy gear, I don't wear the super-beefy wall harnesses like the Yates Shield Harness but a lot of people love 'em. Make sure there are two beefy gear loops on each side. Before you commit to a beefy harness for a mostly-free route like The Nose, make sure you are willing to sacrifice the extra weight for comfort.

If I am going to spend multiple days on a wall, I will wear a “medium beefy” big harness like the Metolius Safe Tech Waldo.

Most of the time, especially on a one-day ascent, I just wear a trad climbing harness because they are light. My three favorites right now are Arc'teryx R320, the Black Diamond Momentum Harness, and the Petzl Sama Harness.

We have a complete big wall harness review and an article [How To Choose A Big Wall Harness](#) at [OutdoorGearLab.com](#).

Gloves

I used to only use sturdy leather gloves like the Metolius Climbing Glove. They are beefy and probably the best option for serious nailing routes. However, they really only protect your palms. After days on a wall your fingers will be sore and black from handling biners and the rope. Then when you eat finger foods with those black fingers... You get the idea. I'm now a fan of bringing two pairs of gloves. I bring the Black Diamond Stove Glove for leading aid pitches. I bring a full-finger Mountain Bike Glove for cleaning. The Mountain Bike Gloves protect your entire hand, have great dexterity, and you can do easy free moves with them on. The downside is they are a little expensive considering they won't last for a lot of walls. If I am going to do a wall with lots of burly hauling, instead of the Mountain Bike Glove I bring Wells Lamont Leather Work Gloves or a pair of construction gloves if there are some lying around.

Wall Shoes

Walking up and down in aiders maybe the single most destructive activity to a pair of shoes. “What shoes to bring on a wall?” is still a question I grapple with on every climb. I have listed all the different types of footwear with their pros and cons on the next page. I usually use climbing approach shoes, but at the peak of my wall climbing activity I would buy a cheap pair of hiking boots and cover the seams in Shoe Goo or Seam Grip. Even if you buy a pair of climbing-specific approach shoes, it may still make sense to cover them in Seam Grip. Some climbers go as far as putting two tubes on each shoe! This will likely result in the fabric blowing out long before the stitching does... which is what you want to happen.

As for shoe fit, I err on the side of wearing my wall shoes a little tight. That way they perform better when doing free moves. But

bear in mind that tight shoes will hurt a little more on the descent.

Approach shoes like La Sportiva Ganda



Pros:

- ✔ Great for moving from aid to free climbing.
- ✔ Generally low profile, so they move in and out of aiders efficiently.
- ✔ What I usually use on The Nose.

Cons:

- ✘ Expensive.
- ✘ Will only last for a handful of wall climbs before blowing out—sometimes only for one wall.
- ✘ Painful for long A3-A5 leads.

Regular hiking shoes like Merrell Moab



Pros:

- ✔ Reasonable support and durability.
- ✔ Can be pretty cheap

Cons:

- ✘ Not as precise for doing the occasional free move.
- ✘ Cheap versions can blow apart fast.

Hiking boots like Salomon Quest



Pros:

- ✔ Most durable option.
- ✔ Comfortable for long A3-A5 leads.
- ✔ Good for edging if fit tightly.

Cons:

- ✘ Generally pretty expensive.
- ✘ Can be clunky when you move around in aiders.
- ✘ Bad for smearing.

TIP: If you really want your boots to last as long as possible and don't care if they're ugly, liberally apply Shoe Goo or an equivalent product to the seams most likely to blow out (mainly the area around the toe).

Big Wall Free Climbing Shoes

For free climbing on a big wall, I bring shoes that are one size too big. Big shoes

reduce performance a little but make the shoes way more comfortable—a worthy tradeoff. Wearing thin socks makes them more comfortable, especially when you have to haul. When climbing The Nose in a day I wear a comfy pair of free shoes all day long. If climbing The Nose over multiple days, I wear free shoes on all of my leads but switch into approach shoes when cleaning. I prefer Velcro shoes so that I can take them off at the belays. That said, lately I have been using the La Sportiva TC Pro because they are comfortable and edge very well.

Unfortunately, they cost \$170. If you are on a budget, just about any free shoe will work. But in general, go with a stiff sole.

Lead Rope

You want a 10.2 to 10.5mm rope with a perfectly intact sheath. Anything with smaller diameter will wear through too quickly and be scary to jumar on. The 11mm ropes add an extra feeling of security but are really heavy. I like a 60m rope. A 50m rope is too short these days and won't allow you to link pitches as easily. In general, a 70m rope is overkill and means you will have 30 extra feet of rope to manage at the belay on every pitch—which can lead to more rope clusters. Right now the Maxim Glider is our top recommended big wall rope and the Maxim Equinox is our Best Buy recommendation. Check out the [how to buy a climbing rope](#) at OutdoorGearLab.com.

