

Faera

R h o n d a H o v a n

Hovan Slow Grow Plan, 2023

The goal of this Plan is to produce a slow and steady rate of growth for Golden Retrievers puppies between the ages of birth and 12 months. The purpose of the slowed growth rate is to support healthy development of bones and joints, because rapid growth and overweight have been linked to a greater incidence and severity of orthopedic disease such as hip and elbow dysplasia, and panosteitis. Faster growing pups are also more likely to sustain soft tissue injuries during play or exercise. Additionally, there is compelling evidence that heavier pups and adults may be at increased risk for developing cancer later in life, and may have a significantly decreased lifespan as compared to trim puppies.

A slowed rate of growth will at first cause pups to be shorter and less physically developed than faster growing pups of the same age. However, adult height and body development will not be permanently altered, and these pups will eventually reach their full genetic potential. They do this by growing more slowly, but for a longer period of time, than faster growing pups. That is, the growth curve will be more gradual and even (See Slow Grow Graph, p 5), avoiding the steep, unnatural acceleration that is produced by overfeeding.

The rate of growth is directly related to calorie intake. Culturally, many owners have been conditioned to believe that nutrient and calorie dense foods are beneficial to puppies. But in fact, these can be harmful for large-breed dogs because they are often in opposition to the manner in which Nature intended young canines to eat and grow. Thousands of years of evolution have designed dogs with an optimal growth rate that is slow and steady, and an ideal body composition that is lean and muscular. Wild wolf pups are not roly-poly sedentary youngsters, and the common misconception that a plump pup is healthy and robust turns Nature upside down!

Conformation (show) prospect pups are particularly at risk for over-nutrition, because their owners are often in a hurry for them to develop the bone, head, coat, and stature of mature, competitive dogs. And it is true that overfed pups will be ahead of their fit and trim counterparts in those attributes – but only temporarily. These differences will disappear with maturity, but the potential damage to the health of rapidly growing puppies remains.

To effectively maintain a normal, healthy growth rate, the pup must be quite lean and fit. Since most of us are accustomed to seeing pups that are growing too rapidly, these trim pups may appear extreme to many people. And in fact, the perception of “thin” varies from one person to another. Therefore, this Plan includes specific weight and exercise guidelines that have proven successful (eg, Champions in the show ring, and strong record of normal hip and elbow certifications) through many generations of Goldens. While following these guidelines will not eliminate all chance of developing orthopedic disease (note that risk may be increased by spaying/neutering under 12 months old), it will support the pup in becoming the healthiest adult that his genetic potential permits.

It's important to follow these guidelines closely, because **excess food is first used for growth**. That is, even if a pup is getting too much food, he may not immediately appear overweight – he will simply grow faster. By the time a pup actually looks or feels “chunky,” he is already growing too rapidly. Weigh-ins 1-2 times per week will help ensure that minor deviations from the Target Weights are corrected promptly. Breeders recommending this Plan to their puppy buyers may find increased

buyer compliance if they require weights to be recorded on the veterinarian's chart during each puppy visit as a condition of a sales contract or guarantee.

Target Weights: Birth to 10 weeks

| Age | Weight | Age | Weight |
|-------|--------|--------|---------|
| Birth | 1 lb | 5 wks | 6 lbs |
| 1 wk | 2 lbs | 6 wks | 7 lbs |
| 2 wks | 3 lbs | 7 wks | 8 lbs |
| 3 wks | 4 lbs | 8 wks | 9.5 lbs |
| 4 wks | 5 lbs | 10 wks | 12 lbs |

Monitor weights regularly from birth to five weeks, rotating pups as necessary to approximate a gain of one pound per week. Don't be alarmed if the gain is slightly less, particularly in large litters. Try to maintain equal size between all pups, within about 4 ounces. This is extremely important to accuracy when making comparisons between pups within a litter for the purposes of selecting show and performance prospects, because heavier puppies generally appear: 1) to have more head, bone, and coat; 2) less coordinated when gaiting; and 3) to have less drive and energy, as compared to lighter-weight puppies. If gain begins to exceed one pound per week, take mom away for several hours periodically; after two weeks old, she can even be away overnight if necessary.

Wean at approximately 4-5 weeks old directly onto a good quality food **labeled specifically for large breed puppies**. There are many good options, but due to a possible association with a potentially serious heart disease (dilated cardiomyopathy) – particularly in Golden Retrievers – it is recommended to avoid: grain-free foods; foods with exotic meats (eg kangaroo, duck, buffalo, etc); foods with legumes (eg, beans, peas, lentils, etc) as primary ingredients; and small “boutique” manufacturers.

A rotational method of feeding is recommended for both puppies and adults, which starts by choosing 3-5 different brands made by large companies. (Large companies are preferred because they have the resources to conduct feeding trials and to support health research that is published in scientific journals, whereas smaller companies do not.) Then as each bag is emptied, select the next from among a rotation of those 3-5 brands, or even occasionally adding in something new.

