

“Why am I slow?”



by Richard Rokos
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“Why am I slow?” This is one of most frequent question alpine racers ask coaches. It is also source of athletes frustration and parents concern. Skiers wear the same outer wear, have a same skis, make the same move on snow, train equally hard, have a same coach, pay the same fee and yet they got stuck in 60 point range for a years or display slower progress to their goals than the rest of peers. The reason could be very individual from skier to skier and in large degree is related to age, body strength composition and somatotype. For junior skiers the strength development could vary from year to year due to growing process.

There are a number of factors involving tactical and technical aspects of the skiing and each has been studied, analyzed and presented to the athletes. The line, transition, pressure, timing, inclination, stance, center of the mass, stiffness of the boots and skis, cant, bevel, wax, etc. All above has to be examined and handled individually. Some tasks for young skiers have been handled by coaches or parents (waxing, tuning) and would later become athlete responsibility unless expert technician will take over on elite level. At some point the individual would reach the physical maturity and should be at the “baseline”. It is the “check point” and confrontation with the peers of the same age. First year of FIS age would be one of those because selection criteria to USST, College, WUG or Championships will be based on the point profile. First four years of FIS competition would be critical to determine next four or more. For parents it is also the time to ask “how is my investments doing?” and sometime even tougher question “is it a right sport

for my kid?" Is my kid on the right track after 10+ years of racing and what is the chance to advance to the senior level?

The twenty first birthday is deadline for D1 college enrollment. Some individuals can be "talented and lucky" to make the ski team or into college sooner, others push it all the way to critical point. It can pay off and late bloomers are not an exception.

Alpine skiing is one of most diverse sports combining strength, agility, speed, balance and mental qualities. Having two runs sometime 3 hours apart and 5 months of competition season and you have to add endurance to the equation.

Before carving became the "rule" the strength was not as critical. Modern skiing however became strenuous sport. In fact the strength is a key element and here comes the question.

"How does the alpine ski racer handle the forces?"

The Giant Slalom turn would serve the best to explore the question. Desired scenario is a clean turn on firm surface executed over radius as listed radius of the given ski. It will be a most efficient and fastest possible turn. This type of turn would also require racer to handle a biggest forces. To measure such a force is very difficult task and a number of methods were employed with more or less success. The closest we can get is to say the ideal turn can generate $G2+$ force. Strength and weakness is a common term for many forms of physical and mental quality. In sport the strength refers mostly to ability to master the task. In skiing it is ability to resist the combined forces of gravity, centrifugal force and body mass.

The last one is combination "power and weight" which enables to handle the body a most efficient way in space and time. Light frame and strong engine is a #1 rule for any speed sports. The ratio is critical to success.

The bottom line is; the fastest skier is the one who handles the force better and most efficient way. It is a mater of strength and technical skills. Lack of strength and technique would force skier to compromise the radius thus get slower. Excessive strength without a fine juggling the center of mass would have the same result. Skill without strength would have a equal outcome.

Skiers are developing technically but are compromising the speed because they are not strong enough. We all are familiar with the picture of the GS gate after the race where the line leading to apex is fairly identical and on exit from the turn spreads in to broad spectrum.

Somewhere in that spectrum is the ideal line. Sharp and firm. Few skiers over-estimated the entry to the next turn and got too high most likely coming that way from previous turn in already slower speed.

Most of them however could not resist the force in the end of the turn and got pushed out of the line, lost the edge and skid the turn or had to open the radius to lessen the force. That is where the speed has been compromised.

Being efficient requires clean execution of turn with dynamic body being still able to absorb the bumps. For experts:); imagine 450cc dirt bike and Harley Davidson on rough twisted road. In the race we can see a whole range of executions. From a stiff static stance on both legs to the ability to handle all forces on a dynamic single leg. The last is not necessary a standard situation but good to have it in arsenal because it wins the race.

Somewhere in that lower end of strength is also a question of how much is ACL exposed to injury? Statistically the number of ACL injuries increases toward the end of season. Plausible explanation: technique exceeded the strength and fatigue of long season became a factor. Even if Fall dry-land training includes a good portion of strength the ratio changes in the season for variety of reasons. In most cases the gate training takes over all other elements and in the Spring technique is on highest level while strength on lowest.

At the time racers are peaking technically they experience decline of the strength. Races, travel, and simple fact that all training is on snow pushes the strength training to lower priority. The summer on snow is widely seen as a “must” and parents are convinced that it is a good investment. However there is no substitute for strength training!!! It needs to be consistent and year around.

A quality summer strength program can accelerate technical development in first weeks of fall on-snow training far more than going through the motion after spending the summer in Southern Hemisphere.

There is also a mental factor to be in consideration. “Load and rest” is a fundamental principle of any training and should apply to both physical and mental aspects of the training. To take a break from skiing helps to reboot the system and adjusts for a better focus in needed time. It is a time to catch-up with the strength. This could be also an answer to the original question.

Richard Rokos is the head ski coach at the University of Colorado Boulder. Now in his 28th season as the University of Colorado’s head coach and his 31st overall at the school, you can’t think of one without the other, not to mention that the combination has been synonymous with success. Twenty-seven seasons, eight national championships, 42 individual champions and 220 All-Americans later, he has turned CU into the premier ski program in the nation.

Richard, 67, is the 11th and longest tenured head coach in CU ski history, has guided Colorado to eight NCAA titles, claiming the crowns in 1991, 1995, 1998, 1999, 2006, 2011, 2013 and 2015. In addition, his Buffaloes have won individual titles (42 total) in 18 different years.

In 2006 Richard was selected as the Coach of the Year in the state of Colorado by the Sportswomen of Colorado Hall of Fame. In 2013, he was inducted into the Colorado Ski & Snowboard Hall of Fame for his accomplishments in his two-plus decades as CU’s head coach.

Rokos was born May 25, 1950 in Brno, Czechoslovakia. He and his wife, the former Helena Konecny, and then-18-month-old daughter Linda, left a communist-bound native homeland in 1980 for Austria where they spent a year preparing their visas, and defected from Czechoslovakia to the United States (Detroit) a year later before calling Colorado their permanent home beginning in 1982. He and Helena are the parents of two grown children Linda, now an alpine ski coach and Thomas, and one grandchild, Stella, who is also an avid skier.