# A COMPARISON OF TWO COMMONLY FED DIETS FOR HAND-REARED NEONATAL HARBOUR SEALS (PHOCA VITULINA)

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Hundreds of orphaned and injured neonatal harbour seals (*Phoca vitulina*) are brought to wildlife rescue centres every summer. Mortality rates for these animals are high. For example, 22% of seal pups at the Vancouver Aquarium rehabilitation facility died in 2004 and 55% in 2006. Rehabilitation facilities use various diets for young seals, including artificial milk formulas and diets based on macerated fish, all fed by esophageal tube, because more natural feeding methods are difficult to use. Despite extensive use of such diets, there has been no scientific evaluation of their effects. This study examined the effects of feeding artificial milk formula and fish-based formula on the survival, health, and growth of orphaned seal pups in captivity. Pups admitted to the facility in summer 2007 (n=129) were paired according to estimated age and body condition score and were randomly assigned to one of the two diets and fed until weaning at roughly 20 days of age. Animals were singly housed and fed four times per day via esophageal tube. Daily weight gain, blood analysis, behavioural observations and mortality were compared. Total mortality rate was 72% of pups admitted. Pups gained little weight on either diet (on average <0.18 kg from admittance to weaning), but survival rate before weaning was twice as high with the artificial milk formula (36%) compared to the fish formula (18%; $P<0.05$ by chi-squared analysis). Although neither diet appeared to meet the nutritional needs of the pups, the milk formula was clearly the more successful of the two. More work is needed on both diet composition and feeding method to achieve high survival and more natural weight gains.