TIP: Always carry climbing tape on a wall. There is nothing worse than being halfway up an aid route and noticing a tiny bit of white core poking through the sheath of your rope. It's a personal call as to when a rope is so damaged that you should not lead on it and need to bail. In most cases, if the core is not damaged, I will wrap the damaged spot in athletic tape and mainly use the "better half of the rope" the rest of the climb (this means switching ends of the rope every time you switch leaders).

DIRTBAG OPTIONS

When you start aid climbing you can improvise just about everything you need off a regular free climbing rack.

Aiders: Intertwine two shoulder-length slings or buy some one-inch webbing and improvise an aider like they used to do in the olden days

Fifi hook: Biner or quickdraw (or nothing).

Harness: Regular free climbing harness.

Shoes: Old pair of running shoes or hiking boots.

Haul Bag: check out this Do-It-Yourself Big Wall Thread for more inspiration <http://www.supertopo.com/climbers-forum/1340828/Big-Wall-DIY-Thread>


If you get serious about aid climbing, you will want to buy the more specific aid climbing gear mentioned above.

Pants

The ideal pants are synthetic, have reinforced knees and are loose enough that you can roll them up to the below the knee if you get too hot. I never wear shorts on a wall. My favorite is the [Patagonia Simple Guide Pant - Men's](#).

Knee Pads

I don't use them because they get in the way and make you sweat behind the knees. But a lot of aid climbers, especially beginners, seem to like 'em. On The Nose or any free climbing wall they really get in the way when free climbing. If you are going to use them I would use the lightest and most low profile ones you can find. One problem with more beefy knee pads is that they can get snagged in the aiders.



Leading traversing terrain

Mark Melvin winds up for The King Swing,
The Nose, El Capitan

Photo: Chris McNamara



Leading traversing terrain is the most exciting and tricky part of wall climbing. There is nothing as cool as making a giant pendulum like The King Swing on The Nose and nothing as scary and traversing horizontally under a roof like The Great Roof. Traverses are heads up for three reasons:

- If you fall on traversing terrain, you swing sideways which is the most dangerous way to fall. On a vertical fall you almost always take the impact with your legs. On a sideways fall you usually take it to the abdomen or hip after you first impact with your hands. You are also more likely to hit your head on a sideways fall.
- It's harder to bounce test on traversing terrain.
- You need to always be thinking about your follower and leave gear and lower-out slings in convenient places for him or her.

Skills to learn:

- Pendulums
- Tension traverses
- Placing and testing gear to the side
- Projecting your follower

Gear you need:

- Daisy chains
- Aiders
- Helmet
- Gloves (optional)
- Locking biners (lightweight if possible)
- Two shoulder length slings
- Lead rope
- Fifi hook.

Where to practice

Ideally, you will have an 80-degree wall that is 30-80 feet tall and has one horizontal crack or bolt ladder and one diagonal crack or bolt ladder. I started in a tree that had a sturdy 20-foot-long horizontal branch. Another good option is a rafter that you can sling. Work with what you have. The important thing is to practice as much as possible.

Pendulums

Pendulums are my favorite part of wall climbing. Nothing compares to running back and forth on El Cap with thousands of feet of air under you. Pendulums are also pretty simple: just lower, swing, and latch onto the next crack. What is tricky about them is what to do after the pendulum swing. It helps a lot to have sticky rubber approach shoes or free climbing shoes for pendulums. Not only does it make the pendulum easier, it makes the critical climbing after the pendulum feel more secure and be potentially safer.

Step-by-step guide to pendulums:

- 1.** Make sure your pendulum point is bomber. If it blows on you, you fall to your last piece. If it blows on the follower, the follower will take a dangerous swinging fall, probably onto their ascenders, which can cut the rope. Back up the point with gear if you are unsure of how bomber it is. The follower can then decide for himself if he wants to leave gear or not.
- 2.** Make sure there is a convenient way for the follower to lower off the pendulum point. If there is a sketchy lower-out sling, replace it with a good one. It is much easier for the leader to clean up the pendulum point than it is for the follower. When the follower

gets up there the pendulum point will be weighted and harder to manage.

