

SURVIVOR, SEAL STYLE: POST-REHABILITATION RESEARCH

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MARINE MAMMAL REHABILITATION:

The purpose of wildlife rehabilitation is to release animals that will integrate behaviorally, survive and ultimately reproduce. While rehabilitation of threatened or endangered species has been more widely accepted as a management tool, rehabilitation of non-endangered wildlife species has remained controversial due to concerns that the population benefits are negligible, especially in light of limited post-release survival data. Due to the cost and logistics associated with post-release monitoring of rehabilitated wildlife, data are rarely collected on the post-release survival, behavior and ultimate breeding success of rehabilitated wild animals. This further compounds our ability to determine the long term behavior and survival of rehabilitated wildlife.

Despite the controversy, the general public has long demanded attention be paid to stranded marine mammals and effort has been put into perfecting the husbandry and veterinary tools needed to rehabilitate and release stranded marine mammals. Post-release studies of rehabilitated animals provide an opportunity to evaluate the efficacy of care and veterinary treatment of seals during rehabilitation. They also permit us to examine the potential population benefits of rehabilitation. Very few studies have been conducted evaluating the post-release movement and survival of seals. Examples of studies conducted in France and various parts of the United States are reviewed.

FRANCE:

In France, a group of researchers used visual markings and opportunistic re-sighting to evaluate the post-release survival of rehabilitated juvenile grey seals (*Halichoerus grypus*).¹ Between 1989 and 1999, 92 seals were released from rehabilitation and 48% were re-sighted at least once. Seals with head tags were re-sighted more frequently than seals with flipper tags or color markings and flipper tags seemed to only really help identify dead animals. Based on seals found dead post-release, they estimated minimum mortality between 20.1 and 43.2%, well within the estimated 40–80% of wild grey seals that die within their first year of life. In this study, researchers also used satellite relay data loggers to track the post-release movement of four pups. The satellite data and opportunistic re-sighting of the other seals demonstrated far-ranging dispersal of rehabilitated grey seal pups, which is consistent with what is seen in wild pups. Despite significant efforts, the researchers still felt they were unable to ascertain the impact of rehabilitated seals on wild populations and recommended further studies.

CALIFORNIA:

Between 1995 and 1998, 29 rehabilitated and 24 wild harbor seal (*Phoca vitulina*) pups were tracked for 5 months post-release using very high frequency (VHF) radio tracking.² The investigators found that dive duration and surface time between dives did not differ between the two groups; however rehabilitated pups spent more time in the water than did wild pups. The distances traveled by the two groups did not seem to vary greatly. When evaluating survival, which is fraught with difficulty due to not really knowing when an animal has died versus the transmitter falling off or failing to work, they found that survival didn't differ between the two groups in 1995 or 1998, but that rehabilitated pups had lower survival than did wild pups during 1996.

WASHINGTON & OREGON:

In the late 1970's, researchers³ reported the first re-sightings of rehabilitated harbor seal pups in Washington and Oregon. One rehabilitated pup that was released in Washington weighing approximately 20kg, was re-sighted 32 days post-release having traveled at least 72km. Another adult seal that was released post-rehabilitation in Oregon was re-sighted 46 days later after traveling at least 92 km. It had lost approximately 10kg when it was re-sighted and re-captured.

Since then, hundreds of harbor seals have been rehabilitated and released in Washington and Oregon with very little data collected on post-release movement and survival. A recent study that used satellite transmitters to track the movement of 10 wild weaned harbor seal pups and 10 rehabilitated pups⁴ in Washington State found that rehabilitated pups swam twice as far daily and, over time, moved twice the distance from the haul out or release site when compared to wild weaned seal pups. Rehabilitated seals also transmitted half as long as wild pups, suggesting that survival was greater for wild pups than for rehabilitated pups.

THE ROLE OF VETERINARIANS IN MARINE MAMMAL REHABILITATION

Veterinarians play an important role in marine mammal rehabilitation. At the onset of admission, veterinarians work closely with biologists to ascertain if injuries or presenting conditions will be treatable and ultimately compatible with release. If not, there is little reason to pursue rehabilitation. Veterinarians also help diagnose disease, develop treatment plans and monitor the health of marine mammals during the rehabilitation process. Ultimately, it is up to the veterinarian to determine if the final condition of the animal is suitable for release based on physical examination, routine blood work and screening for exposure to select pathogens or parasites. This helps ensure that released animals do not pose a health risk to wild animals.

REFERENCES

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