



2007 - 2008

BUMP BUSTERS MOGUL CLINIC

COPPER MOUNTAIN SKI & RIDE SCHOOL

Packet: 2007 – 2008

Presented By Stephen Karp

***Find Your Line...Flow Like The Water...Mold Like The Water...The
Power Of Water...Be The Water***

How Does Your Water Flow?



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Welcome to “Bump Busters Mogul Clinic”, the first program of its kind (Professional Ski Instructors of America, Cert. Level 1,2,3 & USSA World Cup Competitive Mogul Concepts) offered to the public allowing a wonderful chance for instructors to take their passion of skiing to another level of coaching. This clinic isn’t about just bump skiing – it’s about ripping the whole mountain, it’s about having the tools to manage all terrain without the fear or intimidation, it’s about stopping, looking around, taking in the unbelievable beauty and the soul of the mountains. It’s also an opportunity to better understand yourself and the energy you hold deep inside one-self to absolutely, positively, do whatever you want on the hill and in life. Focus, work, ski and feel in the present, understand that if the present is the best that you can do, all will follow. Focus on each turn, not the run. Great turns create an awesome run, tap into the energy you’ve shaped, now own it!

“Flow Like Water...Be The Power of Water”
Karpy’s Philosophy

Moguls – Why & How

Paraphrased From Bob Barnes

Why:

Few scenarios showcase the total package of technical skiing mastery like a big, steep, natural bump field, Skill, composure and finesse in challenging terrain are hallmarks of great skiers.

How:

Ski! Relax, get into the zone, quiet your mind, and ski. This is a performance maneuver, and you will not become more skillful by over analyzing it or trying harder. Your ability to transcend “technical perfection” and appear to have fun in this terrain is part of the challenge – so make it so.

Ski a lot! There is no substitute for getting out there and putting in the miles, both in and out of the bumps. Fundamental skills must be a given, something you do not need to think about. Confidence in the terrain comes with familiarity; do not come from books, from videos or in the instructors lounge.

Search relentlessly for balance. Give yourself permission to get out of balance, it is part of bump skiing. Perhaps more than any other condition bumps are not a question of being in balance, but of aggressively seeking balance. Perfect balance may be important for perfect turns, but this run is not entirely about perfect turns. Balance is a nice luxury in bumps, well worth searching for! The ability to ski through slight imbalances is part of the maneuver.

The only way to acquire a taste for bumps is to a few. Do not be afraid to fall. Certainly, you cannot perform your best by focusing on not falling.

The 50% rule. Fifty percent of better bump skiing is to ski them better. The other 50 percent is to ski them anyway. If all your turns are “perfect”, go a little faster. If your entire run is nothing but a battle for balance, slow down a little.

Either way...have a blast!



Moguls Competitive Style

The Sixteen of Bump Skiing

By Stephen Karp

1. Pre-season Training

Good cardiovascular training activities for pre-season include running (particularly downhill trail running), mountain and road biking, along with using any indoor cardiovascular machines that simulates climbing, running, biking such as a stair master, treadmill, etc. Weight training is also critical to your training plan, and should include pull-downs, upright rows, seated bench rows, wrist curls, bicep curls, squats, leg extension, leg curls, calf raises, in three directions, and extensive abdominal core work, including crunches, sit-ups, and later the same with added weight. Some of the best core workouts come from a system known as Pilates, incorporated with Yoga; a weak core (the root to most injuries to the back) will become a thing of the past. Exercises to increase fast-twitch muscle strength, such as polymetric jumps, lateral box jumping, and weight training with low weight and high repetitions. Finally, be sure to include plenty of stretching in your daily training plan, both before and particularly after your work out.

Your diet during the pre-season should be low carbohydrates and high in protein. Keep dairy to a minimum, eating lots of chicken, fish, lean meat, salads, fruits and vegetables. Avoid too many starches, and eat 5 smaller meals per day. Don't forget the importance of hydration – drink plenty of water and your favorite electrolyte replacement drink. Pre-season workout is also a great way to put yourself in check concerning the shape of your body and the desire to keep it good shape. Don't blame it on work or being busy...DO IT!

2. Clothing and Equipment

Traditional alpine boots are typically used for mogul skiing; very soft, lightweight, four buckle boots with a top power strap. Atomic and Lange are both good brands. Socks should be thin to medium. Skis should have a soft tip and tail, with a stiff underfoot area. Ski length can vary. If your mogul skiing is mostly on the ground and you enjoy turns, 162 – 167 mogul ski will fit perfect. If you want to add more flying time to your mogul skiing, keep the skis on the shorter side of the scale. For everyday skiing with some mogul skiing involved, a shorter shaped all mountain ski will work. But for serious training, all day bump rockin skiing. A mogul ski is the only tool in the chest. Almost every ski company produces a competitive bump ski. Sometime these skis are hard to find, online, or just ask a retailer a lot of questions. A few of the skis out there might be Salomon Ten eighty, the Rossignol Exhibition, the Dynastar Assault, and the World Champion Volkl Dragon Slayer. I personally like and ski on the Rossignol Exhibition. Select your bindings according to ski manufacturer recommendations. Your poles should be two to three inches shorter than your all mountain pole length. Yep, that's right you need (2) pairs of poles. Different skis for different terrain, different poles. They should be as lightweight as possible, have hand straps, a smaller basket, and a grippy racing style handgrip. Graphite poles are recommended. Helmets are a personal choice, but certainly should be seriously considered. Your clothing should be lightweight, with a wicking under-layer, There are several companies that make ski suits specifically designed for mogul skiing, including BFA, SMS Clothing, and Fate, a highly recommended company based in Boulder, Colorado. But an outfit for mogul skiing and all mountain everyday sliding should be on the baggier side, free movement. A non-knit hat is wise, to warm, itchy, fog goggles. Baseball hats, well this just isn't baseball. You should be in a helmet with a visor. Finger gloves work best. I have two pair, warmer temps and colder temps. Finger gloves for proper pole technique. Recommended eyewear includes rose, amber, dark, or mirror goggles; sunglasses are not recommended, due to the need for protection from snow spray. This is where I will spend a lot of money. \$150.00 - \$200.00 for goggles is not unheard of, I ski in Spy Optic goggles, from the motor cross world, they produce different models where one lenses works in all light. Mogul skiing is the most physical part of skiing. Look at the weather, what will you be skiing, what will the light be like at the time of the day you are there, and snow conditions, things to consider when drinking your coffee and putting on the uniform of the day.



Moguls Competitive Style

The Sixteen of Bump Skiing

3. The Competitive Format: Pro vs. World Cup

A Pro competition is judged in a duel format (two competitors skiing on side-by-side courses, red & blue), based on Air, Turns, Line, Speed, and Overall Skiing. A World Cup competition is judged in a single format, similar to competitive ice skating, based on Air, Turns, Line, Speed and overall skiing. Speed is judged differently in the two formats – pro format the winner of the duel run gets the speed point, where as in the World Cup format the single judged competitors are skiing against the clock, the fastest time gets the speed point. Both formats have two mandatory jumps, both with six-foot downhill faces and a 40-45 degree take-off ramp, shooting the skiers up to 90 feet down the course. The pro comp has an upper and lower jump; competitors must take both of them. The World Cup course included three jumps of different sizes side by side at both the upper and lower locations on the course, bumpers may choose the size of jump they'd like to take at both top and bottom airs. The length of both Pro and World Cup is 800 feet long, by 10 yards wide.

4. Fuel

Your in-season diet should be based on medium intake of carbohydrates, and high intake of protein. Once again, keep dairy products and starches to a minimum, and eat lots of lean meats, chicken, salads, bright colored fruits and vegetables, in three or more smaller meals. Fluids are even more important now. Drink lots of water and sports drinks like Gatorade, (watch the sugar intake with those same drinks) and limit caffeine and alcohol. Avoid heavily caffeinated drinks. Carrying a camelback while you are skiing is a good option. Every morning or night before you head out to ski, drink as much water as you possibly can. It is amazing how many everyday problems can be linked to not drinking enough water, DRINK!

5. Pre-Bump Considerations

Stretching before skiing, training or competing in any athletic activity is very important. Find a place where you can focus on your stretching. Pick up a book on Yoga & Pilates and use a couple or all of the stretches. Relaxing one's mind is as important as one's body. Focus is probably the #1 component of mogul or all sports for that matter in one's training. Be sure to stretch the quad muscles, calves, hamstrings, lower and upper torso, hands, wrists, neck and shoulders. Awareness of the impact of light and snow conditions is also important to good skiing, training or competition. Check to see whether the light on your run is sunny, cloudy, shadowy, or impacted by snowfall; this will affect your choice of goggle lens and clothing. Make sure the lift you desire is running that day, and it isn't too long or too slow, both can affect your muscles and body temp. Snow conditions may be hard, soft, frozen crud, or power; choose your skis and your attitude accordingly!

6. Mental Focus and Energy

Never underestimate the importance of proper preparation and the power of mental focus. A positive attitude and attunement to the energy of the mountain, the people you are skiing with while skiing bumps or any sport is critical to your performance and those around you. Often, we are influenced by fear and intimidation due to the lack of knowledge, tools, skill, lack of mileage, lack of confidence, our physical strength, and peer pressure. All of these things can be addressed by a good training program (both mental & Physical), acquiring the tools needed through clinics, lessons, coaching (Model someone who knows what you want, why reinvent the wheel) and setting goals and expectations with a positive, can-do attitude. See the Mogul Logic sections of this handbook for more advice on mental preparation. Once you have all the elements of mental focus and energy in line, (being in the present), you may find yourself addicted to bumps, "one good line" and your hooked!



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7. Slope and Lift Selection for Training on Bumps

For mogul training, or any other skiing you might be working on. You will want to choose intermediate to advanced terrain that is medium to steep pitched, fairly wide, and has a single fall line. Good light with minimal shadows on the run is important. The best light on the overall mountain is between 11am and 2:30pm. On your home mountain look for a bump run with natural snow, (not man-made) never groomed, northern exposure, and one that is known for good bumps (ask around). Make sure there is an express lift servicing your run, one that runs everyday and has a short lift line, (more advanced parts of the mountain, bump runs, won't have as many people skiing them) with an approximate riding time of 4-8 minutes. Anything longer may cause you to become chilled and stiff from sweat on the chair, no good! At Copper Mountain, some of the best training bump runs include CDL, Mine Dump, Brenin's, off of the Excelator Lift, Little Burn off of the Timberline Life, and to finish one's day knock out a couple of runs on Far East, Too Much, or Triple Treat off of Alpine Life. For "Skip and Rip, the Resolution lift offer a bounty of sweet steep natural trails, make it happen and turn up the volume!

8. Mogul Etiquette and Safety

Skiing alone is not recommended. The advantages of training in a group are that it's just plain safer and funnier. You can watch one another and give feedback, and you can feed off each other's energy. You can also stage "Bump-offs". Never did it, Bump off next to someone, and watch the energy grow like a weed. It will improve your skiing 2 fold. A group of two or four is best. Now go do it! Remember that as one of the better skiers on the run, you have an increased responsibility for safety. Most skiers and riders on a mogul run will traverse across the run from side to side. Take the time to let these people clear your line. Most people have no clue that your about to ski a straight line through the bumps. (Your the bullet, their the ducks in a shooting gallery). Offer tips when asked, help and give advice to those in need, (and tell them about "Bump Busters"). Follow the "Skier Responsibility Code" at all times and be polite. Never "Buzz The Tower" (skiing to close to other skiers or riders) Be an ambassador for bump skiers.

9. Stance, Balance, Core, and Body Position

Core, Stance: Your core located behind your belly button in the middle of your tummy. We need to keep that spot of your body over your feet and as far forward as between your bottom buckets of your ski boots. To do this gently flex your knees and ankles together then Move your hands and elbows as described below. This will put you in a solid athletic stance. The same stance you'd use for every other sport on the planet, Why then do we sit back while skiing, don't do it! Imagine that your body is a stack of poker chips, push the top few to far forward the entire stack falls over, push a few back, the stack falls backward. The joints of your body sre the poker chips. Your joints must stay stacked by keeping you core centered, if your elbows drop back your whole body drops back, you must own this stance, it is the magic key to skiing the best that you can. Think about other sports, a ready baseball stance ready tennis stance, riding a real Mountain or road bike, ready golf stance, all have the core centered and balanced by keeping the elbows in front of the rib cage.

Hands & Elbows: Think of driving a car, with the dashboard in front of you. Your hands stay at 3:00 & 9:00 on the steering wheel or 14 inches apart, with the elbows bent at 25 degree angles and extended so that the elbows are in front of your rib cage. Your pole straps are cinched tightly on your wrist so that when your make a pole plant the bottom or heel of your hand pushes down on the strap, (insert your hand from under and through the strap, with your hand coming down and over the strap to grip the pole). The pole is held between the thumb and forefinger, using your other three fingers to guide the pole swing. (Do not wrap your entire hand around your poles, it causes one to curl your wrist into the body, then the rebound will be to almost throw one's hand out to the side, moving the shoulder back, putting you in the back seat). Flick the poles directly in front of you with meaning, no limp wrist flipping of the pole. To do this, move the pole by using a firm wrist movement and ankle flex at the same time, keeping the elbows right where they are. Plant (which is only a light touch) the



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poles directly in front of you with meaning, no limp wrist flipping of the pole. To do this, move the pole by using a firm wrist movement and ankle flex at the same time, keeping the elbows right where they are. Plant (which is only a light touch) the pole about a foot from the front of the ski into the oncoming bump. Retract the pole by letting the pole swing directly straight back, no side to side pole plants (don't let the basket of your pole drift past your boot. You're in the back seat if it does, some call it pole drag) If your pole is behind you, you can't use that pole again until you move it all the way forward, Don't drag the pole tip behind you after your turn.

Feet: The beginning of your balance. We see the best mogul skiers with their feet close together. Yes, they are, they've been skiing bumps forever, but to get our ball rolling lets shoot for about 4-6 inches apart. (Are you better balanced with you feet together or more apart. Stand up, put your feet together, have someone push on you from the side, you will fall over. Move your feet apart, try it again, you won't fall. Or try riding a bus standing with your feet together, you'll fall, then move them apart, better). To find your balance, jump up and down (3) times, land, but don't move. Look down at your feet, that's your natural skiing stance, not just for bumps, but everything, period.

