



# MOUNTAIN DOG FOOD

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## Jean Dodds Raw Food Study

Dr. Jean Dodds recently released exciting information comparing the differences between normal blood values for dogs' fed a raw diet and that of kibble fed canines. Her study involved over 200 dogs of various breeds that were fed a raw diet for a minimum of 9 months prior to collection of the blood samples. The results of the laboratory tests were compared to healthy dogs that are fed dry dog food and can be found at the following web page: [http://www.antechdiagnostics.com/clients/antechNews/2003/jun03\\_02.htm](http://www.antechdiagnostics.com/clients/antechNews/2003/jun03_02.htm)

To summarize, all of the results were comparable with the exception of slightly higher values for hematocrit (packed cell volume), blood urea nitrogen (BUN) and creatinine. This information can more easily be understood by assessing these values in comparison to "normal" laboratory values. These values can be found at the following link by clicking on Articles and then Laboratory Test: <http://ighawaii.com/naturallypet.html>

	Raw Feed Group	Dry Fed Group	Normal Values
Hematocrit	51.0±6.6 – 53.5±5.6%	47.6±6.1%	37 – 55%
BUN	18.8±6.9 – 22.0±8.7mg/dL	15.5±4.7mg/dL	6 – 24mg/dL
Creatinine	1.20±0.34mg/dL*	1.07±0.28mg/dL	0.4 – 1.4mg/dL

\* - Volhard raw fed group only

As is evident all the mean values for both groups of dogs fall within the normally accepted range. A closer look at how these results are interpreted may give more information and help discover why these particular values are slightly higher for raw fed dogs.

- **Hematocrit (Packed Cell Volume)**: Gives information regarding the amount of red blood cells present in the total blood volume. High levels may indicate dehydration, although this is more of a concern for dogs being fed a dry diet because they often do not consume sufficient volumes of water with their food. Levels below the norm could mean anemia (result of hemorrhage), presence of parasites, or chronic disease processes (such as liver disease or cancer). Nutritional deficiencies can also cause low levels. Because dogs fed a raw diet receive more adequate levels of protein from animal sources (including iron and B-vitamins) they are better able to facilitate the growth of red blood cells.

- Blood Urea Nitrogen (BUN): BUN is produced in the liver from the breakdown of protein and is filtered from the blood by the kidneys. Low levels are commonly seen with low protein diets (I.e. such as the plant proteins primarily used in dry dog food), insufficiency of the liver and anabolic steroid use. High levels are an indication of conditions that reduce the kidney's ability to filter body fluids or those that alter the breakdown of protein. Dogs being fed a raw diet have access to animal based protein sources that have a balanced amino acid profile. It makes sense then that they have higher circulating levels of BUN simply because more amino acids available for the liver to use as an energy source. As indicated from results of human testing high BUN values can occur as a result of eating large amounts of protein rich foods.
- Creatinine: A by-product of muscle metabolism that is excreted by the kidneys. High values can indicate kidney disease or urinary obstruction, muscle disease, arthritis, hyperthyroidism and/or diabetes. When we look the results for humans we can see that a diet high in meat content causes transient elevations of serum creatinine. One indication of a normally functioning kidney is consistent creatinine values over time. This reiterates why it is important for raw fed dogs to have a series of results to compare against. Although the values may be on the higher end of normal, if they are consistently in the same range this indicates that kidney function is normal.

It is commonly thought that a different set of "normal" values should be developed for raw fed dogs. These slightly higher blood values are to be expected simply because these indicators are a measure of protein breakdown/metabolism and raw fed dogs receive a higher percentage of readily digestible and balanced animal protein in their diets. It may be valuable for your pet to have successive laboratory results from previous years in order to determine what is normal for your dog.