3. Have the belayer lower you down until you think you are in position to make the swing. Work out in advance what commands you will use. Usually the leader will say, “Take. Lower... lower... lower... stop!” It is VERY important that you can communicate with your belayer for a pendulum. Keep this in mind if you are linking pitches and will potentially be far away from your belayer.

4. Swing over to the crack or face hold you are going for. Usually on the first go you are too high so you have to lower down a little. Its better to start too high than too low. If you are too low then you have to find away to climb back up or, if the wall is blank, you have to jumar back up to the anchor point and start over.

5. If you are making a pendulum to free climbing, you can usually just swing, sink your hands into the crack, and start going. If you are penduluming to an aid placement, you should guess which piece of gear you will need and put that on the end of your aider. Once you reach the crack, you can then sink in the piece of gear and stand on it.

6. Once you are done with the pendulum, you either tell the belayer to give lots of slack in the rope by yelling “slack” or give slack slowly to ease the transition to the next move by yelling “lower slow.” Often if you are penduluming to a free move, you will want to have some tension for the first few free moves, so careful communicating exactly how much slack or tension you want with the belayer is essential.

7. Now the crux of pendulums: where to place your first piece of gear. The longer your wait to place gear, the less rope drag and the more exposed you are to a bad fall (and having to redo the pendulum). The absolute safest and slowest way is to immediately start placing gear after the pendulum. If the rope

drag becomes too bad later, you can always lower down and clean.

Tension traverses

Unlike a pendulum, a tension traverses does not involve swinging side-to-side. Instead, you typically have your belayer take, then slowly lower you as you gingerly use friction and face holds to traverse to the side and usually a little down. Communication is key. Too much slack from the belayer and you lose tension in the rope and usually lose your balance and footing. In many cases, a pendulum leads to a tension traverse. For example, with The King Swing on The Nose, a popular route has you swinging side-to-side until you can gingerly face climb with tension from the rope over to Eagle Ledge. All tension traverses are made easier by climbing shoes or sticky rubber approach shoes.



Ammon McNeely tension traverses low on Horse Chute, El Capitan.

Placing and testing gear to the side

The hardest part of leading traversing terrain is placing gear way to the side and knowing if it is bomber. It is very hard to test gear effectively to your side because to fully commit to a piece to your side means that if that piece pops during testing, you fall back and put a lot of swinging force on the previous piece. There is no easy way to test gear to the side, but here are a few tips:

- A little tension from the belayer will help you keep your balance if the piece you are testing pops.
- Use your foot like a lever (this tip was mentioned earlier). With your foot in the aider of the piece you are testing, point your toe down a little and then try and use it as a lever.
- Use cams instead of stoppers. I always try to use cams instead of stoppers, but especially on traversing terrain. It's hard to tell if a stopper way to your side is any good. And a stopper might be good when you are testing it, but then when your weight shifts to the side, it might become crappy.
- Use cam hooks. Cam hooks are great under some traversing roofs like the Nipple Pitch on Zodiac. You can generally tell how bomber they are by how deep they sink in a roof crack. The downside to cam hooks is it might then be harder for your follower to clean the pitch. This issue is solved by giving your follower cam hooks or just making sure there is not too much distance between horizontal pieces.

wrong spot, your follower may have no way to clean a piece other than leaving it. It is important to think things through. Anytime you backclean a piece, ask, "Will the follower now be able to get the piece before it?" In addition, you need to make sure the follower can safely lower out from pendulum or tension traverse points. Is the lower out point solid? Is the webbing that will be left on the lower out point solid? Remember, you are not just protecting the follower's safety, you are also making sure you don't put the follower in a position where they will have to leave behind a lot of gear.

Protecting your follower

When leading straight up and down pitches, you don't need to worry about gear placements for your follower (except for protecting the rope from sharp edges). When you are leading traversing terrain, things are different. If you backclean gear at the

Big wall gear checklist

Below is a general list. Go to the link below to see the latest specific gear I recommend.