Upper & Lower Body Separation: Keep your upper body completely quiet, other than slight arm and wrist movement. The hands and wrist do all the pole work. Remember don't let your elbows drop behind your rib cage. The lower body is where the action is, extending and absorbing to keep the upper body still and quiet. Steer with your feet and knee angulations, pushing down with the toes while lifting the heels (extend) and lifting the toes and pushing down the heels (absorbing). Actually this act will allow you mold to the bump, you want to push down throughout the entire turn and above action. How will water run through the bumps...Flow like water...be the power of water.

Head: You should always be looking ahead of you, look where you want to go, (while driving a car we don't look at the front of the hood, we look down the road or where we want to go) at least 4-8 bumps down the hill. Your head shouldn't move, still, imagine balancing a book on your head while skiing.

10. Creating Your Energy Package

In the your Ski/mogul stance (see above section) with elbows in place, ankles flexed a strong athletic stance, ready for anything. Create a an imaginary circle directly in front of your chest, running down to the top of your thighs, up to the bottom of your chin and out to your hands. This is called the "Energy Package". You have the same Energy package while your driving your car. Focus your attention and energy to the center of this area (the belly button – this is also the center of your stack) to bring the body into a tight, efficient, centered unit, naturally balanced of your skis. Imagine if the energy package was a bowl of water and our goal is not to spill the water in the bowl. If you move your shoulders, arms, head, and most important letting your elbows drop back behind your rib cage allowing your upper body to move fore and aft out of the energy package, the water spills and you are out of balance. To bring everything back into line and balance takes a greater energy expenditure, (that's why we get so tired and out of breath while skiing bumps). Envision reaching for the glove box while driving your car at 75 miles per hour – not an easy task, in fact down right not safe. You are spilling your energy away from a balanced focused energy package, making simply driving down the road tough. Keeping your energy focused directly in front of you like the dashboard of your car, without ever dropping your elbows and taking your hands off the steering wheel, is the key to successful, balanced, efficient, quiet, turns and then your run. Now make it happen!

11. The Mogul

Moguls are made by skiers and riders turning over and over again in the same places. The better the skiers and riders are, the better the bumps will be. So most likely, intermediate runs will most likely have bumps that are all over the place and not in tight lines. More advanced runs will have bumps that are tougher, bigger, and in tighter line, the zipper line. The best bump runs are never groomed and have only natural snow on them, facing to the north without direct sunlight and protected from the wind. The fall-line of your chosen



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Slope should be consistently even with a 15-20 degree pitch. The trail should be at least 60-75 yards wide. Having the option of many Bump lines on a one run opens up harder and easier lines in one area. There are several identifiable shapes of moguls. But there are (4) basic shapes. (1). "The Camels Hump". This is the birth of a bump, when a bump is just starting to form. (2). "The Tear Drop". Mid-life for the mogul. They will look like an up-side-down tear drop. These are the bumps you should be looking for. (3). "The Razor Back". Old grumpy Bumps. Usually elongated with a steep sometimes-icy drop offs on the downhill end. Found when there hasn't been snow for a while on natural runs, and always found on man-made snow runs that have been groomed, and not groomed for a while. Also found on very steep runs where skier and rider's are making their turn very tentative and slow, sliding down the razor back, creating a deeper, steeper drop off on the back-end. Nasty! (4). Then there's the big bad "Trouble Bump" a bump that disrupts the rhyme of your line and can be found anywhere, on any bump run.

The exposure of the bump impacts the snow consistency. A south-facing bump run with direct sun will be icy in the morning and have baked, heavy snow in the afternoon, freezing up again up 3pm. A North-facing bump run will have less direct sun, creating softer, more consistent snow. You'll find the best snow for bumps on slopes that are North-facing, and have trees surrounding the run to filter sun exposure. No matter what bump run you're looking to make home, there will always be a window when that run will ski the best. Know it!

12. The Start Platform

The start platform is as important as one's equipment and abilities. After establishing your line, choose a mogul at the top of that line, with a flat surface where you can stand and relax. On your Start-platform, position yourself in a wedge facing downhill in your line. Now focus, gather your energy, breath, study and memorize your entire line, when ready, attack and own it!

13. The Line

When choosing a bump line, also known as a zipper line, the tighter and straighter is better. You want it to be as consistent as possible, with a single fall line. Each section of the line should roughly be 300-400 feet, is a good length to work on one's bump skiing without fatigue and increased risk of injury.

Speed control is achieved by using the bump to deflect, extend, absorb and mold to the snow allowing your skis to always be on the snow creating more chances to make turns. Imagine catching an egg, You absorb the energy of the egg flying through the air by relaxing your hands. Think of yourself being the hands absorbing the energy of hitting the bump. Also use check turns as a last resort to maintain the line. While looking at your line, how would water run down, over, through, around to mold to the line of bumps you're about to ski? Be that water, flow through the bumps, softly mold to each bump as it comes to you with complete patience throughout the entire run. Finish each turn before moving on to the next turn. Be The Water!

14. The Turn

The Turn is made with everything in the lower body working together. Let's start from the feet on up. (Right now, stand up with your feet (1) foot apart, hands at your side. Now move to your left as if someone called your name to come to him or her. I'll bet you moved your left foot first.) The same is true for skiing. In this day and age we have changed the way we turn. We don't start the turn with the downhill ski, repeat, we do not start the turn with the downhill, we start it with the inside ski, **LEFT SKI TO GO LEFT, RIGHT TO GO RIGHT**. And it does make sense. If we turn and walk without skis on we turn the left foot first to go left, the same for the right to go right. Now without moving from the spot you're standing in right now. Turn your left foot to the left, then turn your right foot to the left, a perfect parallel turn. Now stand try the same turn, but this time



Moguls Competitive Style

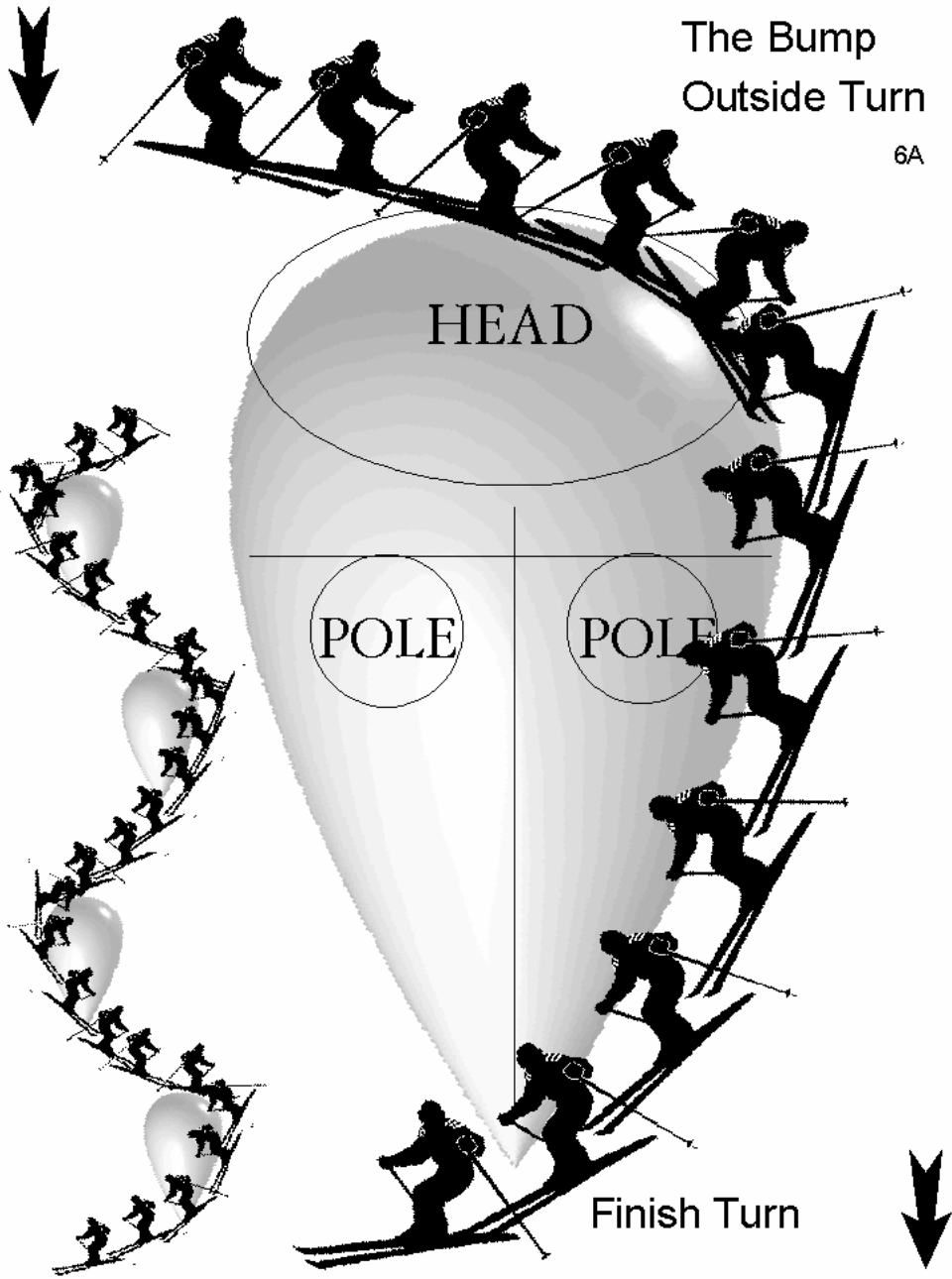
The Sixteen of Bump Skiing

15. Air

When jumping anything, anywhere, you should apply the “Four point Takeoff and Landing”. Your skis at your feet are two points, and your poles slightly touching the snow are the other two points, creating four points. With your entire body in our Mogul stance, your poles should be planted right at the tips of your skis, and your feet should be matched, about six to eight inches apart, maintaining your energy package. On a pro mogul course, there are two jumps with a six foot downhill face. The takeoff ramp is 40 degrees and 12 feet long, The result – 50-80 feet of down the hill airtime. Same goes for smaller jumps or leaping off some crazy huge cliff or rock garden. You have to keep everything tight with your elbows in front of your rib cage. If the elbows drop you drop!

16. Wrap Up

Don't dismiss the benefits of recovery nutrition after a training session of hard bump skiing all day. Drink plenty of water and sports drinks, eat a balanced meal of carbohydrates, fats, protein. Stretch it out, don't think about it, sit down in front of the TV and Stretch out everything, you'll thank yourself when you take a crazy fall and nothing happens other than a goggles filled with snow. Seek-out mogul coaching, ask questions, and come hang-out with the Bump Busters team anytime you want. The following ski area support bump skiing; Mary Jane @ Winter Park, Copper Mountain, Steamboat, Killington, Telluride, Keystone (North Peak), Breckenridge, Squaw Valley. But all mountains have bumps, if there wasn't grooming machines, every run on every hill would be Bumps. It is nice that they groom runs making it easier to get from bump run to another bump run. Be safe, and have a blast!



