***Bobby Orr and the cheetah got it right: athletic development must incorporate sprinting, jumping, wrestling, tumbling … including random obstacles and decisions.***

***In other words … play.***

***Summary***

# *Summary: move your body in random, unpredictable ways ... PLAY*

***Children and adolescents are not small adults.*** *They cannot and should not try to train the same way college athletes do. Yet is common to fit this round peg into a square hole – athletic (neurological) development vs strength, strength, and more strength. The college strength model is not wrong, but inadequate for its stated purpose, because it fails to address the range and speed of skating strides.*

***The goal during these formative years is to develop a broad base of explosive, reactive, athleticism, built to respond seamlessly to unpredictable challenges during competition.***

*College strength programs prioritize heavy weight training, which features: (1) slow movement of the athlete's body, (2) deceleration in the last half of the lift, (3) movement of a barbell restricted to one plane, (4) arms locked into place holding the bar, (5) neglecting skating range of motion ARX, (6) lacking unpredictable, random challenges to the CNS which characterize Hockey. Not wrong, just inadequate.*

*This strength model may be productive at times in a college setting, if it is done safely, under supervision of the strength coach. Even at that level, it should be combined creatively with highly dynamic, skating specific, explosive movement of the athlete's body, not just movement of a barbell.*

*At younger ages, where heavy weight training is not as productive or safe, the stimulus for strength development should come from explosive activities like sprinting, jumping, and Overspeed skating at 100% effort. These activities are not emphasized nearly enough. During a set of repeated squat jumps, the peak forces can reach 4-to-8 times body weight. So this is a viable exercise for building strength.*

*But strength is simply one element of athletic development. The object is to combine all the elements to produce synergy, like training an Orchestra to be much more than the sum of its individual parts.*

*In other words, turn weight rooms into speed gyms. Develop athletes – not specialists in one piece of the puzzle – not necessarily the strongest, the fastest, or most agile. Develop athletes who combine these elements efficiently at the appropriate moments when competition dictates the need.*

*Endurance must also be redefined and removed from the academic laboratory, where six decades of research has produced very few functional answers for Hockey.*

*Anatoli Tarasov used a simple, but comprehensive definition of qualities needed to win: speed of hands, feet, and mind. Therefore, endurance training must focus on maintaining quick hands, feet, and mind.*

***Instead, for decades, we have dutifully attempted to separate each piece of an ivory tower endurance definition - aerobic, anaerobic, lactic, alactic, metabolic training. As if these pieces could ever be separated in real life, much less during a hockey game.***

***Whenever possible, developmental training for young players should combine, not isolate the various pieces of athleticism.***

***Beyond that, training should include elements of uncertainty: like unstable footing, because ice is as unstable as any playing surface in sports. Add dynamic balance and core stability during explosive movement with unpredictable, random challenges that promote greater reactivity and diverse neural development.***

***Given that long list, and adding creative, instantaneous, read react decisions, it becomes impossible to challenge the CNS adequately with overly-defined drills. Therefore, the best of all training is chaotic, unpredictable PLAY. Science indicates that diverse sports participation during childhood accelerates motor learning later during adolescence when training for hockey skills and athleticism is more focused. Then neuroplasticity is actually seen as anatomical changes in the nervous system.***

***We need more play in youth hockey - scrimmages without scoreboards and face offs. Hockey is learned by trial and error, but errors and creativity are discouraged when the priority is to win. Coaches must be as patient in games as outside on the pond. Let Hockey, itself be the teacher.***

***Herb Brooks summarized it this way: "Return the game to the kids."***

***My favorite poem is inscribed into the sidewalk of a neighborhood elementary school. It offers realistic advice for educators, and it places the development of hands-feet-mind where it is most effective – in the random experiences of PLAY… where trial-and-error and creative playmaking are not limited by adults.***

*I don't know enough about balance*
*to tell you how to do it ...*

*I think, though,*
*it's in the trying and letting go.*



*– Cardiac*