

## Pair Predictor

Choose any sire and dam from your breeding program. We'll calculate the likelihood of inheritance for genetic health conditions and expected litter COI.

Sire

"Potato" Leopold

Dam

Leah

**CALCULATE**

### Genetic health conditions

16 results



We've compared the genotypes for "Potato" Leopold and Leah to identify potential health risks for their offspring. The predictions are below. Select any condition to read about it in detail.

 **Clear** (16 results with the probability of all clear puppies)

Chondrodystrophy and Intervertebral Disc Disease, CDDY/IVDD, Type I IVDD  
Identified in Standard Poodles and Small Poodles



Congenital Myasthenic Syndrome, CMS  
Identified in Golden Retrievers



Degenerative Myelopathy, DM  
Identified in Golden Retrievers and Standard Poodles



Dystrophic Epidermolysis Bullosa  
Identified in Golden Retrievers



GM2 Gangliosidosis  
Identified in Standard Poodles and Small Poodles



## Golden Retriever Progressive Retinal Atrophy 1, GR-PRA1

Identified in Golden Retrievers



## Golden Retriever Progressive Retinal Atrophy 2, GR-PRA2

Identified in Golden Retrievers



## Ichthyosis, ICH1

Identified in Golden Retrievers



## Muscular Dystrophy

Identified in Golden Retrievers



## Neonatal Encephalopathy with Seizures, NEWS

Identified in Standard Poodles and Small Poodles



## Neuronal Ceroid Lipofuscinosis 5, NCL 5

Identified in Golden Retrievers



## Osteochondrodysplasia, Skeletal Dwarfism

Identified in Standard Poodles and Small Poodles



## Osteogenesis Imperfecta, Brittle Bone Disease

Identified in Golden Retrievers



## Progressive Retinal Atrophy, prcd

Identified in Golden Retrievers, Standard Poodles, and more



## Retina Dysplasia and/or Optic Nerve Hypoplasia

Identified in Golden Retrievers



## Von Willebrand Disease Type I, Type I vWD

Identified in Standard Poodles and Small Poodles



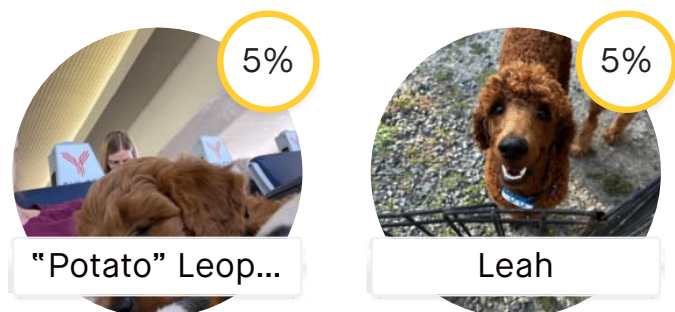
**Expected litter COI (eCOI)**

eCOI: 4% · Average breed COI: 5%



Genetic coefficient of inbreeding (COI) measures the proportion of a dog's genome in which the dam's and sire's genes are identical by descent. All else being equal, a lower COI has been correlated to improved health and a longer lifespan ([Bannasch et al 2021](#), [Yordy et al 2020](#)).

The expected coefficient of inbreeding (eCOI) for this pair's offspring is 4%, which is lower than the average breed COI of 5% for Embark-tested Goldendoodles.



## How to apply genetic eCOI

Compare the eCOI to the average breed COI to understand how this pair's potential litter compares to Embark-tested members of the breed. You can also compare the eCOI to the COI of the sire and dam above to identify if the degree of inbreeding present in your lines will increase or decrease based upon the proposed mating.

Use Pair Predictor to explore how eCOI may change when matching different sires and/or dams. Embark recommends testing the puppies in the litter since the actual COI will vary per individual.

The impact of inbreeding should be one factor when choosing which dogs to use in a breeding program, in addition to genetic health risks, conformation, temperament, and other selection criteria.

## How to maintain your breed's genetic diversity

Use the best tools available to avoid unnecessary inbreeding, test for mutations that are known to associate with genetic health risk, use these results as well as your knowledge of your lines to avoid perpetuating a disease in your breed, and keep as many breeding animals of both sexes in the gene pool as possible.

[Watch: Inbreeding explained](#) →