The Bump
Outside Turn

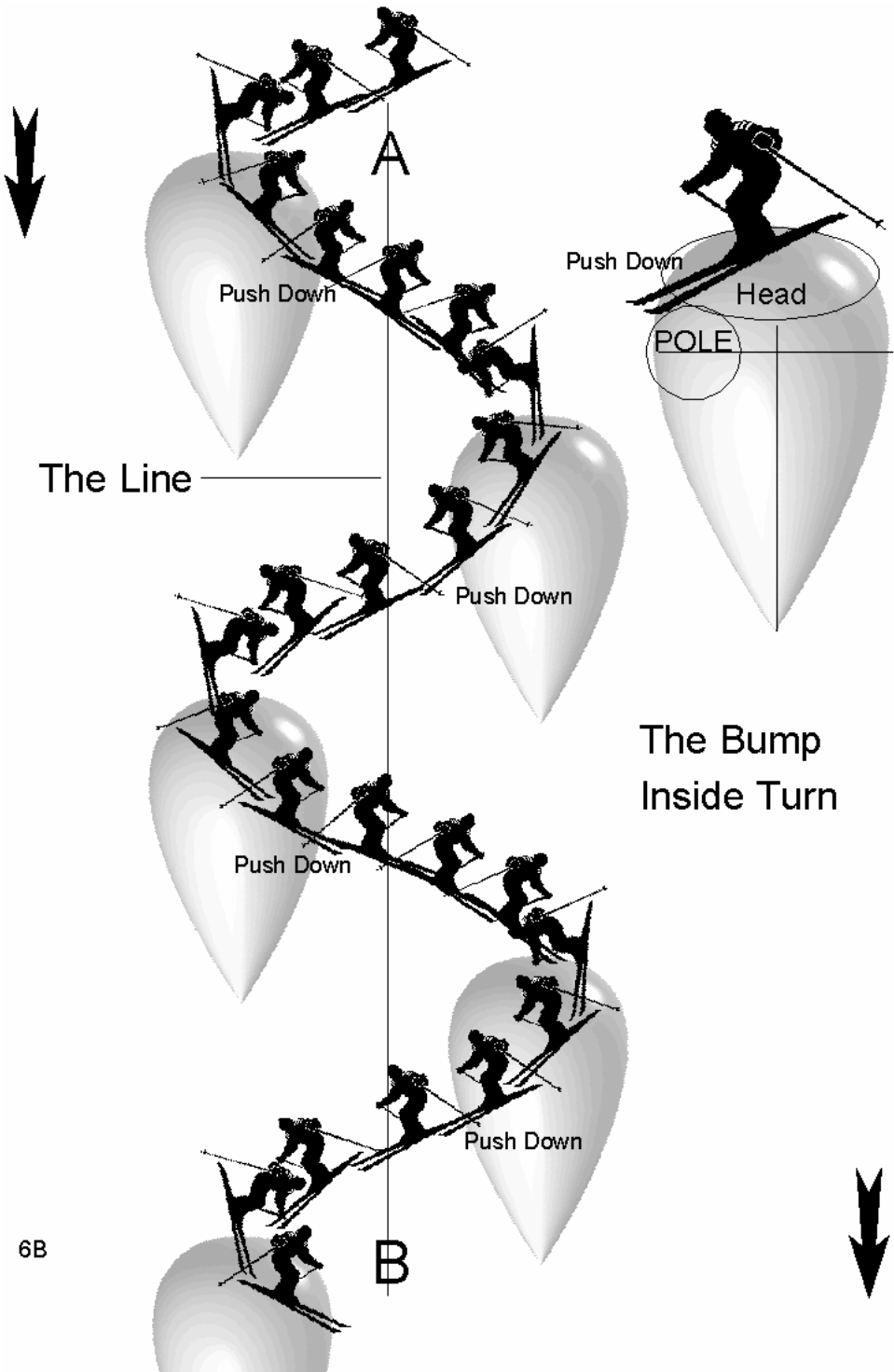
6A

HEAD

POLE

POLE

Finish Turn



BUMP BUSTERS

Zipper Line

Overhead view, looking down

Head up, eyes down line

Absorb

Extend

Hands & chest square

Tip flip

Power turn

Extend

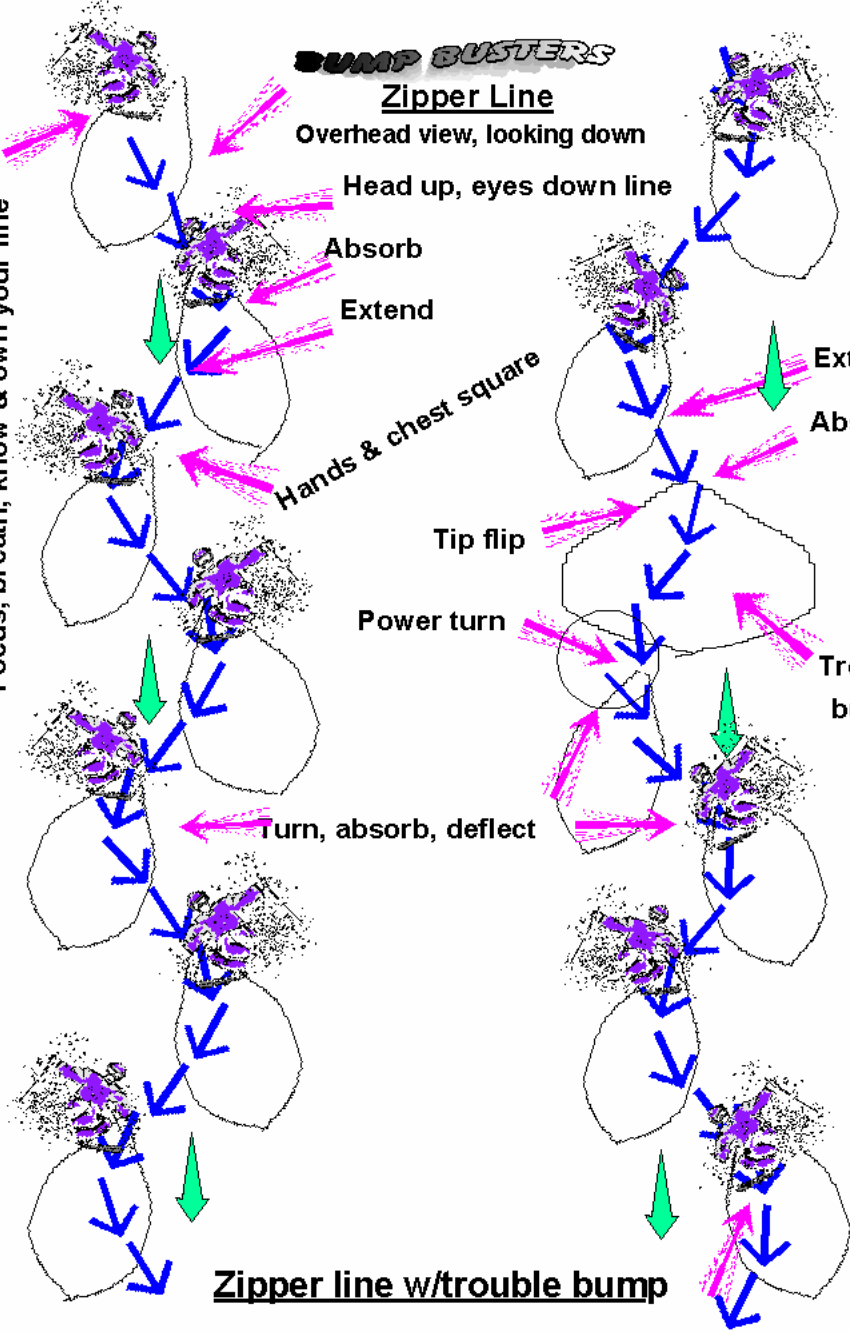
Absorb

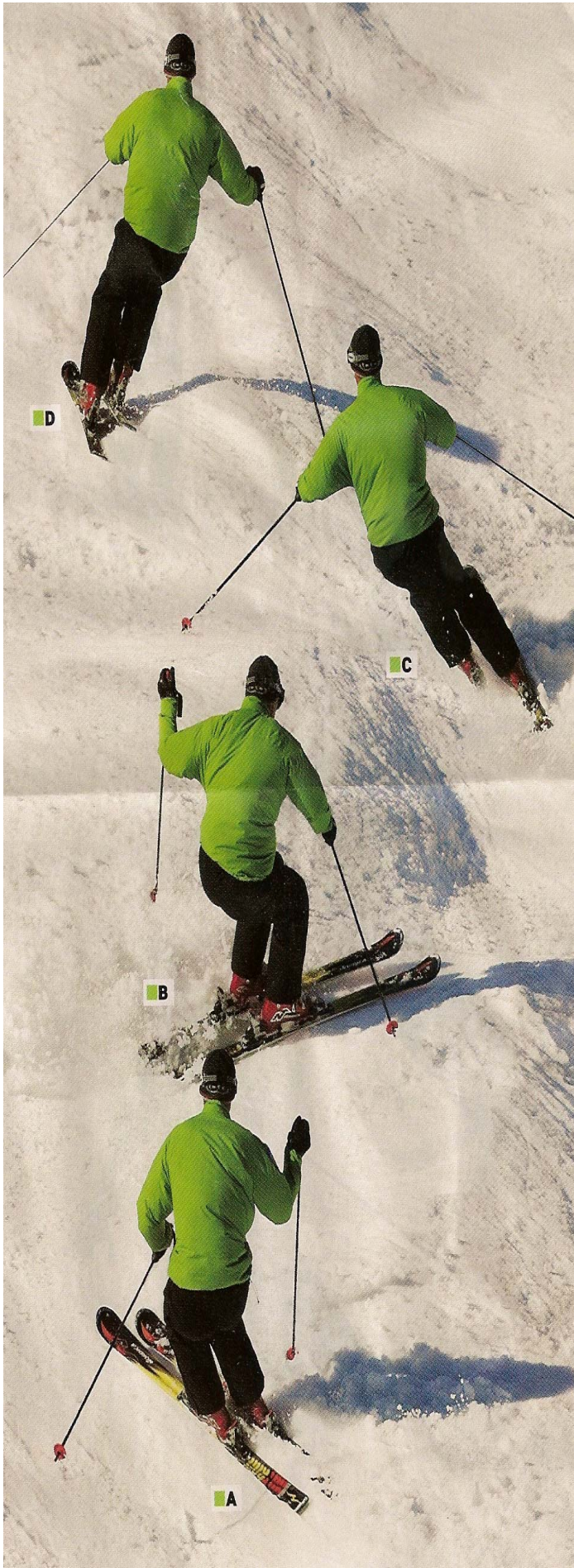
Trouble bump

Turn, absorb, deflect

Focus, breath, know & own your line

Zipper line w/trouble bump





When you first start skiing in small bumps, use a route that takes you over the mogul tops. Now where you can get a gentle lift from a bump is a good spot to plan your pole and pivot your skis. As bumps get bigger though, you must think ahead and plan a line that's flexible. Know where you want to go, but be ready to react and change. One basic approach to a mogul field is to follow the troughs, as if riding a stream flowing between them. This route zigzags back and forth and is called the Zeeper line. Staying in the troughs, you basically ski around moguls on relatively smooth terrain. Keep your hands moving, your skis in front of your feet, and your poles swinging so you can plant them on adjacent bumps. Your stance should stay narrow and your upper body and hips should continue to face downhill as you pivot then edge your skis. The pole plant in this photo keeps the skier's upper body stabilized while his lower body works separately. Ski around the backside of the big bumps, skidding to hold your line in the center of the trough if need be. It's almost almost impossible in bumps to overemphasize the importance of ready hands and early pole swings. If your hands aren't ready, you're not ready. Even in the troughs you'll find yourself lifting your feet a lot and then immediately having the bottom drop out. One moment you may be deeply flexed, the next suddenly extended. While all this is going on, you need to focus on maintaining good balance.



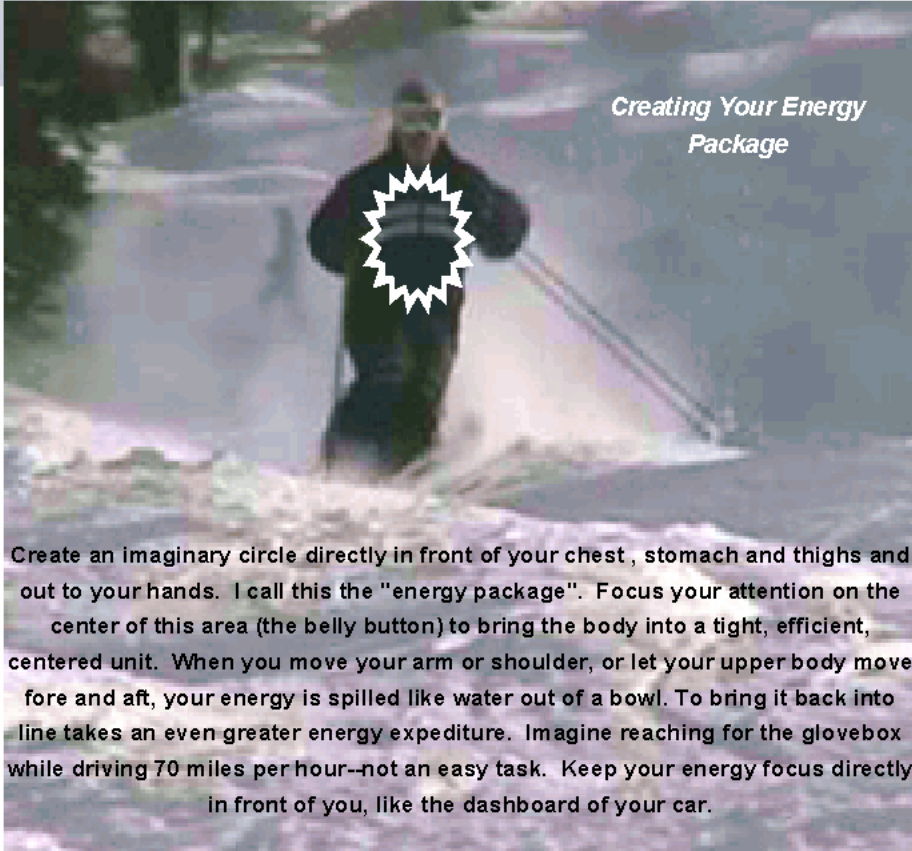
In bumps, think of your hips as part of your upper body. Your upper body and hips should complement all the good things your lower body is doing, not distract from them. Again, keep your movements simple. Keep your head up and scan the terrain ahead. Your hands must be ready. Before you enter a turn, your pole should have already swung forward for your pole plant. Pole plants not only help you time edge changes, they prevent your shoulders from twisting, which would work at odds to what your legs are trying to do. Let your lower and upper body separate. As your feet pivot your skis into a turn, your torso and hips shouldn't follow. If anything, your outside hip should lag behind to keep your skis "all under control." A skier's outside core (the area around and just above your hips) keeps you focused on turning with your lower body. As your knees drive to the left, your shoulders shouldn't tilt that way too. Instead, they should stay roughly level, creating another angle at your waist. To keep your speed down in the bumps, you must complete your turn. FLAT! At the same time, you'll be faced with terrain that's rising and falling constantly. While your lower body works, your eyes, hands and trunk must counterbalance what's happening below. You must be relaxed, yet alert. Here at the bottom of a slowing turn, the terrain dips. The skier calmly absorbs it. In the meantime, the pole starts to swing forward to be planted on the next mogul crest.

BUMP BUSTERS

Energy
Package



**"The Key To
Moguls"**

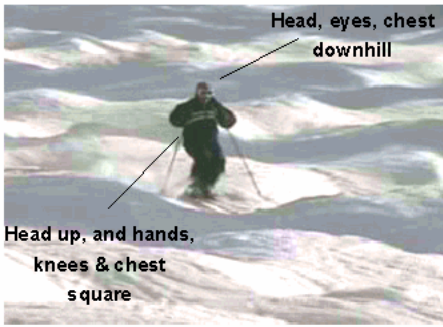


*Creating Your Energy
Package*

Create an imaginary circle directly in front of your chest , stomach and thighs and out to your hands. I call this the "energy package". Focus your attention on the center of this area (the belly button) to bring the body into a tight, efficient, centered unit. When you move your arm or shoulder, or let your upper body move fore and aft, your energy is spilled like water out of a bowl. To bring it back into line takes an even greater energy expenditure. Imagine reaching for the glovebox while driving 70 miles per hour--not an easy task. Keep your energy focus directly in front of you, like the dashboard of your car.

BUMP BUSTERS

Stances



Neutral stance or ready stance



Focus!



Absorbing stance, head of bump



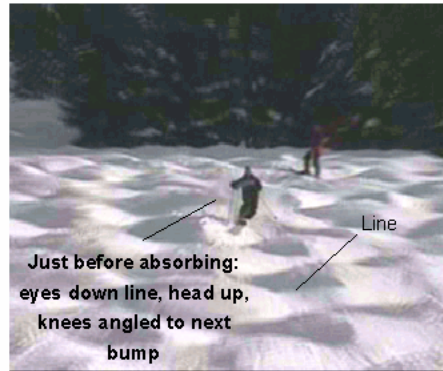
Attack!

