Ankle flex, Ankle flex, Ankle flex!!!

"Flex your ankles" is probably something which a coach has shouted at you during a training session, but what if you can't?
There are a number of things which can affect the ability of the skier to flex their ankle in their boots, some of these are related to the boot others are related to the athlete themselves, below are some of the common problems and how a good boot fitter can resolve them for you and help propel your skiing to a new level

- **Boot just too stiff**..... It happens all too often, the skier asks for or is sold a boot which is too stiff for their body weight and /or skill level to allow good ankle flexion. The solution lies with the boot fitter and judicious use of snips and a grinder, it is fairly simple to make a boot softer by cutting material from the shell in various places, this is a very permanent adjustment and should only be done if you know what you are doing or by a trained fitter. Cutting a "V" slot in the back of the boot is not the answer as it reduces the rebound from the shell, neither is removing stiffening bolts form the back of the shell, although doing this is ok as a test, if you want to soften the shell then the only real option is to do the job properly which involves dismantling the shell and cutting the relevant points, it is fairly easy to get a 150 flex boot down to below 120 flex.
- **Boot too BIG**.... simply having a boot which is too big [more than 25mm behind the heel with toes touching the front of the shell, without liner] is reason enough for the skier to not be able to flex the boot as expected, the wrongly positioned foot does not allow the shin to contact the tongue of the boot properly causing a point of pressure and the inability to bend the boot, the solution is really as simple as getting a boot the correct size and shape for the foot.
- **Size matters**..... calf size that is, modern ski race boots have, on average a forward lean angle of between 14 and 17 degrees, these boots are designed to fill the needs of a particular person in design terms and then sold to the masses. Based on a 14degree forward lean boot the optimum circumference for the leg at the top of the boot is between 355mm and 380mm [13"-14"] for every 25mm increase or decrease of that size the skier is positioned approximately 9mm forward or backward of where they should be. With the large calf muscle the skier is held too far forward, often runs out of available range of motion in the ankle joint and therefore cannot make the boot move, the solution here is to make the boot a little more upright, this can be achieved in a few ways but the most effective is to flare the cuff backwards to allow pressure to come off the calf and allow the skier to open the ankle joint and start flexing from a slightly more upright position. For the skinny calf the opposite happens, the skiers centre of mass is back of where it should be and the cuff of the boot gets over tightened to compensate, this firstly makes the boot stiffer physically and secondly means there is slop between the leg in the liner and the shell, in this case the addition of spoiler plates between the shell and the back of the liner can make a dramatic difference to the way the boot functions.
- **Just haven't got it**..... if you have a lack of available ankle joint range of motion either caused by tight calf muscles or bony blockage within the ankle joint then flexing the boot without some kind of mechanical intervention just is not going to happen, the angles inside a ski boot are such that you generally have to stand with the ankle flexed, if you run out of motion before you have applied enough pressure to the ski the bodies compensation is to allow the heel to lift and the foot to rotate outwards, this can cause pressure on the little toe side of the foot and rubbing at the heel causing bony spurs to form on the back of the heel... the solution is again a simple one, the addition of a small [or large if required] heel lift into the shell of the boot can rectify the problem instantly. A stretching plan should also be implemented if the problem is caused by a tight muscle group, as the problem will only get worse with time if nothing is done about it.

These are just 4 things that can affect the way you apply pressure to the ski and make you slower than you should be. All of the fixes are pretty simple but the skill is in knowing what has to be done, having your feet and boots assessed by a qualified fitter after discussion with your coach could be the missing link in achieving your personal goals.

Ski fast.

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