<http://www.supertopo.com/gear/htbw-rack>

Clean Aid Rack

- o Nuts
- o Offset Nuts
- o Cams
- o Offset Cams
- o Cam Hooks
- o Lead Rope
- o Haul Rope
- o Lower Out Line (optional)
- o Quickdraws
- o Carabiners
- o Locking Carabiners
- o Slings
- o Cordelettes
- o Hooks (optional)
- o Peckers/Tomahawks (optional)
- o Wire Rivet Hangers
- o Keyhole Rivet Hangers (optional)

Personal Gear

- o Harness
- o Belay Device
- o Climbing Shoes
- o Helmet
- o Gear Sling
- o Chalk bag
- o Fifi hook
- o Nut Tool
- o Ascenders
- o Aiders
- o Daisy Chains
- o Approach Shoes
- o Gloves

Hauling Gear

- o Knot Protector
- o Haul Bag
- o Hauling Device

Bivy Gear

- o Bivy Sack
- o Synthetic Sleeping Bag
- o Sleeping Pad
- o Stove (optional)
- o Headlamp with space batteries
- o Poop Tube
- o Portaledge and seam-sealed Rain Fly
- o Stuff Sacks with clip-in loops
- o Portable Solar Panel and Cell Phone
- o Duct Tape
- o Climbing Tape
- o Water Bottles with clip in tie-offs

Clothes

- o Synthetic Pants
- o Synthetic Underwear
- o Synthetic Belay Jacket
- o Rain Jacket
- o Rain Pants
- o Balaclava
- o Beanie
- o Synthetic Layers
- o Bandana
- o Wool or Synthetic Socks

Clean Aid and Hammerless Climbing - Top 11 Tricks

A big goal of SuperTopo is to inspire more clean ascents. Here are 11 tricks that I have found to do that. Please add in your own clean aid tips below the article.

Carry lots of small cams

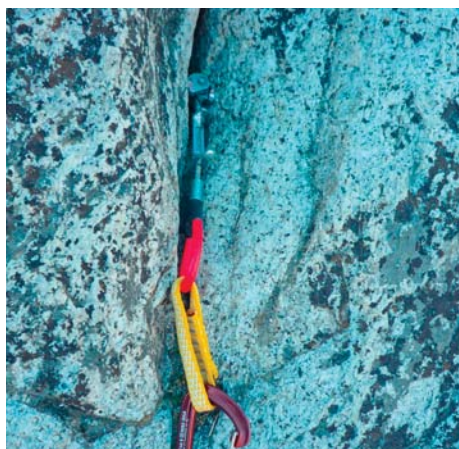
It's impossible to carry too many small cams (sizes .33-1") – just try. They weigh nothing and are the most-used pieces on any aid climb. If you have too few, you have to backclean, which means you are more likely to get scared and reach for the hammer.



From top to bottom, Black Diamond Camalot C3, Metolius Master Cam, Wild Country Zero, CCH Alien.

Offset cams

In an earlier book, offset cams were “recommended” in the racks. Now we list most racks as requiring 1-2 sets. Yes, you can get up most walls without them; but offset cams are usually the most bomber clean placement in a pin scar. The difference between a tipped out regular cam or a bomber offset cam is often the difference between C1 and C2 or C3.



Metolius Offset Master Cam in a Yosemite pin scar.



Offset micro nuts

These little guys get in pin scars where nothing else can. Non-offset micro nuts often won't stick at all or are more likely to get fixed.

A set of DMM Brass offset nuts.

Cam hooks

Cam hooks not only save time, they are often the only clean placement that works in a thin crack. They are scary at first, but if you “aid boulder practice” enough with them, you will cruise C2 as fast as you free climb.



Moses Cam Hooks

Top step

Increasing your reach is usually the best way to find an elusive clean placement. Getting into that top step gives you another foot or more. There are top-stepping tips and other tips at the online “How To Big Wall” page here:

<http://www.supertopo.com/gear/tableofcontents>

Free climb

Many low-angle A2 sections can be easily free climbed. Sometimes a move or two of 5.8 or 5.9 saves ten minutes of trying to get a shallow pin scar placement to hold. Even pasting one foot on an edge and one foot in your top step can help you reach a bomber clean placement. Wearing comfortable free shoes on a low-angle aid pitch is a good idea.

Leave the hammer in the bag

On a route that you might be able to do clean, leave the hammer in the haul bag. Just by having to tag it up, you are more likely to push your clean climbing as far as possible.

Intertwine stoppers

You can make a two-foot mini cheat stick by intertwining three stoppers to snag distant rivets.

Hooks and beak hooking

Often you can hook a crack or fixed head either with a regular hook or with a beak. Medium and large sized Black Diamond Peckers work especially well. A BAT hook can also sometimes get in the eye of a RURP with a broken cable. If you are going to nail, it is much better to use a beak, Pecker or Tomahawk as they are much less destructive than Lost Arrows, knifeblades and angles.



The Tomahawk works as a regular hook in some applications thanks to the curved shaft that wraps around edges for stability.