Own It!!!



Extended stance, mid-bump

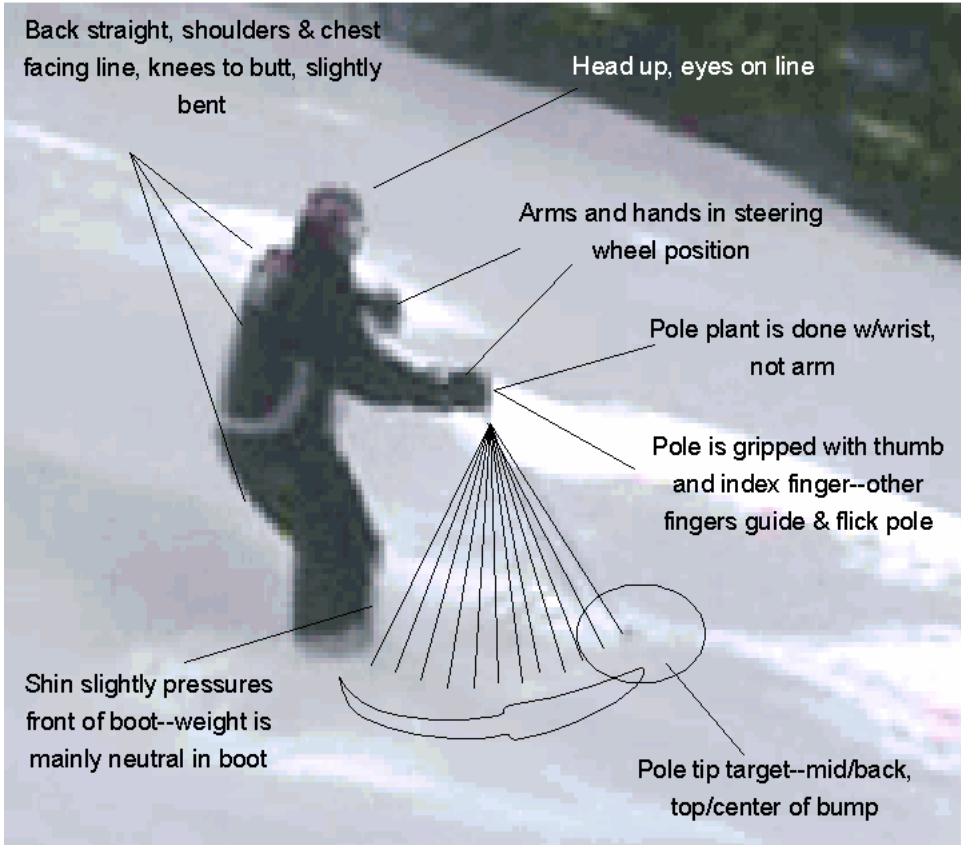
Energy!



Knees in driving angle in turn



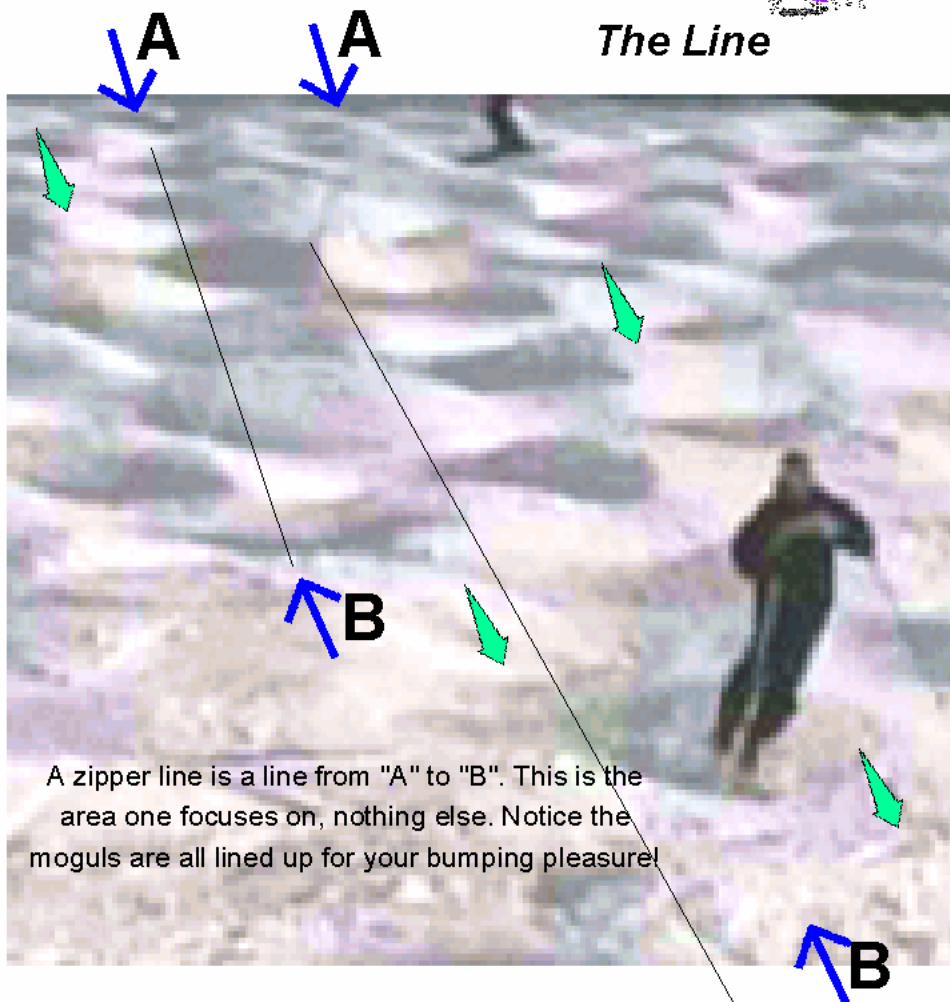
Overview of Arm, Wrist, Hand Position



*Mountains give off a ton of energy, **GET SOME!***



The Line



A zipper line is a line from "A" to "B". This is the area one focuses on, nothing else. Notice the moguls are all lined up for your bumping pleasure!

Focus...be in the present, right now...nothing else in your mind...JUST BUMPS!



The Key!

The Hands...The Wrists...The Hands? Here is the key to all of skiing. Or for that matter almost every sport on the planet, balance you have to be balanced. Try it! In your living room or anywhere warm and comfortable with a flat floor, stand with your feet 6-8 inches apart, hands at your side, arms straight, flex your knees a bit and relax. With your hands and elbows at your side you can gently roll your ankles from side to side, also in the same stance turn your feet from side to side. Turn the left foot first to go left, then turn the right foot first to go right. Now put the two together, roll the ankles and turn the feet at the same time. Not to bad. Now bring your hands up to a relaxed position like you hold your ski poles while skiing. While in your stance start turning your feet and rolling your ankles together as before. Slowly move your elbows backward, doesn't take very long before turning or rolling anything is impossible, welcome to the back seat! The only reason anybody can ski in this position, (in which about 92% of all skiers live in that position, hence being stuck in the intermediate level of their skiing forever) is because there are tails on the skis. Still there is no balance. Now assume the same ski stance as before, start your turning feet and rolling your ankles, drop your elbows back again, out of balance, now start to slowly move your elbows in front of your rib cage, turning and rolling gets real easy. You are balanced and your core is center over your feet. This is the stance in skiing needed to move into the advanced world of skiing, no stance, no balance, no advanced skiing. **YOU MUST OWN THIS STANCE, OWN IT!**

In your skiing stance with elbows in a balanced position. Motion as if you where to use your ski pole to make a turn. Remember your travel at 20-25 miles per hour down the hill. Slowly drop your hand and elbow as if someone was pulling on it from behind you, (Pole drag) until your elbow and hand are behind you. Stop in that position, look at your shoulder of that arm, It will also be back, way back, (#1 reason people have a difficult time in the bumps) back enough to prevent you from making a desired turn in the other direction. (in the time it takes you to regroup from being so far back, your late or missed the bump you wanted to turn on, times that by the whole run, careful you'll end up in the trees) To turn in the other direction we will have to use our upper body, (Rotation) to start the turn, not our feet. Very inefficient way to turn, and not effective in the bumps. (won't work) We must turn our feet first in the bumps, actually in all skiing, period. Drop the elbows, drop the hands, the shoulder drops and you are out of balance, and out of control living in the backseat on the tails of your skis. Get Balanced!

In a balance skiing stance with our elbows in front of the rib cage, with your ski poles in your hands, gently use your hand, wrist and flex your ankles to make a pole touch, not a huge pole plant, (bury the pole to the basket while making your pole plant, Combined with your forward motion going down the hill, it will remain buried until it is pulling or hands, elbows and shoulder back, we're just not quick enough to get it out and forward fast enough, causing us to worry more about a huge pole swing, instead of a nice deliberate pole touch with the basket of the pole not passing the front of our ski boot). We can't maintain our forward, centered, balanced position with the hand, elbow, arm, and shoulder and then the pole dropping behind us, we must create and own the "Energy Package". (See Page 16) This package will keep you centered over your skis and in balance, ready for anything. In this position, nothing moves, not your upper body, not your hips, just your feet which point the knees, which allow you to roll your ankles. The faster you pole with your hand, wrist while flexing the same ankle without the leaving the energy package, the faster your feet will move with each movement of the ski pole.

The Forward Stance

- In front of a full mirror
 - Feet 6-8 inches apart
 - Slightly bend your knees and ankles
 - Extend arms in front with hands in a holding ski pole or driving a car at 3 and 9 o'clock positions
 - Bend the elbows slightly (15-20 degrees) and relax the whole arm without dropping it.
 - Move elbows in front of rib cage
 - Tighten your stomach muscles
 - This is your mogul stance, this is your all mountain skiing stance, you have created the "Energy Package"
- Now, take your package out and RIP IT UP !



Scare Tactics!

The Mind And Fear

Whether you're a kamikaze cliff-hucker, a speed thirsty cruiser, or the hottest bumper on the hill, fear is a factor on the any slope. Ignore it. And you'll face consequences; perhaps falling short of your ski potential or suffering and injury from reckless behavior. But if you learn to use fear to your advantage, you'll ski better and enjoy it more.

If an instructor does delve into a mental realm, the goal shouldn't be to eliminate fear, but rather to teach skiers how to manage it. There's a fine line between fear and thrill. If you take the fear away, you take the thrill away. Fear starts in the mind, but it effect radiate through the body; sudden fear shoots a danger signal to your brain's hypothalamus, which in turn stimulates your adrenal glands to produce epinephrine, norepinephrine and hydrocortisone. These hormones trigger a chain reaction designed to help you survive; your pulse quickens to move more blood, the muscles tense for action, and the mind becomes more attentive. To you body, fear is fear: It responds identically whether you catch a ski-edge, leap out of an airplane or watch a midnight airing of the Shinning by yourself in a remote mountain lodge.

How each person handles fear, however, is different. It can motivate you to act, to run, to fight or even to change your life; a person who seeks out the rush of fear has a thrill-seeking personality, Everyone shows fear under certain circumstances, but the thrill seekers thrill comes from overcoming the fear. Risk-taking is a way of life for them.

On the other end of the spectrum are people overwhelming by irrational fears. Many of them live with an accumulation of little fears that are just paper tigers; they avoid thrills and seek predictability.

Most skiers land somewhere in-between the two extremes. Sometimes they forgo the fun of riskd because of excessive fear. Other times they endanger themselves because they don't heed the messages fear sends. But by following a few basic tips, you can turn fear from foe to friend and learn t "stick the snot out of what scares you."

- 1) **Analyze It:** Does fear cause you to rush or lose your form – or retreat altogether? You first need to understand how fear affects your skiing before you can explore how to deal with it.
- 2) **Take modest steps:** Push your comfort level. Ski terrain that's more challenging each time, but noy so challenging that you might not be able to handle it. If you jump into something really scary and you're way over your head, you'll never want to try it again.
- 3) **Relax:** Take some deep breaths from way down in the gut. It's amazing how this calms you down, and it doesn't take sessions of psychotherapy to know how to do it.
- 4) **Prepare mentally:** talk yourself through what you're about to do. Day, "I've been building up to this moment, I'm in control of my skills, and I want to do this."
- 5) **Focus on what you can control:** Think about the line you're going to take, your stance and your fundamentals; if you do, you'll be more confident.
- 6) **Think positively:** When choosing your line, look where you want to go, not where you might end up. If you think too much about what can go wrong, it's bound to happen.
- 7) **Know your limits:** If your fears are sending loud and clear messages to stop, obey them.
- 8) **Don't fear failure:** Travis Mayer was 19 and new to the U.S. Ski Team when he competed in Salt lake City. In the mogul finals, he saw fellow competitors vomiting from nerves and fear, "I decided I wouldn't care about failure", he said. "You've got to ski for yourself. You can't please everyone, anyway."



Bump Tips

Point Your Knees The Key To Carving Bumps Starts At The Tip

by Shannon Bahrke

With the popularity of terrain parks, you see a lot of skiers with amazing air sense who actually learned how to turn. Most can wiggle their way down mellow bumps, but as soon as the pitch gets steep or the bumps become funny-shaped, they're on their butts. I never learned how to carve until I got on the U.S. Ski Team and my coach, Liz McIntyre, forced me to do it before she would let me ski any more moguls. She taught me that the key to carving was to point my downhill knee toward the tip of the uphill ski. Start by standing on a groomer with your feet slightly wider than shoulder-width apart. Pressure the downhill ski and point your downhill kneecap towards the tip of your uphill ski. Now, try this while making wide, fast turns. This drill exaggerates the change in pressure on your downhill ski and helps you get a feel for both kneecaps pointing towards the uphill ski tip, eventually leading to a clean carve. As you get the hang of it, decrease the length of your turn and the width of your stance to shoulder-wide until you feel comfortable making very short-radius turns. At this point, you'll be ready to transfer your carving abilities to the moguls. By carving in the bumps, you'll be using the power and rebound of the ski, making it easier to move smoothly and energetically down the fall line.

