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*The Secrets to Transitioning Your Pups Diet*

The growth of any pup from a physiological perspective is the highest at birth, is continuous, and proceeds at a rate that reduces exponentially as the pup matures through to adulthood. This high rate of continuous growth dictates an additional workload or energy requirement for a pup, and from a nutritional perspective, a constantly changing need as the pup moves along its predetermined growth curve. To best cater for these changing needs, an almost constant change of diet is required. Unfortunately, this option is simply not practical for either pet owners, retailers or manufactures. It is for this reason, where work rates and nutritional needs are constantly changing in the pup, that LifeWise have developed diets which breaks down the pup's growth continuum into three stages. Think of this like three steps to get to the top of a hill rather than a footpath that covers the distance and height required more gradually. LifeWise have factored in the formulation for each step or stage, the genetic and physiological needs of the pup during that phase of their growth irrespective of their breed.

It is the intention of this paper to help pet owners like you, transition your pups successfully through their growth periods, whilst enjoying the genetic and physiological benefits of LifeWise puppy foods stages.

Stage 1 in pups is the very early, high rate of growth immediately following birth. Dependent on breed, this stage concludes anywhere from 6 weeks in toy breeds to 14 weeks of age in giant breeds. This is the stage where pup is weaned from Mum’s milk and in most cases leaves home.

Stage 2 sees the pup reach full height during which time the rate of cell division slows compared to the earlier phase. Pups’ physical growth is the most during this stage and can be realised anywhere from 5-8 months in small breed dogs to 12-14 months or so in large to giant breeds.

Stage 3 with a much-slowed growth rate, covers the time from full height to adulthood. This stage is generally the same length of time as taken to achieve full height. Muscle and organ development is the primary outcome of this stage.

Overarching the physical stages of pup’s development is the critical requirement to build a diverse and robust microbial population(microbiome) in the pup's gut. The ideal microbiome in a dog has around 1000 different species of microorganism’s all fed and nourished by the ingredients in the food eaten by the dog. If the balance of ingredients does not adequately and evenly feed all the population, some species grow stronger and crowd out the weaker species. This leads to a reduction in species diversity in the microbiome which in turn triggers an inappropriate activation of the immune system leading to skin sensitivities, allergies, and inappropriate responses to stress. This overall condition is known as “dysbiosis of the gut”. A compromised microbiome as just described also reduces a dog’s ability to absorb key essential nutrients required for overall health (assuming they are in the food to begin with). Thus, developing a diverse microbiome in our pups is a crucial step in the quest for a happy, health dog.

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A puppy's gut microbiome starts to develop prior to birth from a base heavily influenced by Mum's gut flora. Hopefully, Mum's microbial population is diverse (which unfortunately is not always the case) leaving pup with a deficit on this heath measure before it's even born. It’s possible Mum's microbiome is compromised due to high birth rates and offspring numbers, previous medical procedures and treatments, or a less than ideal balanced diet which is unable to support a diverse microbiome.  The seed microorganism population in a puppy gained from Mum, is then built on from the time of its birth through contact with its Mum's skin bacteria, and those present in her birth secretions, as well as those available in Mum’s milk. Any interference in this natural process of microorganism’s transference can alter what pup is able to acquire during this phase and ultimately their baseline microbiome. From here the microorganisms present in the intestinal track should be stimulated correctly to enable rapid growth and diversification. This necessity is influenced positively almost exclusively by diet, whilst impacted negatively by any stress elements interjected.

The diet a puppy needs post weaning is one with sufficient complexity to build microbial diversity, as well as supplying all required nutrients to support healthy growth and conformation. Such foods are designed to feed both the diversifying microbiome and the growing body which still has high energy demands.

These foods do represent a step up in the necessary complexity from earlier dietary requirements, and will require time for the microbiome to adapt and develop in line with the ingredients being supplied. Foods with a narrower profile, containing simplified, hydrolysed, or purified ingredients at this point (or at any point really), will be detrimental to maintaining and building diversity within the microbiome, and may even cause a loss of species diversity in the same manner as antibiotics and stress do at any stage of a pup’s life. Loss of diversity for any reason during this time does compromise the microbiome both short and long term. This outcome creates an individual baseline population which may or may not sufficiently support good health, wellbeing and longevity.

Any transitioning of foods whilst a pup moves through its development needs to be done carefully and with consideration. This is particularly important in the first 12 weeks or so of their life, when puppies face several stress induced events. Early on pups are separated from their Mum and litter mates, they move homes and all that comes with it, they're exposed to new noises, smells, not to mention new people. Pups are then subjected to vaccinations and inoculations and potentially fed a new diet. Every event described is, on its own, enough to jeopardise the pup's emerging microorganism population. Hence, when considering changing food brands or formulation, it should be spaced free of those events which bring stress to a puppy. Failure to space these types of events by a few weeks, or at least acknowledge their impact, can lead to gut issues, and tip the pup into an unwanted negative loop of health and behaviours. What is meant here is that one negative outcome flows on to create another, and another, and so on. The challenge then is to break the negative cycle and move the pup’s overall health into a positive loop.

