Developing the Energy Systems Needed to "Accel" in Hockey

Hockey is a sport full of intense battling actions from the drop of the puck to the final buzzer. Games are won or lost with effort. Out working your opponent usually equates to more wins. Explosive feet, quick transitions, and full out open ice breakaways, are all high intensity game requisites. Average people expect hockey players to be fit with great aerobic conditioning, but having good endurance only gives players a foundation for the execution of game skills. High intensity or anaerobic energy production fuels the power play, the penalty kill, big hits, and races for loose pucks. Hockey is an anaerobic sport, and the ones able to go all out for 45-60 seconds are the ones who excel.

When intense efforts are required, your anaerobic fuel tank is activated immediately but depletes quickly. To improve the performance of this high-pace energy supply, players need to train regularly using intense anaerobic conditioning. Over the season continuing to perform high tempo skills and drills extends the time that large amounts of energy can be produced quickly and reduces the time it takes a player to recover between each intense effort. Pushing the limits of this energy system translates directly to on ice performance.

High intensity anaerobic conditioning is most often structured as repeated sprint intervals. In-season, players who work hard on every drill can get anaerobic conditioning within practices through repeat sprint drills and stop-start actions. Players can also supplement the in-season multi-directional on-ice demands with bike intervals rather than risking overuse injury by adding more skating or sprinting.

An excellent starting place is to challenge players to complete 6 x 30 second hard on ice sprints with about 1:30 minutes of moderate skating between sprints (a 1:3 work to rest ratio). Each week more sprints can be added to continue to challenge energy production and performance, until a total of 12 sprints are completed. Next progressively reduce the rest between each sprint until players are resting 30 sec after 30 sec of work (1:1 work to rest ratio). If coaches note a significant drop in sprinting speed or technique, more rest should be added until players are successful for all 12 repeats. Continue with this progression until players can complete 60 second sprints (with 60 seconds of rest) with good mechanics. Off ice conditioning uses the same progression where high tempo hurdle drills (shown here) challenge athletes to push the limits of energy production. This strategy should peak just before playoffs so that players are well prepared to handle longer shifts while maintaining high intense efforts.

Remember, in hockey, every skill must be performed explosively to remain competitive. Fakes, dekes, shifting gears, absorbing body contact, being knocked off the puck, falling – getting back up, shooting, back checking, retaining strong positioning all require this same energy system for best results. All of these situations cost more energy than most coaches and parents appreciate. The best players who excel at all aspects of their game build a strong base of endurance then push the boundaries of pain and effort to expand high intensity energy reserves to best express their hockey skills in every shift.

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