Advantages of rotational feeding: 1) prevents relying solely on any one brand to supply all nutrients; 2) helps to avoid long-term exposure to possible risks from accidental food contamination or untested formulations; 3) may help to increase diversity and balance in the gastrointestinal microbiome (complex microbial community in the gut), which is associated with overall good health and healthy immune function; and 4) with a diverse GI microbiome, dogs typically can switch easily from one food to another (just as people do) without needing to slowly mix in a new food.

Some brands or lines to consider include Purina Pro Plan, Eukanuba, Science Diet, Royal Canin, Hills, and Pedigree. In addition, selecting several different common, well-tested, protein sources such as chicken, fish, lamb, and beef may also introduce more variety to the diet. All of these brands offer a large-breed puppy food, as well as numerous adult formulations.

Feed two to three times per day, either dry or adding nothing but water. The needs of each puppy will vary with activity level, so it's impossible to recommend a precise amount, but approximately 1/2 cup (dry measure) **per day**, per pup is a good starting point (Not per meal!) This will gradually increase to about 3/4 cup **per day**, per pup by eight weeks. It's often necessary to feed several pups separately or in pairs, since there are usually some that will tend to get more or less than their share from a common feeding bowl. **Please note that it's always more important to feed to manage each individual pup's weight gain, rather than to try to schedule a certain specific amount of food. Therefore, it's vital to weigh each puppy at least 1-2 times per week and adjust each puppy's amount up or down as necessary to meet Target Weights.**

As with nursing puppies, it's valuable to accuracy in puppy evaluation and selection, to keep weights among the puppies equal within about 4 ounces. When there are weight differences, relative puppy size/weight between littermates is primarily related to the amount of food each is eating. Therefore, size is generally not useful to include among selection criteria because bigger puppies may end up as smaller adults, and vice versa.

Continue to feed as above, but cut back to two meals per day at eight weeks. As before, the optimal amount of food may vary due to differences among puppies. Do not add any vitamin or mineral supplements, such as vitamin C or calcium, but fish oil supplements that are predominately composed of omega-3 fatty acids may benefit brain development, and can be added at a rate of about 1 gram (1000 mg) per puppy.

Target Weights: 12-20 weeks

| Age | Weight |
|---------|------------|
| 12 wks. | 15-16 lbs. |
| 14 wks | 18-19 lbs. |
| 16 wks. | 22-23 lbs. |
| 18 wks. | 25-26 lbs |
| 20 wks. | 28-30 lbs. |

Notice that the Target Weights above jump two weeks at a time, and the recommended weight gain during each period is about three-to-four pounds. This divides into approximately 1.5-2.0 lbs per week—don't let the pup gain it all the first week! **Weigh the puppy 1-2 times per week, then adjust food amount up or down as necessary to keep weight gain steady and on Target.**

Of course, there may be minor variations from these charts without upsetting the Plan, but keep in mind that sometimes just a few pounds can represent a large percentage. For example, at the 12-week Target Weight of 15 lbs., a three-pound increase to 18 lbs would actually be 20%. So while three pounds may not sound like a lot, 20% would certainly be significant enough to accelerate the growth rate.

Over 20 Weeks

Once the pup has reached 20 weeks old, his growth rate will have been slowed for the most critical periods of his development. A general guideline from there is that a 12 months old puppy should

weigh approximately 85-90% of its anticipated healthy adult weight. Thus, an average size female should weigh about 50-54 lbs at one year old (based on a 60 lb adult), and an average size male should weigh about 60-63 lbs on his first birthday (based on a 70 lb adult). Therefore, during the next 32 weeks, males should gain about 34 lbs, which is close to 1 lb per week. Females should gain about 25 lbs over those 32 wks, which is approximately 3/4 lb per week. Continue to record the puppy's weight monthly on the Graph on p 5, adjusting the amount of food up or down to ensure that weight gain matches the slow and steady growth curve.

Of course, it will take some time for growth to catch up completely as compared to fast-grow puppies. Slow Grow puppies may even appear slightly undersize as they reach the 6-9-month Puppy Class, but should be within lower limits shortly thereafter, usually by approximately seven-to-eight months old. And their growth will continue until they reach their normal genetic potential.

The puppy will not grow much in height after about 12 months old (unless he/she has been neutered under 12 months), but body maturity and broadening between 12-24 months old will support several more pounds gained during that period, as illustrated on the Graph.

Exercise Recommendations

Exercise is a vital component of the Slow Grow Plan. An active puppy can eat more food, and thus will be more assured of getting enough nutrients. Furthermore, his muscle-to-fat ratio will be more favorable, reinforcing the desired goal of a slowed rate of growth. And stronger muscles will support bones and joints, which, combined with greater coordination, will help protect him from injury.

Free-walking is a suitable exercise for dogs of any age, because it permits them to choose their own pace and level of exertion. Of course, this must be done in a safe environment. While this may not possible on a regular basis, perhaps it can be a special weekend treat; or walking on leash is certainly an acceptable alternative.

Begin with approximately one-half mile walks with an eight-week-old pup, four to five days per week, and add about one-half mile every other week. Do not jump ahead to make up for lost weeks when there has been a lapse, but instead resume where the puppy left off. If there has been an extended layoff, begin back several weeks and build up again. An exercise level of three miles per day, four to five times per week, will result in a fit, healthy Golden. Of course, as with any exercise, be very cautious in hot weather; cold is rarely a problem except under extreme circumstances.

