In raising a canine from a puppy to an adult dog consideration should to be given to the anatomical developmental period. There is awareness and thought given to the emotional and psychological periods of canine development. Consideration of the anatomical aspects of a growing puppy are equally important and merit conscientious attention.

It is widely believed that a tired puppy is a good puppy! While a tired puppy may be good for the owner, it is not always good for the puppy. Allowing either a pup or adult to reach the point of being tired due to excess exercise can have detrimental affects on their anatomy causing injury, particularly to a growing puppy. Occasionally a pup or adult dog may react just the opposite to excessive exercise than what is expected. (A correlation might be a runner's high.) Dogs can become hyperactive and unmanageable! The concept that puppies need to be given a lot of exercise does not take into consideration the dangers of undue physical stress on immature joints, muscles, ligaments and tendons.

Many joint disorders of the canine, such as hip and elbow dysplasia have a genetic component and are termed polygenic. But, some disorders are latent with what is called a genetic predisposition meaning that the potential is there but with careful management of the critical growth period the disease may not develop. Dogs are genetically predisposed to osteochondrosis, but environmental factors may influence how this disease is manifested. Some disorders, regardless of the animal's physical management, will be overtly manifested. In large breed dogs the typical age at which the bones' growth plates have closed is 14 months; they close in small breeds are 10 months. The growth plates are the locations in each bone where new bone forms. Damage to the growth plates can result in serious limb abnormalities. How a pup is physically managed through this early growth stage will, in many instances, have an affect on whether or not these disorders actually develop.

World renown expert on canine fitness, Chris Zink, VMD, PhD states in her book Peak Performance: Coaching the Canine Athlete: "Puppies have an increased risk of injury due to their relative lack of coordination, because their bones are immature and softer than those of adult dogs, and because their muscles are not yet fully developed...... Even after a year of age, young dogs should not be worked strenuously until their muscles have been developed by a program of increasing exercise of a period of several months." She also recommends that there be no forced exercise before six months. In other words, pups can run and play but not be taken on long walks and hikes. Dogs between six and fourteen months can safely do strength training exercise but not endurance.
Strength training exercise is appropriate for an immature puppy body. (Weight lifting is the classical strength exercise for a human.) When a dog does strength training, it is his body that is the weight he moves. Exercises where he moves over short distances are strength training exercises. Therefore, a pup gains strength by moving his own body weight at his own speed. He seeks his own level of exercise. Pups benefit from strength training activities such as fetching, swimming short distances, playing with other pups, chasing games and most other activities a pup normally does. For those who must take their pups for walks, the European dog community has what I consider to be an excellent rule of thumb for young puppies - five minutes of normal walking for each month a pup is old. So, a two month old pup could be walked for ten minutes. This will gradually and safely contribute to age appropriate endurance.

Endurance exercises are those in which a dog makes repetitive movements over a period of time. Long controlled walks, jogging with an owner or running next to a bicycle are endurance exercises. It is important to note that dogs should not be exercised on hard surfaces such as concrete and asphalt. Humans have special shoes designed to absorb the impact of their weight when exercising on hard surfaces, canines do not! Running and hard playing on sand often contributes to injury of the cruciate ligaments. **Encouraging serious endurance exercise is not in the anatomical best interests of a dog under 14 months of age.**

Canine of all ages benefit from exercise. It is the amount and kind of exercise given at the appropriate age level of anatomical development which is of significance in maintaining a healthy, physically fit and sound dog. It is helpful to compare a growing pup to a child. A six month old pup is commensurate in age to a seven year old human. Would you ask that child to run a 10K race or lift weights? Common sense must guide you!
Off on the Right Paw....Puppy Fitness Basics

Puppies, not unlike toddlers, benefit on numerous levels from daily exercise. Regular exercise activities will create a happier dog and also reduce bothersome behaviors like digging, hyperactivity, destructive chewing, etc. Understanding the basics of proper puppy fitness and physical training is essential, not only to help your puppy develop properly, but also to reduce risk of injury.

By: Dr. Jennifer Hennessey, Certified Veterinary Journalist

Regardless if your puppy is a family pet or a future athlete, you must take into consideration your dog's size, breed and age when selecting between play activities and rigorous exercise. Exercise activities can be categorized as either self-paced or forced exercise. Examples of forced exercise include leashed jogging, excessive frisbee or ball play, and long walks. Puppies should not experience forced exercise until
over 6 months of age. Puppy fitness at this early age should be completed at their own pace such as running freely with the option to sit or rest when needed. Your little friend has boundless energy and can easily overwork his young body and joints. Developing an age appropriate exercise plan will allow for a safe and smart way to develop your puppy’s inner athlete without risking joint/bone stress.

**Age-Appropriate Puppercise**

*If less than 6 months of age:*
*Start with a consistent routine of obedience training and short duration, non-forced exercise*
*Rule of thumb on training at this age: exercise for 5 minutes per month of age twice daily (i.e. 20 minutes/session for a 4 month old pup)*
*Obedience work at this age will set the foundation for a better future relationship between you and your pet*

**Puppies 6+ months of age:**
*Initiate strength training such as learning to shake or wave a forepaw, sitting up to beg, standing on hind limbs and balancing, running off-leash and tugging*
*Typical strength training exercises can be completed in small spaces, such as in your living room, and strengthen forelimbs, back/core body, and rear leg muscles*

**Puppies 14+ months of age:**
*Now that the growth plates have closed, start endurance training and high impact exercise including jumping and running*
*If your pet is neutered or spayed, it is recommended to wait until 20 months of age due to delayed growth plate closure. Experiencing too much rigorous exercise before growth plates close can lead to long-term joint/bone issues*

**Fitness Fun!**

Time spent training your puppy is rewarding and strengthens that special bond between you and your pet. Motivation to work with your pet will come easy when you consider your pet’s fitness activities as
part of game time. Most importantly, remember to always use positive re-enforcement techniques when working with your furry friend.

Safety First!

Remember to seek advice from your pet's veterinarian about overall fitness abilities and appropriate activities. Avoid overtraining your little friend with the same routine to prevent boredom and improve overall muscle development. Keep in mind when working with your pet that hard, hot pavement or loose unstable surfaces may result in injury. As a puppy parent, your job is to look after your pup's best interest as you would for a child. Restrict exercise immediately after eating and regulate exercise by allowing or enforcing resting times. Dogs that overplay or work during hot, humid conditions are susceptible to heatstroke therefore be aware of the weather before starting outdoor activities.

Raising a puppy is an exciting and unique experience. Exercise and physical training will create a happy and healthy pet thus providing a win-win for the whole family.

Dr. Hennessey has been granted the Seal of Approval and the credentials of Certified Veterinary Journalist from the American Society of Veterinary Journalists.