String 'Em Up

by Shannon Bahrke

Even the greatest skiers get hung up in the moguls, when they hit the bumps in a hunched-over, racing position, they absorb the first bump ok, then each one after that puts them farther and farther back on their heels until they blow up. Their problem, like a lot of ex-racers, is that they don't make the adjustment out of their racer mode and into bumper mode. Racers don't need much absorption – they grind their edges in to stay in control. But in the bumps, you release the edge as fast as you engage it. To do that, you have stand up tall and move your feet closer together to allow the quicker edge transfers. The upright position is the only way you can absorb enough to maintain control in the moguls. Before you try this tip on the snow, put a chair about a foot behind your heels and slowly sink down into it. Now spring out of the chair and land straight upright. That's the range of motion your after. As you take that thought into the bumps, imagine you're a puppet being pulled upright by a string connected to the top of your head. As you absorb each mogul and move toward the sitting position, the string pulls you back into the upright position. By constantly returning to that upright position, you will make your hips move fluidly, and your hands come up in front of you. You'll be forced over the front of your skis as you extend down into every trough.

Shannon Bahrke is the 2003 World Mogul Champion and the 2002 Silver Medallist

Target Your Turns During Flat Training, Use A Gun Sight To Increase Power And Control

Erik Schlopy

One of the most common problems skiers have is upper body over-rotation, when your torso turns too far into the hill, causing the tails of your skis to wash out of the arc of the turn. Since the body follows your focal point, you need to train your eyes to always look down the hill at a target by using the following drill. With your hands shoulder-width apart, grab the middle of your poles and hold them vertically in front of you, forming a column or gun sight. Pick a reference point – a tree or lift tower (your target) – straight down the hill and line it up between your poles. As you start making turns down the fall line, keep your hands up with the target centered between your poles. While your lower body still moves freely beneath you, the drill keeps your shoulders from rotating and robbing power from the end of your turn. Learn to lose that upper body twist, and the pressure on your skis remains more constant, which in turn lets you pull more energy out of the ski while boosting control on all terrain and snow types.

Six-Time National GS Champion Erik Schlopy Was A Bronze Medallist In The World Championship In St. Moritz, Switzerland, in 2003



Bump Tips

Box The Bumps

By Travis Cabral

You would never see Joe Louis drop his hands in the 10th round, and there's no reason you should drop your gloves in the bumps either. Boxers are more likely to get pummeled when they lower their paws, and skiers who drop their hands can get in all sorts of trouble – they sit back, lose control of their skis, and open themselves up to injury. Avoid getting knocked down, always remember to move your hips, torso, and arms and elbows up and forward, keeping your core centered and balanced. First, plant your pole farther down the hill than you normally would. Each time you plant, imagine punching your fist like a boxer. At full arm extension (which should coincide with the beginning of the next turn), flick your wrist to plant the pole tip on the backside of the bump. This extended pole plant will move you forward and down the hill, and it will also help you stand up between turns for better absorption. Do it and you'll still be standing when the bell rings.

Advice from Travis Cabral, who is 2003 World Cup Mogul Champion, a six-time World Cup Winner, and the 1999 U.S. National Mogul Champion

Double The Bumps...Skip & Rip!

By Travis Cabral

Most good skiers can arc down the same smooth, expert slopes pros do. But it's a different story when the terrain changes to bumpy crud, or big steep fluffy bumps unevenly spaced. Most skiers freeze up, slam on the brakes, and get tossed, while the pros just get faster and smoother. If speed is your shtick, and fat skis or big shaped skis are the only thing in your closet, then navigating terrain changes at speed means finding crud and huge natural snow bump fields, you can "double", the bumps and "Skip & Rip. By skiing at a much faster rate of speed than what might seem comfortable, use the uphill side of one clump of snow or bump as a launching ramp, clear one or more troughs in the air, also turning as you sore to the landing spot on the downhill side of another bump slightly across the fall line. This will allow you to carry your speed through unpredictable terrain so that you gain control more easily. Looking ahead and down the hill is super important. Identify a couple of bumps – or even just large piles of choppy snow – that will work for your next launching pad, while pressing forward and keeping one's core centered and balanced over the skis so you can stay forward in your boots and gather energy and power from your legs. Head straight into the ramped portion of the bump and spot the downhill side of the one you want to land on. As you rise to the crest, give a little pop with your toes and ankles and float to the backside of the next mound. In order to check your speed and land smoothly, make a slight turn in the air so you land on edge, Skid your skis to dump speed as you slop down the backside of the bump. Once you get this technique down and feel comfortable carrying a lot of speed through chop, bumps, crud, big mountain terrain, think about going even bigger – and tripling.

Spot It Before You Launch It!

By Travis Cabral

Even good mogul skiers show poor technique when they go to launch air. As soon as they get off the ground, they immediately look down to see the mogul they're going to land on. It's even worse than staring at your tips as you ski – in the bumps; looking down pushes your weight forward and makes it difficult to land without going over the handle bars. Instead do a little homework before launching. First, stand on top of the run where your jump (or mogul) is and pick a landing zone. Picture yourself going off your jump and landing the air or trick successfully, then put it out of mind. Next, look straight out from the jump and choose an object you can keep out eyes focused on throughout the air. In competitive mogul skiing, this is often the judges' stand, but it could be a rock on the other side of the valley, a chairlift tower, or any stationary object. As you hit your takeoff, focus on that spot as you pop, extend and perform your trick. Don't take your eyes off the object until your feet are about to hit the ground. This will keep you standing straight and help you improve your balance on the landing.

Bump Basics

U.S. freestyle champ Jeremy Bloom shows the way to mogul mastery

By Liz McIntyre

Photos can't capture the athleticism and speed that Jeremy Bloom brings to mogul skiing. But these images do show us techniques he uses that can be imitated by any bump skier: his feet are underneath the center of his body, his hands are out front and his eyes look well down the line.

1) Bloom keeps his feet beneath him, and looks beyond the bump in front of him. His right pole is positioned so that its basket clears the top of the mogul. He has released his left pole so that his shoulders stay square to the bottom of the hill and his center can move toward the next bump.

2) His feet contact the mogul, and he continues to look down his line. He's patient with the pole plant and lets the bump come to him rather than reaching for it. Bloom keeps his head, chest and hips riding over the bump, rather than collapsing into it.

3) Bloom lets his knees come up, while keeping his chest and head high. He stays forward by maintaining good pressure and ankle flexion.

Homework: "Its difficult to mimic moguls". Train as much as you can, but the only way to get the feel for it is to do it. Do a low-impact pool workout of lateral plyometric jumps. Stand in three feet of water and imitate a mogul stance: hands in front in a level position and head and chest held high. Imagine you're hopping over a 12-inch box and jumping side-to-side, landing on both feet. Be sure to keep your core muscles tight. Try three 30-second intervals. To increase intensity, repeat the exercise on land.





Bump Questions

Q: I have trouble keeping my skis together in the moguls. How can I ski bumps like a pro?

It's a mistake to get too hung up on keeping your feet together in the moguls. Yes, having your skis in close proximity often helps you stay tight and snake your way between the tightest of lines, but you still need to let your feet work independently. Watch pro mogul skiers and you see their knees together. They wear colored kneepads to let judges see their knees are tight. But their feet are slightly separated and working individually. Instead of thinking, "If I put my feet together, everything will work in the bumps, think, "I'll make everything work and my feet will come together". Even with shaped skis, we are still "walking down the hill" changing pressure from one outside ski to the other ski. (Like walking down stairs one foot at time.) Don't try to make two feet function as a single unit. Humans are two-footed and it's difficult to dance – in the moguls or otherwise – with your feet tied together. Perfect your short turns with your feet 6-8 inches apart. Once you have your timing down, start to bring your feet closer together. You'll find that a slightly open stance is quite stable in many bumpy situations.

Q: I stretch before I ski, but my legs always cramp up.

Gentle pre-ski stretching is a good idea, but it's not enough to prevent cramping, injury or other ills. Focus instead on limbering up after you ski, holding stretches for 30-60 seconds. Also try to stretch key muscles throughout the week to stay loose. If that doesn't halt the charley horses, your diet and what and how much you are drinking has something to do with it. Evidence shows that cramps can occur when you're dehydrated or when your electrolytes – minerals such as potassium, calcium, magnesium and sodium that carry electric charges to the muscles to help them expand and contract – are out of whack. One quick hit of electrolytes (such as downing a sports drink) won't solve the problem, though. You need to make a habit of staying hydrated and eating fruits, vegetables and other nutritious fare that'll help keep your electrolyte levels up.



Flow Like Water

How Will Water Run Through The Bumps...Flow Like The Water...Be The Power Of Water

As you approach the top of a bump run, do you feel that intimidating feeling the moguls are radiating. No longer! As soon as you learn how to pick the “Best Line” through the bumps, that cold fear will disappear. In surprisingly short time, you’ll sail through even the most monstrous moguls. But before attempting that first turn. Set yourself up for success by visualizing and choosing the line of least resistance – the path through the bumps that will be least likely to buck you around and throw you off balance. To do this – identify the piles of snow that live on the uphill end of the top of the bump. When looking down hill they will stand out. You can’t see them when looking up hill. It is super easy to see them from a chairlift over the bump run you are skiing. Simply look over your shoulder down at the run, and there they are. Now look at the piles and the troughs of the bumps and imagine seeing a stream of water running down the through the bumps, through the line you are about to ski. Imagine the waters path, flowing gently around the piles and through the trough to the pile to the trough, snaking it’s way through the low points between the bumps, all the way to your next stopping point. That’s the line of least resistance. As you continue to watch that imaginary torrent of water, you notice something else – it never leaves the snow. This is the second secret to successfully maneuvering through a mogul field. To keep connected to the line of least resistance, focus on maintaining ski-snow contact. The more you leave the snow, the more likely you are to hit the high points, jarring yourself and throwing you off balance, Establishing a solid foundation in the bumps starts with understanding where to begin your first turn, what line to follow, and how to follow that line. Learn to pick the line of least resistance by visualizing that steam of water and follow that path memorizing that line and all the bumps (or at least the first 15) in that line. By following the water, you’ll turn yourself from a mogul weenie into a Bump Buster.



Up Close With Travis Cabral

From Ski Magazine

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World Cup Champion Travis Cabral, the world's number-one mogul skier and youngest U.S. mogul champ, gives a winner's-eye look at the Whiteface Mogul course, venue for the 1991 Freestyle World Championships and host of the World Cup events since 1984.

Why do I love the mogul course at Lake Placid? It's definitely one of the top two or three courses in the world, and not just because the hill itself is challenging. The snow conditions are always unpredictable – usually hard, sometimes soft on places, often a combination of the two.

Out of the start, the course is pretty flat, and it can be hard to get your speed up for the first jump. At the same time, you don't want to be going too fast. The table-top landing after the jump is usually hard and icy. The middle section between the jumps is the toughest part of the course. The moguls are tight and uneven because guys are trying to slow down after landing the first jump, and you have to be really quick on your feet through the first five moguls. After the first five moguls, the line starts to even out, but it's a fairly long section before you hit the second jump, so you can't relax. You want to be carrying good speed over the second jump, but again, not too much. There's another table-top landing that's easy to overshoot. That's a challenge at Lake Placid, those table-top landings. Airs are something I've really had to work on. At Lake Placid, I did two 360 maneuvers – a 180 cross 180 on the first jump, and a 180 cross, 180 spread on the second jump. I think I stunned people a little bit. I grew up in California where the Sierra snow is different than the snow in Lake Placid, but I've had no problem adapting. The toughest thing about mogul skiing is keeping your balance, and that's especially true in Lake Placid. If the moguls are hard, you really have to keep your feet under you or you'll lose in a hurry. But I've been mogul skiing I was six, and I've been through a lot of different experiences. Mentally that's made me stronger, and I know what I have to do to win. On a hard and unpredictable course like Lake Placid, skiing in front of U.S. fans who really want an American to win, and with the temperature about minus-30, being tough mentally was a key to my victory last year. I'm hoping to be back on top of the podium when the World Cup comes back to Lake Placid.



Off Season Training...With No Health Club

By Kellee Katagi

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In summer, the last place you want to be is in a health club. We don't blame you. Fortunately, there are plenty of ways to stay fit for skiing that don't involve sets, reps, dumbbells or memberships fees. The following five sports will keep you in shape, outdoors and primed for the first snowfall. Competitors of the sport of mogul skiing will spend a month or so out of the gym, but will combine their favorite summer sports with the health club. Cross-training has a lot to be said for it. Let's get outside!

Inline Skating: Versatility is inline skating's trump card. To boost your aerobic capacity, do a sustained workout at a steady pace. For an anaerobic challenge, try shorter, quicker intervals. Hit the bike path for a cardio and strength workout, or weave around cones in your driveway to sharpen your ski technique. (For skate-to-ski tips and drills, visit skimag.com and type in "perfect parallel") Whatever you choose, expect gains in your balance, coordination and comfort with speed. With bike-path-style-skating, you'll work your quads, hamstrings (which contract to help you balance) and glutes. Also, skating is one of the few aerobic activities that emphasize lateral leg movement, as opposed to ultimately, better balance as you transfer your weight during a ski turn. The more aggressively you skate, the more you'll work your core and upper body muscles, but don't expect great strength gains from the waist up.

What It Works: Abductors, adductors, quads, hamstrings, gluteals, lowerback, abdominals

Insiders Tip: For an enhanced quad workout, pick up speed and drop into a racer's tuck. Hold it for as long as possible – at least 60 seconds if your legs can handle it.

Trail Running: There's no more efficient cardio exercise than running. Take it off-road, and the perks for skiers multiply. A trail-running workout can be either aerobic or anaerobic, and it strengthens the entire lower body – even the smaller stabilizer muscles, which kick in to keep you upright on uneven surfaces. Rugged trails also mean more lateral movement and less chance of repetitive stress injury than with road running, in which every footstrike is the same. Uphill efforts tax your heart and lungs and build strength in your hamstrings, glutes and lower back. Downhill cruises recruit your quads and abdominal to serve as shock absorbers and stabilizers, much as they do in skiing. In fact, downhill running technique mirrors that of skiing: eyes ahead to find your line, quiet upper body, legs making quick adjustments to terrain. Fall in any of those areas, and you may be eating dirt.