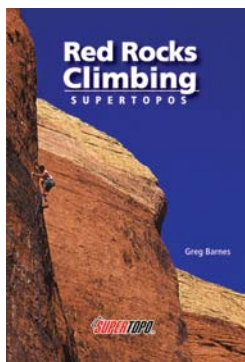
Hand place pitons

Many pin scars take a hand-placed piton. For extra security, give it a few pounds with your palm (leather gloves recommended). Sawed-off pitons often work the best if a hand-placed beak or Pecker won't work.

Cheat sticks

I don't use em. But if it keeps you from reaching for the hammer, go for it.

More from SuperTopo

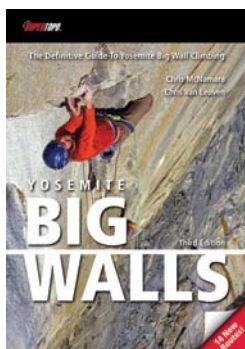


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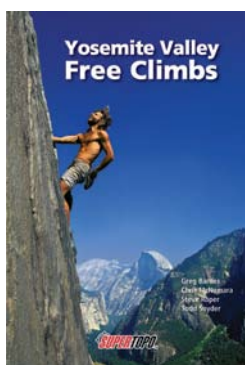


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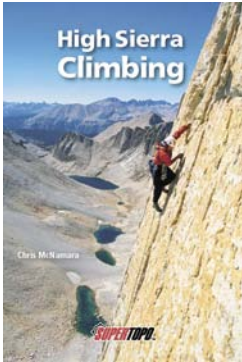


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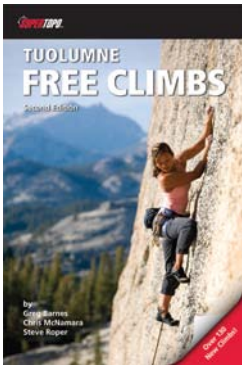


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This guidebook includes 26 of the best High Sierra alpine climbs, ranging in difficulty from 3rd class to 5.11c. Most of these climbs are well-protected, 10-15 pitches long, and ascend some of the best alpine granite anywhere. Whether you plan to scramble up the 3rd class East Ridge of Mt. Russell, climb the 5.7 East Face of Mt. Whitney, or ascend the epic 18-pitch Sun Ribbon Arête, our guidebook will ensure you spend minimum time off-route and maximum time enjoying the climb.

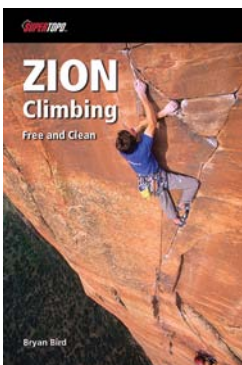


OUTSTANDING PEAKS AND DOMES IN THE HIGH SIERRA

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DESERT BIG WALL MECCA

ZION CLIMBING: FREE AND CLEAN

List Price: \$29.95 Available at www.supertopo.com

Zion Climbing Free and Clean is the most comprehensive climber's guide to Zion National Park, arguably one of the most beautiful national parks in the United States. Inside you will find up-to-date information on more than 250 free climbs and 25 of Zion's best clean aid climbs, plus pictures and directions to the park's most popular bouldering areas.

About the Author



Climbing Magazine once computed that three percent of [Chris McNamara's](#) life on earth had been spent on the face of El Capitan – an accomplishment that left friends and family pondering Chris's sanity. He has climbed El Capitan more than 70 times and holds

nine big wall speed climbing records. In 1998 Chris did the first Girdle Traverse of El Capitan, an epic 75-pitch route that asks the question, "Why?"

Outside Magazine has called Chris one of "the world's finest aid climbers." He is the winner of the 1999 Bates Award from the American Alpine Club and founder of the [American Safe Climbing Association](#) (ASCA), a nonprofit group that has replaced more than 11,000 dangerous anchor bolts. He is a graduate of UC Berkeley and serves on the board of the ASCA and the Rowell Legacy Committee. As a BASE jumper he claimed a slice of the Golden Age of Wingsuit BASE first descents by finding and jumping 10-plus significant new exits in the United States and [Baffin Island](#). In Switzerland he hiked and jumped The Eiger three times in one day. Chris is the founder of SuperTopo and is its CEO. He also founded [OutdoorGearLab](#) and serves as its Editor-in-Chief. And he also runs the Lake Tahoe vacation rental business [RentSouthLake.com](#).

What do you think about this book? Please email your reactions and suggestions to chris@supertopo.com. The second edition is in the works and needs feedback.



*Author Chris McNamara.
Photo Mark Melvin.*