

Is the health metrics of Penguins related to their diet or the species?

The Palmers Penguins dataset (collected in Palmer’s Archipelago near Antarctica) contains various body dimensions, and health metrics of 3 species of Penguins found across 3 islands (Biscoe, Dream, Torgensen) and for year 2021-2025. (Data only for 2022 is considered.)

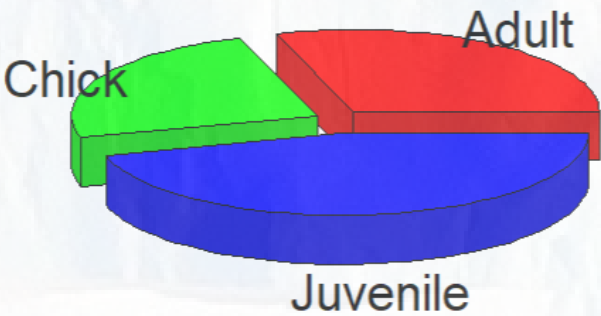
1. Adelie Penguins: are found on all 3 islands. In 2022, there were 295 adelie penguins. Their diet consists of fish(21%), krills(48%), parental(25%) and squid(6%).



2. Gentoo Penguins: are found on Biscoe island only. In 2022, there were 103 gentoo penguins. Their diet consists of fish(14%), krills(41%), parental(38%) and squid(7%).

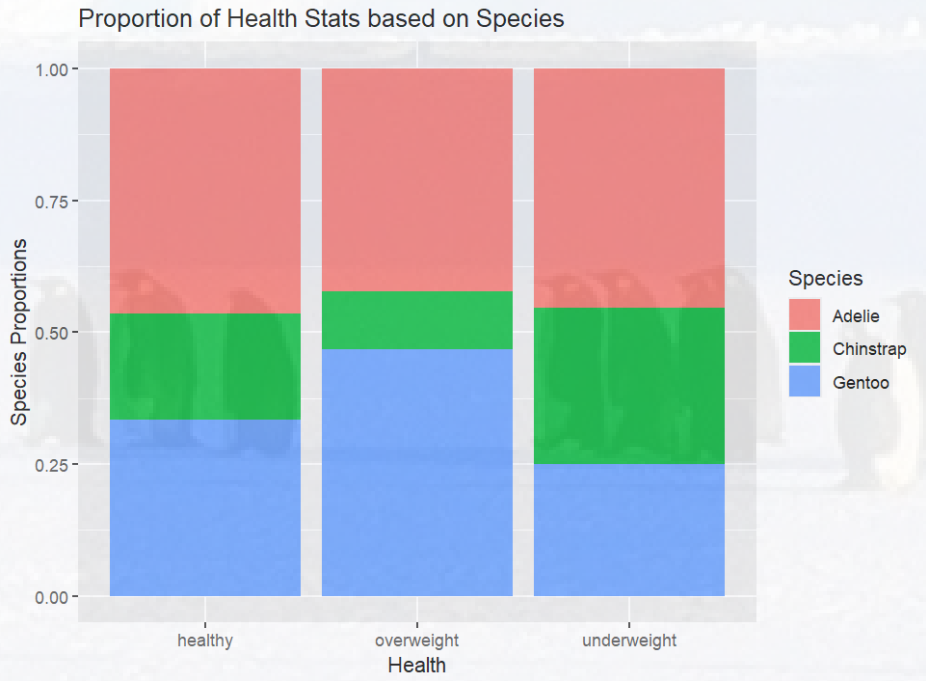


3. Chinstrap Penguins: are found on Dream island only. In 2022, there were 125 chinstrap penguins. Their diet consists of fish(12%), krills(57%), parental(24%) and squid(7%).

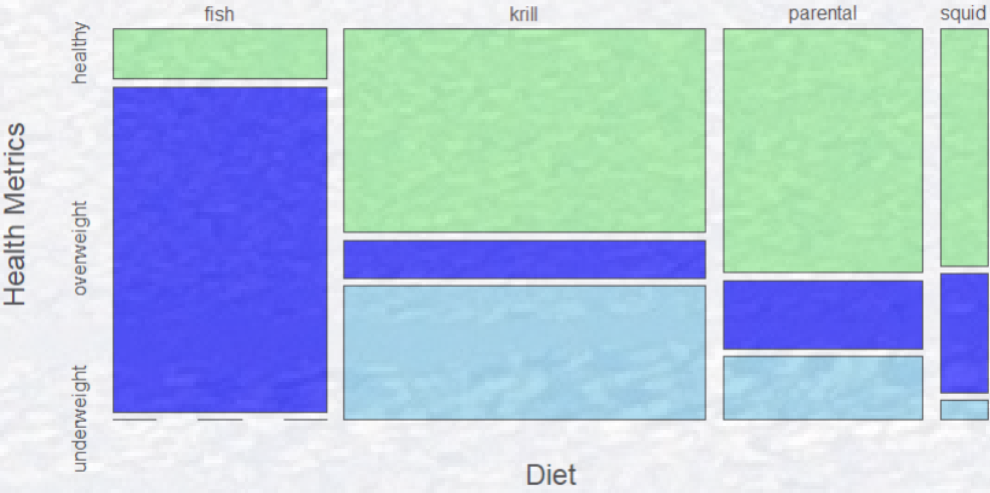


The majority of the penguins are juvenile(46%), then adults(30%) and least are considered chicks(24%).

It can be seen that the proportion of Adelie penguins is more for all the health metric group. So, the Species does not seem to have major impact on the health metrics of Penguins as it varies based on the count.



Diet to Health Metrics



But, diet does seem to have major impact on their Health metrics. Those having fish as their main source of food tends to be overweight. Penguins in their infant stage(chicks) relies on parental source of food and are the most healthy in that stage

From the data above, it can be said that the health metrics are mostly based on the diet of the penguins and indirectly on their life-stages

[1] <https://www.kaggle.com/datasets/samybaladram/palmers-penguin-dataset-extended/data>
[2]<https://www1.usgs.gov/coopunits/project/47657330689/katie.dugger>
[3]<https://www.worldatlas.com/articles/gentoo-penguins-unique-gift-giving-birds-of-the-antarctic.html>