What It Works: Quads, hamstrings, gluteals, calves, lower back, abdominals

Insiders Tip: When running up steep hills, try to step with a heel-to-toe motion rather than with just your toe. That will reduce stress on your calf muscles. On down hills, keep your steps light and springy to lesson the beating your joints will take.

Tennis: Like skiing, tennis emphasizes anaerobic fitness. Jumps and sudden direction change build the agility, reflexes and polymetric power you need to navigate a mountain. Bursts of running and an athletic stance strengthen your lower body, while wielding a racket tones your upper body and core muscles. Be careful, though; your torso gets a lot more action in tennis than it should in skiing. Don't carry that extraneous motion back to the slopes.

What It Works: Biceps, triceps, shoulders, upper back, obloquies, gluteals, quadriceps, hamstring, calves

Insiders Tip: Tennis rivals yoga and espionage for the strange positions you can find yourself in. That means flexibility is a must. To ward off injury both on the court and on the hill, maintain a full-body stretching routine throughout the summer.



Swimming... Many people swim because it's easy on the joints. While that's a plus for skiers, the most slope-friendly aspect of swimming is that it tones all major – and many minor – muscle groups. And because it demands a wide range of motion, it can boost flexibility, especially in your neck, shoulders, torso and hips. Swim fast intervals for an anaerobic drill, or keep a steadier pace for an aerobic workout. If you're a novice swimmer, take a lesson to learn the mechanics of a swim stroke. The better your technique, the better your workout will be.

What it Works: Shoulders, chest, triceps, biceps, upperback, lowerback, abdominals, obliques, gluteals, hamstrings, quadriceps, calves – you get the idea.

Insiders Tip: In atypical crawl stroke, about 70 percent of a swimmer's propulsion comes from the upper body. To move the focus to your lower body, grab a kick board and propel yourself solely with your legs. It won't take long to feel the burn.

Mountain Biking... If we had to pick only one cross-training activity, this would be it. It builds a solid aerobic base and taxes your anaerobic system, prepping you for intense efforts such as tight bumps and jump turns on steep slopes. Climbs strengthen your lower body, while downhill (if you don't sit) teach your legs to serve as shock absorbers. Both build muscle endurance. Mountain biking also employs ski techniques such as shifting your weight, maintaining a quiet upper body, adjusting your balance in response to changing terrain, keeping your eyes ahead to select your line and staying relaxed while hurtling downhill at high speeds. Another bonus: once you've flipped over your handlebars, trashed your body and scraped your face over rocks and dirt, wiping out on snow will seem like child's play.

What It Works: Quadriceps, hamstrings, calves, hip flexors and extensors, lower back, abdominals

Insiders Tip: The hamstrings are used in every phase of the pedaling stroke, but the greatest effort usually comes from the quads. Because skiing also emphasizes the quads, your hamstrings and quads may already be out of balance. (How to tell? If the back of your legs burn or cramp during climbs, this likely applies to you) To reduce your chance of injury and to keep from getting farther out of whack, try hamstring bridges. Lie on your back with your knees bent and your feet flat on the floor. Keep your abs tight, and raise your pelvis up toward the ceiling until your body forms a straight line from your knees to your shoulders. Slowly lower your pelvis to about an inch above the ground. Do three sets of 12 reps.

Those Hamstrings

Your instinct to loosen your hamstrings is right on; tight hams can harm your stance, hinder your ability to react to changing terrain and even lead to injury. For a better stretch, check your form. People often round their backs when stretching their hamstrings – which nicely loosens the back, but not necessarily the back of the legs. Instead, lie on your back with your legs flat on the floor. Your lower back should be slightly arched with your hands stacked, palms down, beneath it. Keep your legs straight and slowly lift one leg until you feel a stretch, maintaining light pressure on your hands. Hold for 30 seconds. Start stretching now, and you'll be in fine form come winter.



Instructor's View

People get bounced around in the moguls because they put their feet where they want their skis to go. Instead, think "Tips Go In First". Aim your skis tips where you want your feet to go. Putting your ski tips in the first requires active pressing and reaching with your skis. It will make you feel like you have more time to execute your turns. Leading the way with your skis tips will also make your turns rounder and smoother. At the top of a bump run, think Tips!

Megan Harvey, Aspen

In order to ski bumps well, you have to be able to make good short turns. Since bumps come in a variety of shapes, your short turns have to have a variety of shapes, too. On an intermediate slope, discover how many differently shaped short turns you can make. Then study a bump field and find the rhythm of the bumps with the shape of your turns; you'll transform bump bashing into ballet.

Michael Rogan, Heavenly

When skiing bumps, look ahead, be prepared and anticipate what's coming toward your feet. If there's a big clump of snow, push your feet through and make the bump explode. But keep your skis on the snow. If you have contact, you have control. Push your skis down the bump at the same time you extend your legs, then suck up the new bump by pulling your knees toward your chest. Pole planting will keep your rhythm and help you commit from turn to turn down the bump slope.

Cally Smith, Whistler

Just like in the movie *Crouching Tiger, Hidden Dragon*, poised preparation and engaged abs prepare you for any terrain change. Pilates-based cross-training allows you to ski from your center. Start by organizing your body to stabilize your trunk and disassociate your lower extremities. Use your core – abs, lower back and glutes – to create a strong torso for control and balance. Then use your legs to powerfully support your body. Finally, keep your feet alive, sensing the undulations to maintain fore and aft balance. Conscious breathing, engaged abs, active limbs and quick feet are needed to battle any bump field. You are the tiger, ready to pounce, and the dragon with fiery, active abs ready to handle terrain changes.

Malcolm Ridenour, Northstar

An easy way to negotiate bumps is to use the step turn. When approaching a bump that you don't want to go over. Step around it and finish your turn. While traversing with the outside ski actively tracking across the slope, move the tail of your inside ski up the hill. As you approach the bump, start putting weight on the uphill ski. You should find that when you begin standing on it, the ski will want to move downhill toward the side of the trail. Go with the movement of the ski and allow your weight to move from the outside ski to the inside. By this time, you will have just passed the bump or will find yourself turning over the far shoulder of it. Finish your turn and continue across the trail in search of another bump. Step around them while still moving down the hill and continue on your way.

Andrew Kemmeur, Sugarloaf



Vocabulary Sheet, Key Words

- Absorption** - Letting the knees come up when the skis make contact with the face of the mogul in order to absorb the impact.
- Range** - The distance between absorption and extension.
- Extension** - Extending the legs in the hole after the absorption so the legs can absorb the next mogul.
- Macaroni** - A difficult World Cup technique of countering the force of impact between the lower leg and the mogul with the upper body.
- Purchase** - Ski-to-snow contact on the backside of the mogul.
- Touch** - Absorbing the necessary amount for each mogul; absorbing enough but not getting too deep. Anticipating the depth of the range needed.
- Push-Down** - As you crest the top of the mogul, push your toes and the balls of your feet down, molding to the bump, (another word for extending). By molding to the snow with Push-down, it allows you to turn sooner or whenever you want because your skis are always on the snow.

Dictionary of Technique

Overall-Body

- Position** - Hips and upper body should face downhill. The shoulders, hips and feet should remain stacked over each other when viewed from the side or the front. Joints of the body should align like poker chips stacked perfect.
- Head** - Eyes should look three to 6 moguls ahead at slow speeds, five to 8 moguls ahead for faster speeds. The position of the head should be as if you were balancing a book on you head.
- Shoulders** - The shoulders should stay level with each other and squared to the line you are skiing, and when viewed from the side should not be ahead of or behind the torso.
- Arms** - Arms slightly wider than shoulder-width apart. The hands considerably in front of the torso, as if driving your car in a comfortable position, or without involving pulling on the shoulders and keeping a slight bend in the elbows, as if gently hugging someone. Another way to position the hands and elbows, Drive a car, Then move your elbows slowly in front of you until they are just in front of your rib cage. To get there, don't break or bend at the waist, Flex at the ankles as you move elbows forward, as if the two were connected.
- Hands** - Pole plant is a light touch just on the backside of the mogul with only movement from the wrists. Poles should swing back and forth opposite each other and never remain static. The actual pole swing is from the front of the ski to the boot. The tip of the pole should never pass the boot creating pole drag pulling the arm and shoulder back, moving your entire stance and Core into the backseat.



Vocabulary Sheet

- Torso** - Back should stay straight and perpendicular to the slope. No tilting or leaning with the shoulders from side to side when viewed from the front; it should be a shift with the shoulders over the waist. A slight tightening of the stomach will help keep the entire torso in place. Keep the chest on the target or your line down the hill.
- Hips** - The hips should be over the feet and under the shoulders over the waist.
- Legs** - Absorbing and extending as needed while turning without involving the upper body with a lot of flex in the ankles along with the knees.
- Knees & Ankles** - The knees are on the opposite side of the body with respect to the mogul when contact with the mogul is made, driving to the inside as everything else settles to the outside of the turn. Ankle flex is thought of as connected to the elbow position, moving together, the knees follow their lead.



Vocabulary Key Words

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- Absorption** Letting the Ankles and knees flex with the knees coming up when the skis make contact with the Up-hill face of the mogul in order to absorb the impact.
- Range** The distance between absorption and extension.
- Extension** Extending the legs in the hole after the absorption so the legs can absorb the next mogul.
- Purchase** Ski-to-Snow contact on the backside of the mogul.
- Touch** Absorbing the necessary amount for each mogul; absorbing enough but not getting too deep.
- Overall Body Position**
Hips and upper body should face downhill. The shoulders, hips and feet should remain stacked over each other when viewed from the side or the front. Elbows gentle in front of the rib cage with the hands driving a car, gentle pulling a slight roundness to the back.
- Head** Eyes should look three to five moguls ahead at slow speeds, 6 moguls ahead for faster speeds.
- Shoulders** The shoulders should stay level with each other and when viewed from the side should not be ahead of or behind the torso.
- Arms** Arms slightly wider than shoulder-width apart. The hands are considerably in front of the torso without involving the shoulders, while keeping the elbows in front of the rib-cage slightly bent.
- Hands** Pole plant just on the backside of the mogul with movement only from the wrist and forearm while flex coming from the ankles. Poles should swing back and forth opposite each other never swinging past the boots, while never being static.
- Torso** Back should stay straight and perpendicular to the slope, with the chest pointing and fixed on one's downhill target or line. No Tilting from side to side when viewed from the front; from the side, each joint should be staked one upon the other directly over the feet, relaxed. While a slight tightening of the stomach to round the upper back. All angles of the ankles, knees, calves, thighs, back should be the same.
- Hips** The hips should be over the feet and under the shoulders over the waist.
- Legs** Absorbing and extending as needed while turning the feet and legs without involving the upper body.
- Knees** The knees are on the opposite side of the body with respect to the mogul when contact with the mogul is made, working together with the feet, driving to the inside as everything else settles to the outside of the turn. Creating movement over the mogul while shifting the feet and knees together to the next mogul.
- Lower Legs** When contact with the mogul is made the lower leg is at appropriate angle to the mogul or perpendicular to the side of the mogul.
- Feet** The feet should be patient and not reach for the next mogul, remaining under the hips and the shoulders when viewed from the side and the front. Put one's feet where you want you skis.



Mogul Terms

Basic Body Position for Mogul Skiing

Stack	Basic body alignment with the hips and shoulders stacked slightly over the downhill foot.
Lead Change	When the body is stacked properly over the downhill foot the uphill knee naturally advance forward.
Transitions	The weight shifts gently from downhill ski to downhill ski by using directionally movement, slight turning of the inside foot, and slight lead change of the ski, without up-weighting and down-weighting or popping.
Knee Roll	The ski is put on edge with the knee angle, not the hip angle. This allows the knees and ankles to freely bend up and down.
Weight Shift	The body should be in a non-banked or tilted stance. The shoulders should always stay over the downhill ski, never getting ahead or behind the hips or feet, square to the hill.
Shin Pressure	Shin pressure should be maintained at all times on the front of the boot. The pressure should be not over powering, a more consent pressure through the entire turn.
Non-Braced Stance	To increase sensitivity and free range of motion the body should not be bracing against itself in any way. A relaxed stacked stance into one's boots.
Center of Mass	The center of mass, (Your Core) which is just below and behind your belly button, should always be projected down the hill and over the feet. The key to all good skiing and all sports is understanding that the Core or center of mass is balanced over your feet.
Parallel Shafts	The legs should create parallel shafts under the center of mass with the uphill ski and the downhill ski tracking together. Skis and feet about 4 inches apart.
Opposing Hip Drive	The uphill hip should drive down the fall line. Moving into the turn.
Turn Placement	Turning happens on the top front side of the mogul.
Foot Containment	As the knees bend and absorb the feet pull back underneath the center of mass to keep the body stacked and in balance. Like a pedaling a bike motion.
Soft Focus	Focusing down the fall line without spot fixation. Scan the line like driving a car.
Opposite Hand Drive	The hand that is not planting should be driving down the fall line. Working directly with the up-hill hip that is diving down the hill into the turn.
Light Pole Plants	Pole plants should be used as a timing device. They should not be used for balance. A hard, deep pole plant creates an action, the re-action is the pole jarring backwards moving the hand, elbow, and shoulder away from the next turn, twisting upper body with a result of to much upper body rotation to recover. The light pole plant is a huge device in mogul skiing. It will quiet the entire body, reducing wrongful actions, not as many reactions, creating more focus on rippin' one's line rather than picking yourself up from another fall.