Changing foods, particularly early on in a pup’s life needs to be taken slowly. A slow transition enables time for the microbiome to expand and diversify in keeping with the complexity of the ingredients in the new food. It's worth noting this process of microbiome modification is slow, so any food transition must be correspondingly slow. A standard transition involves the replacement of 10% of existing diet daily, meaning on day one meal is 90% old food and 10% new food, day two 80% old food and so on over a 10-day period. This timeframe could vary though for several reasons subject to the baseline microbiome population the pup has, and the food being transitioned from and to.

**Started on Lifewise stage 1**

If your pup has or is enjoying the benefits of LifeWise Stage 1 Turkey puppy food, they are going to have a different baseline microorganism population to a pup that has started on an alternative food. Much like how different populations in different countries around the world would have developed a different microbiome. In the context of the goal of building a diverse and robust microbiome, pups started on LifeWise Stage 1 Turkey will have a baseline better prepared for a step-up in complexity in foods. This pup in most cases will find the required step-up easier. However as mentioned earlier Mums seed microbiome, medications and stress could have compromised the start LifeWise Stage 1 Turkey food is designed to provide.

Where a puppy has started with LifeWise Stage 1 Turkey and is being transitioned to Stage 2 Lamb and Fish the transition will still need to be paced as recommended earlier to allow time for microbial adaptation. This time is essential because of the increased complexity of the Stage 2 diet.

**Started on Alternate food**

It is possible when a pup starts on a food that could contain simplified, purified, or hydrolysed ingredients that it will have a lower microbial baseline and narrower diversity in comparison. This may also occur, not because the food did not have the correct ingredients, but more because they are not in a highly digestible form or present in the correct ratio within the food.

If your puppy has a narrower microbiome relative to the ideal at this stage of life, transition to LifeWise Stage 2 Lamb and Fish will need to be much slower. This reduced speed is warranted because the incumbent microbiome will not have the diversity to cope with the introduction of a complex formulation like LifeWise Stage 2 Lamb and Fish diet.

It is possible in some cases where the baseline microbiome is sufficiently distorted that the introduction of a complex food, or for that matter any new food with higher allergic familiar proteins, will lead to allergies, intolerances and or skin sensitivities. In these cases, further consideration needs to be given to transition times, in conjunction with probiotic supplementation.

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A course of probiotic is frequently prescribed to support a puppy through a transition of foods. This is particularly warranted when a pup’s baseline microbiome is low, and allergic type symptoms have already started to present. Probiotics will introduce new bacteria strains to pups gut bacteria population and commence the reconditioning of the gut environment, as well as improve the efficiently of nutrients being absorbed into the blood. The combination of digestive enzymes in good formulations help pups gut to cope with the complexity of food ironically needed to generate a diverse population. The best probiotic for the job is the Synbiotic 180S, with a daily dose rate customised by body weight, and sprinkled simply over meals. If feeding more than once per day, simply divide the daily dose equally between the meals. The use of probiotics should continue all the way through the transitioning of foods and continue for around 2 months so that stools are an ideal “kickable” consistency. If the pup initially presented with allergic type symptoms, the dose could then be halved provided symptoms have reduced.

Irrespective of what food pup is transitioning from to LifeWise Stage 2 Lamb and Fish, the feeding rate should be like the quantity of food he is currently eating. But as the pup's body comes into balance, the amount of food required will slowly reduce. However, noting that pup is still very much a pup, it is important to make allowances for development and maturation through the fastest growing phase. Keeping the food volume appropriate early in the process is all about not putting any more stress on the pup than is needed.

The recommended procedure during transition should the pup at any stage show signs of soft stools or diarrhoea, is to simply stop at the current level of transition (or even go back one step) and wait for pup's body to catch up. It is very important here not to ever push pup to transition faster than pup's body will allow. In the more sensitive cases, it may be warranted to actually reduce the amount of food fed daily. This step will reduce the load and strain on the pup's gut, whilst it develops a more diverse gut flora and lining optimised for the absorption of nutrients.

A similar approach to the above should be used when transitioning to LifeWise Stage 3 Turkey food from Stage 2 Lamb and Fish. In line with pups changing needs at it moves closer to maturity, this formulation represents a step change too in its ingredients.

*A diverse and robust gut microbial population is one of the best health elements we can give our pups. I hope this article has helped with the understanding of the importance of a diverse gut microbial population, and the best steps to build a more robust one!*

*About the author… Bill Wiadrowski is a consulting nutritionist who has worked in the field of performance animal nutrition for over 50 years. His latest development is the LifeWise range of next generation foods that are rapidly gaining acclaim for their ability to repair common gut and skin sensitivities issues in domestic canines.*

*For additional advice or information, please contact us at* **info@lifewisepetfood.com**