While SeaSalt is isolated, the surviving pups lounge in the large pools.

Pups not in a pod
**Harbor Seals** : Basil NMLC 15-012 PPv [on gruel] 
abandoned pup, hypoglycemia resolving, electrolyte disturbances resolving, reopened umbilicus, exposed to lice  
**male** [admit] wt=8.1 kg, SL= 69 cm; [current] 12.0 kg BS=3/5  
stranded 5/24/15 COA Deer Island ME; admit: 5/25/15;  
last blood:5/26/15; 5/28/15 EP  
last rads: 5/26/15  
Visual Inspection [Williams] : WNL; OK for pool 24hrs 

**Harbor Seals** : Rue NMLC 15-013 PPv [on gruel]  
abandoned pup, borderline hypoglycemia (resolving), exposed to lice  
**male** [admit] wt=7.1 kg, SL= 7.4 cm; [current] 10.1 kg BS=2/5  
stranded 5/26/15 MMOE ME; admit: 5/27/15;  
Athens Pan-Herpes PCR negative 6/10/15 blood, nasal and ocular swabs  
last rads: 5/28/15  
HX: blood on OGT after feeding, OK to monitor  
Visual Inspection [Williams] : WNL; OK for pool 24 hrs  
P: check electrolytes 1 week off flornef - WNL 

**Harbor Seals** : Juniper NMLC 15-015 PPv [on formula]  
abandoned pup, hyponatremia, lice, hypoglycemia [BG=126]  
**female** [admit] wt=7.8 kg, SL= 80 cm; [current] 11.0 kg x cm BS=2/5  
last blood:6/4/15 (BG=116)  
last rads: 6/9/15 failed; 6/24/15 (lateral), 6/30/15 WNL  
Visual inspection: WNL AL OK for pool 24 hrs  
P: check electrolytes 1 week off flornef = WNL 

**Harbor Seals** : Sage NMLC 15-016 PPv [on formula]  
abandoned pup, fever, oral ulceration, hyponatremia, hypoglycemia (109) exposed to lice  
**female** [admit] wt=7.1 kg, SL= 79 cm; [current] 8.7 kg x cm BS=2/5  
stranded 6/7/25, Scarbough Maine MMOME; admit: 6/7/15;  
last blood:6/7/15 (BG=159)  
Athens Pan-Herpes PCR negative 6/10/15 blood, nasal and ocular swabs  
last rads: 6/9/15 failed  
Visual inspection: WNL AL OK for pool 24 hrs  
P: check electrolytes 1 week off flornef = WNL
Harbor Seals: Salt NMLC 15-022 PPv weanling male [admit] wt=13.5 kg, SL= 93 cm; [current] 13.5 kg BS=2/5 oral lesions, fractured left mandible, umbilical ulcer, wounds, swollen hind flippers, melena, tapeworm, gastric worms, & lice stranded MA 7/?/15; admit: 7/6/15; last blood:7/21/15 WBC WNL, but Lymphopenia still decreased hind flipper BG=137 mg/dl; dorsal sinus BG = 140 mg/dl last rads: 7/7/15 (full set + flippers) fecal: 7-22-15: Cryptocotyle, Diphylyobthrium, Pseudoterranova ova PE: [Williams, Voorhis, Berridge] TPR= 100.9, 120, 6, chelitits is healing nicely, fractured left mandible still exposed and mobile, missing PM1-4, umbilicus healed, eyes and nose WNL, flippers, mild healing laceration on right front flipper ventral aspect, hind flippers now WNL. tonovet Right = 46, 49; left= 30 A: improved, P: CWCT d/c abx, check CBC and electrolytes, confirm no lungworm via fecal and treat with ivermectin, staff found lice on head. Husbandry Plan: tube 5x day, d/c SQ fluids, and decrease salt from 5g to 1g/day
Under the Microscope: It matters how you look for parasites.

We can do a few tests to determine the parasite load of the seals. First is a gross examination, next is a wet preparation, a dried and stained thin film, but most frequently we try to concentrate the ova and larva from the sample. Centrifugation with a supersaturated sugar solution had been the gold standard for a while in veterinary medicine, but a good ol’ fashion fecal floatation was the stand-by for generations of veterinarians. Solutions here range from sugar solutions, to sodium nitrate to zinc sulfate, or even magnesium sulfate or even a concentrated saline solution.

It really about the perfect match, each solution has a specific specific gravity, as does each of the larva or ova were looking for. And what does not float, can be picked up on a sediment exam. We routinely find nematode larvae, but a particular protocol called a Berman’s Apparatus was designed to concentrate fecal larva.

So all of this can get a little complex. Let’s look a SeaSalt, three common harbor seal parasites, a fluke, a cestode, and a nematode, each with an ova, and preform a simple bench top fecal flotation and only vary the solution, first with Sheather’s sugar (SG=1.270) and Fecalsol (sodium nitrate) (SG=1.200). Cryptocotyle were observed in roughly equal numbers and size and morphology were not affected, however the shell detail was a little better with the Fecalsol. The Pseudoterranova also was recovered in a similar amount but the rough outer coat appears to have been stripped off by the Fecalsol. This outer coat is a key morphological feature used to distinguish the ova of Pseudoterranova vs Anisakis and Contracecum. Let’s call it a point for each. But the effect on the ova of the tapeworm in the genus Diphyllobothrium were significantly affected. First of all the recovery with the Sugar solution was 10x that of Fecasol, but the sugar distorted the morphology, causing a loss of the internal architecture of the embryo and creating folds and distortion at the operculum. This is particularly problematic as these distorted ova mimic the ova of Schistocephalus solidus which could lead to an erroneous diagnosis. But because the yield was so much lower with the Fecalsol a false negative could result. What’s the best? we have a lot more work to do.