Mogul Terms 2

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- Relaxation** The ankles, knees, hips, upper body, elbows and shoulders should be relaxed and stacked straight down into the boots. Staying relaxed by proper breathing before and during every run allows for reaction to maintain balance.
- Grip** Pole straps should be wrapped around the hand, so the hand is pushing gently against the strap, using the thumb, index and middle fingers to primarily hold the pole grip rather than the whole hand. Using the wrist and a tad of forearm combined with gentle ankle flex in the direction of the downhill ski. Keeping the entire body relaxed and stacked as a unit. Gripping the pole with the entire hand allows the hand to curl the pole into the body, (action) hand recoiling away from the body and not downhill, (reaction). **IMPORTANT STUFF!**
- Flowing focus** The mental focus during a run that enables the mind and body to flow completely in the present, making each turn better than the turn before it. Flowing like water down through the moguls, Creating a picture with your mind like that of a camera, and focus on nothing but the picture you are taking, (your bump line). Not focusing so much on the entire run, but each part of it directly. Amazing parts equal a great whole run.
- Non-Thinking** Letting thoughts go during your bump runs so that you can focus on your skiing.
- Top To Bottom Focus** Visualizing a run from top to bottom, looking at every turn as if you were actually skiing it, while skiing through any mistakes made along the way.
- Paralysis By Analysis** Focus on one point of your skiing during a run, like total focus on flow throughout the entire run.
- Self-Talk Key Words** Use one key word throughout the entire run, like say "Water" during the run you focus on flow.
- Visualization** Learn to visualize your run while standing at the top of your run while breathing and building energy. This can take some practice and patience.
- Trust Your Stuff** Trust yourself to let go of your thoughts when you are at the top of your run and during the run. Do your thinking while you are learning Bumps. Have fun and smile while skiing them.
- Speed Relaxation** The key to going fast is to breathe and relax into the center of mass.
- Center of Mass Moving Through** When absorbing and extending the center of mass should always be moving down the fall line. A-B line to the target.
- Punch** The tips of the skis should push powerfully down the backside of each mogul. The legs extend for the next mogul in an aligned position, using the pedaling of a bike motion while moving the belly button forward.
- Release** The body should be in stacked position when the skis make contact with the face of the mogul so that tension can be released in the legs, allowing the knees to absorb the mogul. Like catching an egg with your hands, you catch the mogul with your legs.



Mogul Terms 3

Touch	If the body is aligned properly the impact will be very light on the face of the mogul, because the knees will be able to absorb the impact. Mogul skiing is not about super power, (it does help) but more about technique.
Tip Touch	The releasing, absorbing process should happen the second the tips make contact with the mogul.
Hip Clearing	The hips and center of mass should always clear the top of the mogul as the tips of the skis punch down (Push-down) the backside of the mogul.
Hip Projection	The hips and center of mass should always be projecting down the fall line. A to B line.
Passive Active	A passive style skier maintains a good body position but looks very relaxed. While an active skier who was able to ski with a lot of knee angle and absorption. An active skier will also keep and pull their feet underneath their center of mass, keeping their core in line in a stacked position.
Anticipation	Setting up the body in a stacked position early in the extension process so the legs are able to release the second the tip makes contact with the mogul.
Pre-Jumping	Pre-jumping the face of a mogul, pumping with heavy contact on the backside of the bump. This is a technique to gain speed in the moguls.
Effective Range	The range of motion used when the knees move up and down. The range can be adjusted according to the size of the moguls and the pitch of the terrain.
Approach	Spot the jump early, and control speed 3 bumps early. The last two moguls before the air are key for setting up balance in a stacked center of mass position. Poles and feet should be in a "4-Point Stance" just before take-off. Landing the air in the same position.
Vision	A loose focus should be kept on the jump on the approach, and a loose focus should be on the landing and the next three bumps after the take-off.
4-Point Take-off	Both poles should touch lightly on top of the jump 4-6 shoulder width placed to the side of the tips of skis. With feet slightly wider and body stacked on take-off. This helps square the body to the fall line and keeps you from launching too far forward.
Blink	A light 4-Point Take-off on the jump so that the hands do not fall behind the center of mass.
Take-Off Extension	The legs should be fully extended on top of the jump.
Shin Pressure	When approaching the transition of the jump the shins should be pressing into the boots with the center of mass stacked over the ball of the foot. Like squeezing a sponge with your shin against your boot tongue, but leave a little bit of water in the sponge.



Mogul Terms 4

- Hips Up** During the take-off extension of the hips should come all the way up into a symmetrical Position.
- Symmetry** When execution the tricks in the air the body should stay in a symmetrical position with the shoulders “T’D” off with the rest of the body.
- Spotting** When approaching the top of the jump the eyes should spot forward over the jump with a loose focus.
- Timing** The take-off extension should be timed to give the maximum lift off the top of the jump.
- Relaxing Into The Center**
When landing in the moguls it is important to relax into the center of mass.
- Big Air Projection** When executing the take-off extension, concentrate on projecting the body up into the air rather than down the hill.
- Arm Box** The arms should form a box in front of the body with the hands in line with the elbows, Also called the “**Energy Package**”
- Square Shoulders** The shoulders should square up to the fall line, keeping the chest pointing directly down the fall line.
- Downhill Shoulder Drive**
The shoulder over the downhill ski should be driving down into the downhill ski.
- Backside Pole Plants**
The basket of the pole should reach for the area just pass the top of the bump on the backside / downhill side of the mogul in front of you.
- Pulling down The Hill**
The pole swing should be early. It is a sensation of being pulled down the fall line with the pole plants.
- Suppression** Pulling down with the shoulders. Setting into the center of mass and stacked.



Relaxation & Visualization

By Chuck Martin & Mogul Logic

Chuck Martin, USSA Mogul Champion, United States World Cup Mogul Skier United States Olympian

This relaxation technique takes time and practice to learn. Take the time to concentrate on one sensation at a time until you can put this whole list of sensations together in one brief moment of concentration. It can take months of daily training to master all of these sensations, but once you have mastered this technique, it can benefit you in three important ways. In all sports.

1. This relaxation technique puts you into an Alpha state of mind, a state in-between consciousness and sleep. While in the Alpha state of mind your visualizations are most effective.
2. Ten minutes of relaxation can energize you more than an hour and half of sleep.
3. You can learn to have control over your moods and sharpen your attention.

Relaxation Technique

- Step 1** Find a quiet place where you will not be disturbed, Lie on your back with your arms at your sides, palms down.
- Step 2** Take at least three deep, diaphragmatic breaths, letting out all the tension in your body.
- Step 3** My relaxation mask is on – relax all the muscles in your face.
- Step 4** My face feels smooth and relaxed.
- Step 5** My arms and legs are limp, warm and heavy.
- Step 6** My chest feels warm and pleasant.
- Step 7** My heartbeat is calm and steady.
- Step 8** My stomach feels soft and warm.
- Step 9** My forehead feels cool.

Now you are in the best state of mind to assimilate your visualization and positive self-talk. You are in control.



The Mental Difference

By Chuck Martin

“It’s Not Just The Best Athletes Who Win...It’s The Best Prepared Athletes Who Win”

Looking at all the great mogul skiers on the Blackcomb glacier during summer camps, you have to ask yourself what makes one of these skiers a champion, because they are all technically awesome.

“The Champion is the skier that can lay down a perfect run during the 30 seconds that count”

Of course, it is important to be in top physical condition to avoid injury and to be #1, but the most important element in your training is a champion attitude.

The Champion’s Training Attitude!

Champions set long-term goals, but they do not dwell on them when they are on the training site. The only way to reach your long-term goals is to set short-term goals along the way. Every morning on the training, we should set goals and objectives for the day. One mogul turn, aerial maneuver, workout, mistake, competition, National Title, World Cup Event, World Championship Title, Olympic medal at a time.

“If your mind is dwelling on the future then you are not concentrating 100% on your training now, in the present, in the moment!”

“Goals are not the end of your training, they are only the beginning of the next step.”

Champions enjoy and experience fully every step on the path toward their goals. They are always applying 100% awareness to their training now, in the present! Each step on the path must be mastered fully before going on to the next. Each step will be mastered with patience, always leading to your future goals. Champions have had many bad days in their careers, but they always look at their mistakes rationally as learning experiences.

“The champion is the skier that trains through his or her mistakes, recognizing them as an event in the learning process, not as a problem!”

“If we did not make mistakes then we would have nothing to learn.”



Knowing Yourself

By Chuck Martin & Mogul Logic

If you watch champions in almost every sport, you will notice that they all have well-learned consistent approaches to their competition performances. Most top athletes have a consistent schedule, starting with their training four days before a competition, right through to the day after the competition. This process is learned over the years of training and competing, and can be different for every athlete. You have to know yourself to know what works best for you.

“We as athletes are addicted to the adrenaline and the anxiety of competition. Champions recognize nervous feelings and anxiety as positive competitive emotions, and use them to compete above and beyond their normal abilities.”

Following is an example of what I do before, during and after a competition:

- What line am I going to take?
- Where will I catch air?
- How will I approach the air bump?
- How Will I land?
- Where will I ski fast and for speed points?
- Where will I have to control my speed?
- Where are the tight lines?
- Where are the spaced out lines for extra turns?

I learn the course and then ski top to bottom runs at about 75% speed level. As soon as I am comfortable with the course I ski two or three runs at 100% speed with full-on air and competition turns. I concentrate on my confidence in my skiing ability knowing that all I can do is ski to the best of my ability. I like to watch the other skiers because I can usually learn something. Even if I have a bad day I leave the course with confidence that I know the course inside and out. The main objective on competition day is to learn the course. Don't burn yourself out. Your training is done; work with the tools that you already possess.

“Do not be intimidated by the other competitors. Watch and learn”



Knowing Yourself

By Chuck Martin & Mogul Logic

Competition Day:

Training in the morning is a time to get used to the current conditions and to adjust my plan if necessary. I will slip the course once, looking at every mogul and air bump, making sure I know the course from top to bottom. Then I ski the course at 75% speed with single or double air. I ski my last few runs at a competition level with full confidence.

“Anything can happen on the competition morning. I have had terrible practice sessions on the day of competition and still won the contest. If you are having problems with the course let it go, relax and get ready for your competition run with full confidence in your abilities.”

Ten Minutes Before My Run:

I close my eyes and visualize my run three times from top to bottom...perfect turns with big air.

Two Competitors Before Me:

I completely clear my mind and concentrate on breathing slowly, The training is behind me and it is time for my body to do what I have trained it to do. I have faith in my training; my body can ski the perfect run without my mind getting in the way.

In The Gate:

I try to keep my mind clear. It is not easy because of the adrenaline pumping through my body. As soon as the starter says “competitor ready,” I let out a deep breath and pump it up! When the starter says “go,” I use all the adrenaline and muscle in my body to push out of the gate and attack the course.

In The Finish Area:

When I ski my best runs, I don't even remember exactly how I skied. My mind and body are completely in sync without any conscious thinking. This does not happen every time I compete, but I have achieved my best results with this state of mind.

The Next Day:

I take some time to relax and think about what I did well and where I made mistakes. I write down my observation of the competition day. With my observations in writing, I can look back at my competitions and work on a consistent approach to competitions in the future. I have learned a lot about myself, what works and what does not.

“Champions look at a bad day of competition rationally as a learning experience.”



Visualizing Competition

By Chuck Martin & Mogul Logic

You can learn how to be a seasoned competitor even if you have not competed very much. Visualization has been an instrumental part of my training over the last 16 years.

- Find a place where you can lie down and relax without being distracted by anyone.
- Close your eyes, take three big breaths and relax your body, moving your concentration slowly from your toes all the way up to your head.
- Visualize yourself at a competition site that you are familiar with. Recall every detail of the starting area – colors, smells, sounds, who is there, who is watching the competition. Let all the familiar competition feels come to you.
- Let yourself feel good; you are the best today, you are completely prepared because you have trained hard. Feel the adrenaline in your body; it is good and natural. Push through the gate with power using the adrenaline to bring you up to the next level. You have skied the perfect run and you have won. Feel how good it is to win, live up the moment of glory when you have competed at your best, all the hard training has paid off and you are number 1.

Positive Self-Talk

Self-Talk is the constant chatter that goes on in our heads all the time. 90% of our self-talk is negative. I can't ski this run, I can't take this air, I can't win this competition, I am not very good at taking tests, I am not a stud with the girls, hunks don't like me.

We actually have to train ourselves to think positively. If we believe we are number 1, than we will do anything in our power to be number 1, and to stay number 1.

Train yourself to think positively in the present tense.

- *I am the best skier on the hill*
- *I can catch perfect air*
- *I am a fast skier*
- *I am good at taking tests*

Start now to think positively in whatever you do. You will be amazed at how much negative self-talk you will discover. If you train yourself now to be a positive thinker, you will be one. Naturally become a positive doer.



Achieving Your Goals

**By Evan Dybvig
1998 U.S. Ski Team, 1998 Olympic Team**

I love mogul skiing! I realized pretty early on that I loved to compete. I mean I really love it. I knew as soon as I started this gig that I wanted to be the best. I wanted to compete at the highest level that I possibly could and that meant the Olympic Games. I was willing to do whatever I had to do to make this happen.

This meant setting my priorities up in such a way that mogul skiing was at the center of my life and all of the other components revolved around this pursuit. In doing this it was necessary for me to make some sacrifices along the way. Whether it was going to summer camp to train while all of my friends were hanging out at the lake trying to get the nerve to talk to girls, or missing out on five months of my regular high school year to attend a boarding school in Killington, I was not only willing but completely fired up about making these decisions, because I knew that these steps would help me to achieve my goals.

I feel that it really simplifies my life and makes it a lot easier to make decisions when I have an ultimate goal. I can look at whatever I'm faced with and ask myself, "How is this going to effect me and the pursuit of my goals?"

If you have decided to make mogul skiing your early life pursuit, you have to be willing to commit yourself to it one hundred percent and make the necessary decisions that will set you on the right path. All along this path you will be encountering all types of setbacks, and what some people consider failures. I think that you only fail when you don't learn anything from any given situation.

The success of a person depends greatly upon how they handle those setbacks and adverse situations. "What happens to you is nowhere near as important as how you react to what happens to you."

Using myself as an example, I was faced with all kinds of adversity when trying to reach my goals, especially in the season leading up to the Olympics. How much more of a setback can you have than not being named to the Olympic team? Yet I still managed to be able to go. Obviously, it wasn't one of my goals to go to the Olympics and have my ski come off in my run, but that is just the type of adversity and setback that I am talking about.

So what have I learned from all this? The fact that it takes even more hard work, dedication, desire, and persistence than I had previously thought, it takes more than just being a good skier and working hard on the hill. It takes working hard to becoming the best in all areas related to skiing and competing. It also takes believing in yourself and having the confidence in yourself that you can do all of those things.

YOU CAN, just go out there and give it everything you've got!