Exercise Recommendations, 4-5 times per week

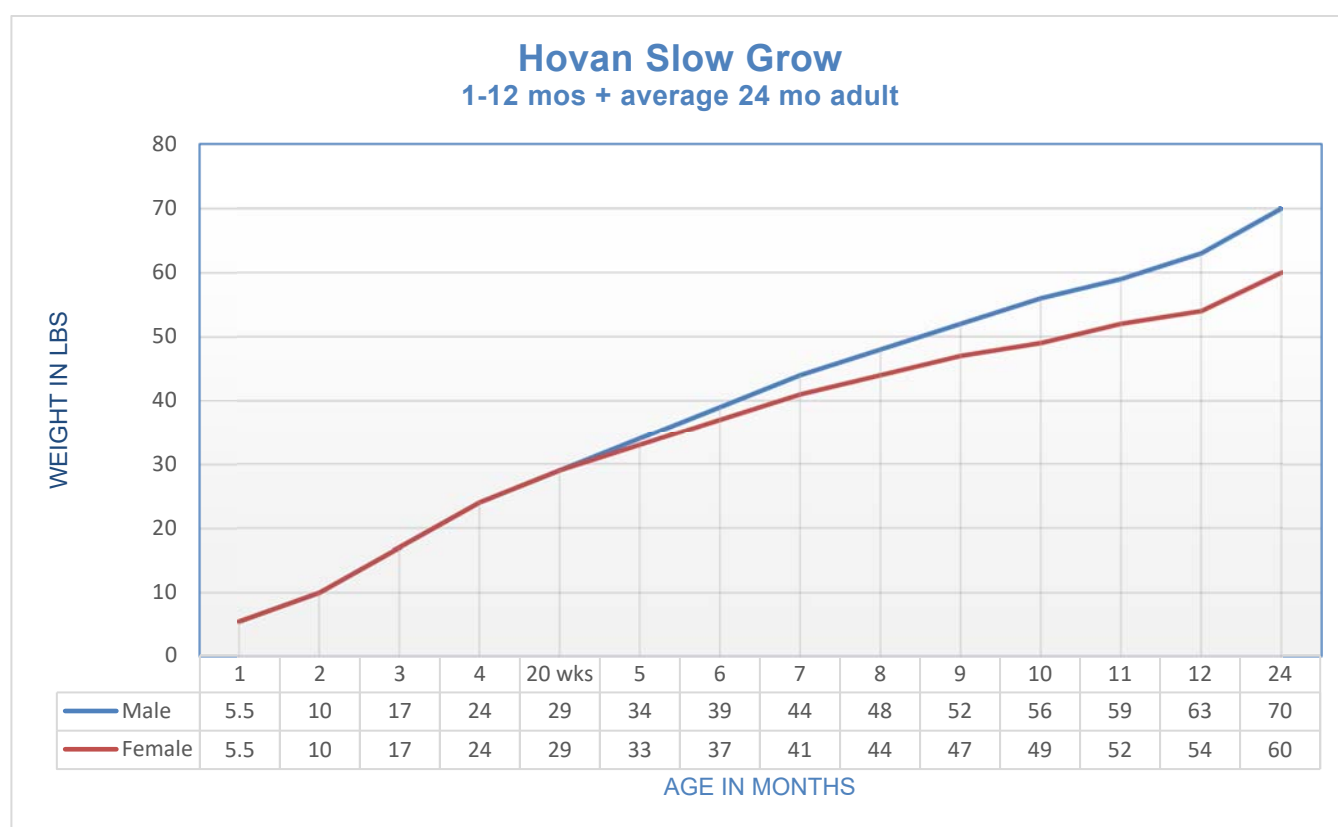
| Age | Distance | Age | Distance |
|--------|-----------|--------|-----------|
| 8 wks | ½ mile | 14 wks | 2 miles |
| 10 wks | 1 mile | 16 wks | 2.5 miles |
| 12 wks | 1.5 miles | 18 wks | 3 miles |

Do not fast-walk, jog, bike, or roadwork a young Golden under six months of age. Prior to beginning these types of more stressful, repetitive, pounding exercises, it is advisable obtain a preliminary OFA hip evaluation. Four-to-six months old is an excellent age range to obtain an preliminary OFA hip

evaluation because pups raised on the Slow Grow Plan have a high likelihood of rating very similar at this age as they will at their two-year-old final x-ray. However, radiographs for elbow dysplasia are less accurate until at least 12 months of age, unless the dog is showing abnormal clinical signs.

Only puppies with a preliminary rating of “Good” or “Excellent” hips should even be considered as candidates for more serious athletic training, and only with veterinary advice. Be aware that **a 6-month-old Golden is comparable in physical development to a 6-year-old child** (1 month = 1 year up to 24 months), so use an abundance of caution to build speed and distance very gradually.

Record Your Puppy’s Weights on the Graph Below:



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