Finland Freestyle Ski Team Training Regimen

One of the Best Mogul Teams on the Planet

Training:

- At least 200 days a year on snow
- Training in the morning and afternoon, two hours each
- In the evening, short game, stretching and weight training.

Training on the hill – Successful Finnish technique:

The Finland skis flats more than you can imagine, because it is easier to concentrate and learn to ski without bumps. The similarities in the technique of the Finnish skiers comes pretty much from flat training and skiing.

- Basic mogul skiing body position
- Turning smoothly by using knee angles to get the skis on their edges, low basic skiing position
- Upper body relaxed and still
- Vision up
- Pole plants by using wrists
- After that, do the same things in the moguls with push-down technique
- For keeping snow contact we are pushing the whole ski straight down in the backsides of the bumps instead of just pushing the ski tips down.
- When learning something new, ski moguls in short sections and focus on one thing at a time
- We are used to skiing icy moguls because of the Northern weather conditions, after that a soft mogul course is fun and easy to ski

Training off the hill (Summer Training): Total of 9 training times per week

- Aerobic training: long distance running, roller blading, interval training
- Getting more power: circuit Training, weight lifting in periods. Basic force period, max force period, quick force period
- Elasticity: Jumping like a mad rabbit
- Velocity: Short track runs (10-100 meters) with reaction starts
- Coordination: Trampoline, roller skating (downhill with poles), skateboarding, gymnastics (good for strength too)
- Flexibility: stretching everyday!

Motivation to ski at the World Cup Level:

- Having a good time, hard times teach to practice and win.
- Success is a result of hard work, everyone of us has a tough mind and a belief in ourselves
- Team Spirit, cheering each other on and competing at the same time, coaching each other, being happy for others success even if you have failed.
- Good feeling, it feels good after you have done well either in training or competition.



Fitness Evolution 1

Getting To The Next Level...Rise Of The Machines

The key to ski strength may be as close as the nearest weight machine. Follow this guide to the best gym equipment for building a brawny ski body.

We've told you before, and most trainers agree: simple tools like exercise balls and balance boards and basic moves like hopping and squats are an important part of any ski workout. They add finesse to your fitness routine and lead the way to better performance on the slopes. But to build a powerful strength and fitness base, you may not need to look any further than the weight and cardio machines that take up most of the real estate at your local gym.

Weight machines isolate muscles for a super-focused workout and are relatively easy to use. Cardio machines prep your heart and lungs for skiing and improve all-around-fitness, on and off the hill. And because most gyms have similar weight and cardio equipment, you can usually perform a simple circuit wherever you go. But not everything at the gym is equally suited to skiers. Here, we can help you navigate the maze of machines and identify those that give you the biggest ski performance boost.

Leg Press: This is a classic for building strong quads and it comes as no surprise that it's a prime part of the U.S. Ski Team workouts. In addition to the standard two-leg push, experts suggest carrying the movement and pace to work a greater range of muscles. Try pushing with two legs and then lowing with one. Other options; push down and up with one leg, and slow the pace with a count of eight up and eight down as many times as possible. Why do it? Strong quads directly translate to strength and stability on the hill. They contribute to form, keeping you forward in your boots and function, helping you steer and brake. But watch out! Be sure that when you adjust the seat, your torso and thighs form a 90 degree angle in the ending position. An angle greater than 90 degrees will stress your knees and increase your chance of injury.

Hamstring Curl: There are two versions of the hamstring curl; horizontal (where you lay face down), and seated. Trainers say both isolate the hamstring equally well. Why do it? Strong hamstrings keep your tibia (shinbone) and femur (thighbone) stable. Without stability, your tibia can shift too far forward, increasing your risk of blowing your ACL. Strong hamstrings also decrease general wear and tear on your knee. Lastly, they help you shape your turns. When you roll and extend into a turn and your leg straightens out, that's when your hamstrings kicks in. But watch out! Make sure the pad sits right where your lower leg meets your ankle on the calf side, or you won't get the proper motion from the machine.

One-Arm Cable Row: This is an excellent move for strengthening your back and, to a lesser degree, your shoulders and biceps. To do it, sit down and grab a handle with your left hand. Extend your left arm forward, then twist back and to the left, pulling your hand toward your rib cage. Then switch sides. Why do it? When you ski, your upper body and skis move independently, and strong back keeps you stable. By twisting, you also strengthen the obloquies and abdominal, which make up your core. But watch out!, To prevent injury, extend your legs but don't lock your knees. Also keep your back straight, and aim for a 90 degree angle between your torso and thighs.

Chest Press: Skiers know they need to work their backs and might forget about the chest, and this machine is the perfect fix. It also strengthens the shoulders and triceps, Why do it? A strong chest is important for good posture, a must for staying upright on the hill. It's also vital for an overall well-toned body, especially if you're strengthening your back. If you work one, you must work the other to help prevent muscle imbalance, which can lead to injury. Shoulders and triceps assist in polling and with pushing yourself up after falling.



Fitness Evolution 2

Getting To The Next Level...Rise Of The Machines

Rowing Machine:

While experts suggest a variety of cardio equipment to stay in top shape for skiing – everything from spin bike to the elliptical trainer to the treadmill – the rowing machine is particularly favored as a low-impact, full body workout. Why do it? Cardio is essential for working out at altitude, where the air is thinner and your heart and lungs have to put out more effort to keep you moving. The rowing machine is a good choice because it targets so many parts of the body. You drive through your hips, knees and ankles and finish the row with your arms; it also strengthens your back. But watch out! Rowing machines injuries are rare, but to be safe, don't arch your back.

What About Free Weights:

If you're looking to isolate a certain muscle – the hamstring, for example – using a machine is an ideal option. But if you want to work more muscles simultaneously – the key to staying strong over the long term, according to experts – free weights strengthen your whole core. Free weights can also work your muscles more completely by allowing a larger range of motion. (With most machines you're locked into a specific, simple movement, such as straight up and down). Trainers say this more complete movement is a great way to work out because it's comparable to how we move on the hill and throughout our daily lives.

Free weights also improve balance, a crucial component for staying strong and upright on the slopes. You have to use balance every time you pick up a weight. But there are drawbacks to free-weights. Because they're more complicated to use than machines, you need more training to learn proper form. It's also easier to get hurt with free weights, and when you use them you usually need a spotter. For the best-rounded workouts, incorporate both free weights and machines into your weekly routine. The two are complementary and, used together, can keep you primed for the slopes.

Get Solid To The Core, Tighten Up Your Energy Package!

The core is often the most neglected muscle group of the body. What's worse, building it up requires more than simply hopping on a fitness machine. Your torso muscles are most challenged in movements where they have to balance and keep the body upright – often while the upper and lower body are reacting independently of each other. Unlike bench presses or curls, which work one or two muscles in isolation, core-strengthening exercises recruit your legs, back, hips, and upper body all at once to simulate what your body is actually doing while skiing. A core prescription includes drills for skiing's three basic planes of motion. Forward bending and straightening, sideways bending and straightening, and twisting combinations of the two. The thick necks in the gym might look at you funny, but these exercises will improve your skiing a lot faster than knocking out hundreds of single-planed crunches and plan old sit-ups. Once you've warmed up for at least 10-20 minutes, approach the core workout itself as a three-part assignment: sideways movements, twisting exercises, and fore and aft work. If you only have time to do three exercises, do one from each group. While performing each exercise, suck in and tighten your abs to bolster your spine. Be sure to bend from the hip rather than the gut when doing forward-bending movements and lead with your pelvis rather than with your shoulders in rotational movements. Because it's harder to overwork the core than it is your quads, you can hammer the area more often with higher reps than you can other larger muscle groups – three sets of 20, four days a week, all years long.

When you hit the gym for the first time, trying to figure out which weight to start with can be the most intimidating factor. The key? Start with a light weight, and work up to where you burn out after each set of 20 reps. When the burn dissipates, notch it up in three to five pounds intervals.



Fitness Evolution 3

Group 1: Rotational Plane Movements

- 1) **Rotational and Diagonal High-Low Cable Pull:** Start with a cable pull in the highest position. Stand in a squat stance with your body at a 90 degree angle to the cable. Grab the handle to your upper right with stiff arms and two hands, pulling it down like you're chopping wood toward your left knee. Your shoulders should end up pointing forward. Slowly releasing the cable to the starting position and repeat for three sets of 20 reps. Switch sides.
- 2) **Rotational and Diagonal Low-High Cable Pull:** Start with the cable pull in the lowest position (at the floor). Stand in a squat stance with your body at a 90 degree angle to the cable. Grab the handle to your lower right with stiff arms and two hands, pulling it up like you're starting a golf swing. Bring the cable down slowly and repeat for three sets of 20 reps. Switch Sides.
- 3) **Hanging Hip Rotations:** Hand from a chi-up bar or use a dip station. Bring thighs up to a parallel, rotate legs to the right with the body facing forward, slowly twist to the other side, then drop slowly. Repeat for three sets of 20.
- 4) **Lateral Cable Pulls:** With a cable pull at your right side at waist height. Turn your upper body to face the cable while keeping your feet planted and knees slightly bent. Grab the cable pull with your left arm, keeping it slightly bent at the elbow. Pull the cable across you lower chest, twisting 180 degrees to the left. Bring the cable back to the right slowly and repeat for three sets of 20 reps. Switch sides.

Group 2 Lateral (Side To Side) Plane Movements

- 1) **Dumbbell Side Bends On Balance Board:** Standing on a balance or Bongo Board, hold a single dumbbell (start with 10 pounds) in your right hand. While balancing in the middle of the board, lean down the right side to mid-thigh and return slowly upward. Repeat for three sets of 20, then switch to the left side.
- 2) **Side Raises On The Swiss Ball:** Start with your right hip on the Swiss ball, feet laying sideways on the ground, and arms folded over the chest. Bend at the side, slowly lowering your ear to the ground in a controlled fashion, then bring yourself back up so your body is straight. Repeat for three sets of 20 reps, then switch to the left side.

Group 3 Sagittal (Front To Back) Plane Movement:

- 1) **Good Mornings:** Keeping a flat lower back and using an un-weighted bar resting on your shoulders, bend forward at the hip to 90 degrees with knees slightly bent. Return to a standing position. Can be done kneeling or standing on a Swiss ball for a more advanced workout. Repeat for three sets of 20 reps, then switch to the left side.
- 2) **Swiss Ball Back Extensions:** With the front of your hips resting on a Swiss Ball, keep your feet close together on the ground with a slight bend in your knees. Slowly raise your upper body from a relaxed position (face down close to the floor) to where your lower body and torso form a straight line. Slowly release and come back to starting position. Repeat for three sets of 20 reps.
- 3) **Medicine Ball Sit Up:** Lying on your back with your knees bent and your feet against a wall, hold a three to five-pound medicine ball over your head with both hands. Do a basic sit-up, and while in the upright position, throe the ball against the wall and catch it on the rebound. Slowly lower to starting position. For extra credit, hold the medicine ball above your head and hi nge sideways at your waist while you sit up. Keep your lower back straight, drop the ball down to the ground beside you, and catch it. Repeat for three sets of 20 reps.



Karpy's Workout For Bumps

This is also a wonderful workout in general all year long.

Before starting any workout session, complete a full stretching routine, incorporate some Yoga.

Lower Body

- A 1-2 mile run is nice outside (inside use treadmill).
- Sit-ups on Crunch Floor Machine (Done 6 times between other exercises)
- (2) Pilates Core exercises (The Hundred) (The Knee Kick Sit-up) (Done with sit-up 6 times between other exercises)
- 20-30 minutes of bike machine
- Sit-ups, Pilates
- 20-30 minutes of stairmaster
- Sit-ups, Pilates
- 25 minutes of inclined treadmill, running
- Sit-ups, Pilates
- Leg Extensions Low weight, High Reps (3) sets, burn till toast
- Leg Extensions, One leg at a time (2) sets, burn till toast
- Leg Press, Same as above.
- Leg Curls, Same as above
- Calve raises, as many as possible, then do more
- Squats with low weight, high reps, (3) sets or till toast
- Sit-ups, Pilates

Upper Body

- On Pulley Machine with low weight, really high reps, (3) sets, then one set of 10 with more weight.
- Upright Rows
- Standing Pull-downs
- Seated Pull downs, Front then back
- Standing one-arm curls with top pulley, lower pulley across body
- Standard curls using straight bar
- Sit-ups, Pilates

After: A bit of light stretching, time in Sauna, Steam Room

Time is usually the problem for getting these workouts in. I try to spend at least 4-5 days in the gym. This is a solid strength, endurance, Core and muscle twitch workout. When I skied competitively this was my workout combined with more strength-based exercises.



Attitude is more important than the facts. It is more important than the past, than education, than money, than circumstances, than what other people think, or say, or do. It is more important than appearance, giftedness or skill. It will make or break a country, a relationship, a company, a church, a home.

The remarkable thing is that we have a choice every day about the attitude we will embrace. We cannot change our past. We cannot change the fact that people will act a certain way. We cannot change the inevitable. The only thing we can do is play on the one string we have, and that is our ATTITUDE.

Life is 10% how you make it and 90% of how you take it, and so it is you...that must be in charge of your ATTITUDE.

In everything you do in life...you have one shot, every year, month, week, day, hour, minute and with each breath, one shot to make that moment the best it can be with energy and passion. Don't waste it. Make that moment the absolute best it could be, perfect!

Flow Like The Water, Be The Power Of Water!



Do not burn yourself out. Be a reluctant enthusiast...a part time crusader, a half-hearted fanatic. Save the other half of yourselves and you live for pleasure and adventure. It is not enough to fight for the land; it is even more important to enjoy it. While you can. While it is still there. So get out there and ski, ride, bike, hike, boat, sail and mess around with your friends, ramble out yonder and explore the forests, encounter the grizz, climb the mountains, bag the peaks, complete a desired task, read more books, run rivers, breathe deep of that yet sweet lucid air, sit quietly for a while and contemplate the precious stillness, that lovely, mysterious and awesome space. Enjoy yourselves, keep your brain in your head and your head firmly attached to the body, the body active and alive. Center your life around your recreation...not your work.

Find Your Line...Flow Like The Water...Mold Like The Water...The Power Of Water...Be The Water

How Does Your Water Flow?