

Sled dogs as sentinels for the people they live  
with:  
not all super heroes wear capes



# LAST RELAY DRIVER ARRIVES AT NOME WITH SERUM

*Kasson Fights Blizzard on Final Lap With Precious Antitoxin*

Six Hundred and Fifty Mile  
Mush Across Arctic Wastes  
to Save Diphtheria Suffer-  
ers Made in 127 1-2 Hours

(For Editorial Comment See Page 5.)  
By Associated Press.

**NOME, Alaska, Tuesday, Feb. 3.**— Exhausted from two days' loss of sleep and driving a team of dogs sixty miles through a blinding blizzard for seven and one-half hours in order to deliver 300,000 units of diphtheria antitoxin to this town yesterday, Gunnar Kasson was still sleeping early today. He was the last relay driver in the 650-mile dash from Nenana.

A portion of the serum, frozen on its arrival, was thawed out yesterday afternoon and used on patients. Dr. Curtis Welch, government physician, said he could not tell if the antitoxin had deteriorated until the effects were noted. One new diphtheria case was reported yesterday, Mrs. John Winters being stricken.

Kasson accomplished a feat seldom attained by seasoned mushers of the sub-Arctic. For two days he waited on the trail at Bluff with thirteen dogs, headed by Balto, sagacious canine leader, of the Hammon Consolidated Gold Fields Company, to transfer serum shipped from Anchorage via Nenana, from Olsen's relay team.

Leonard Seppala, undefeated musher of the North, met a relay team at Shaktoolik, east of Norton Sound, and carried the antitoxin to Golofin, on the north shore of Norton Sound, Bering Sea, where Olsen awaited him.

## Rohn Reaches Nome.

Despite a temperature of 38 degrees below zero and fanned by a stiff wind, Kasson mushed on. The storm and darkness prevented him from meeting Fred Rohn, who waited at Solomon to make the last short relay dash into Nome. He kept up the pace, however, and reached here at daybreak. Four dogs in his team were badly frozen.

Rohn arrived before noon from Solomon after he learned Kasson had missed him. No word has been received from Seppala. The former Finnish athlete is expected to return slowly, resting at villages to feed his tired dogs.

The blizzard yesterday stopped operation of a telephone line on the route taken by the antitoxin and

(Continued on Page 5, Column 5.)





[Hinchcliff KW](#), [Reinhart GA](#), [Burr JR](#), [Schreier CJ](#), [Swenson RA](#).

Metabolizable energy intake and sustained energy expenditure of Alaskan sled dogs during heavy exertion in the cold.

Am J Vet Res. 1997 Dec;58(12):1457-62.



11,000 kcal = 20 big macs!





Bjørn Dæhlie:  
VO<sub>2</sub> max 93 ml/kg/min

Reynolds AJ, Hoppler H, Reinhart GA, Roberts T, Simmerman DA, Weyand P, Frank DA, And CR Taylor. "Sled Dog Endurance: A Result oHigh Fat Diet or Selective Breeding? #5775 F.A.S.E.B. Atlanta, April 1995.





Elite sprint sled dogs:  
 $VO_2$  max 240 ml/kg/min





2013  
Fur Rondy  
Sled Dog Race

DE WIT

A word cloud featuring various terms related to sled dog research and Arctic health. The most prominent words are 'sentinel', 'subsistence', and 'sleddogs'. Other significant words include 'circumpolar', 'adaptation', 'diet', 'contaminants', 'worldwide', 'health', 'exercise', 'polar T3', 'Alaska', 'homogenous', 'diurnal', 'cardiovascular', 'immune', 'research', 'biomedical', 'population', 'model', 'metabolism', and 'tradition'. The words are arranged in a dense, overlapping cluster with varying colors and sizes.

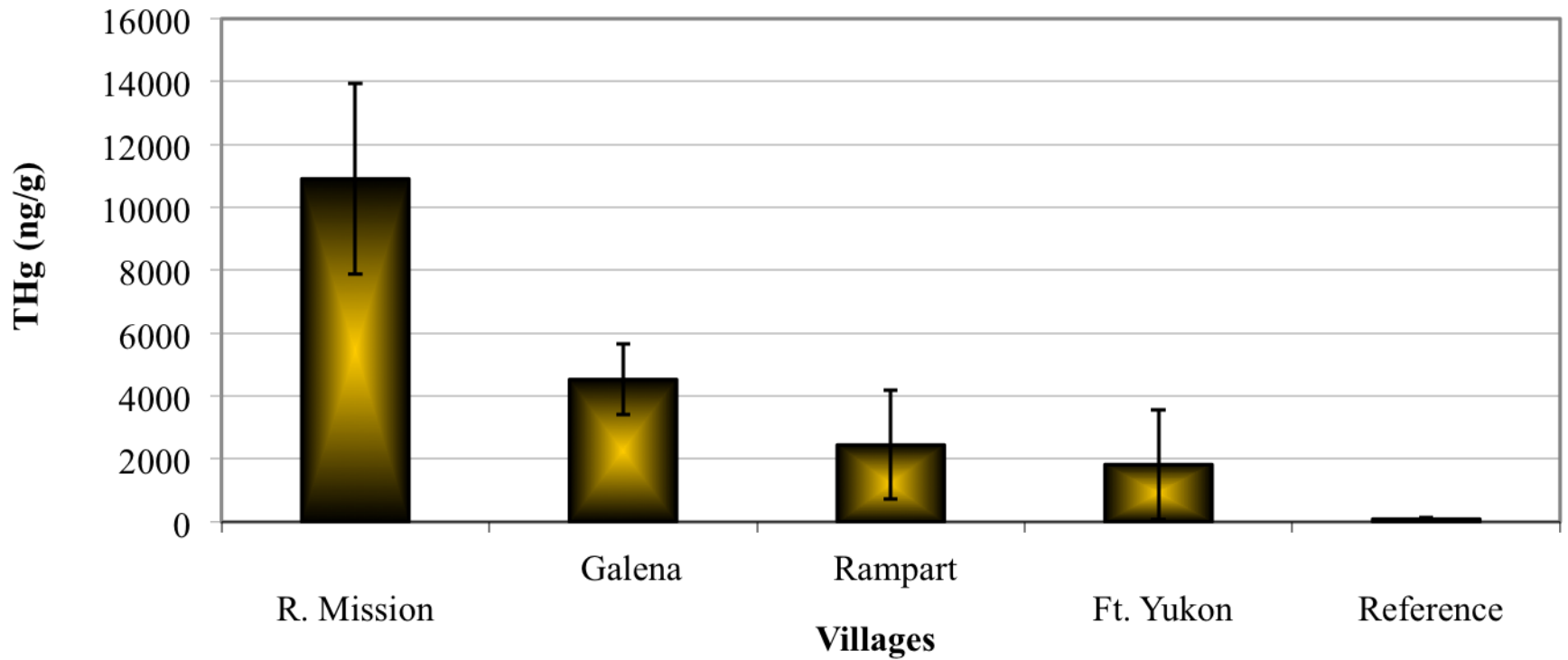
metabolism  
tradition **sentinel** biomedical  
exercise **subsistence** population model  
polar T3 Alaska homogenous diurnal research  
circumpolar **sleddogs** cardiovascular immune  
adaptation **health** diet contaminants  
worldwide



# Why the Yukon River?



# Total mercury concentrations in Yukon River sled dogs



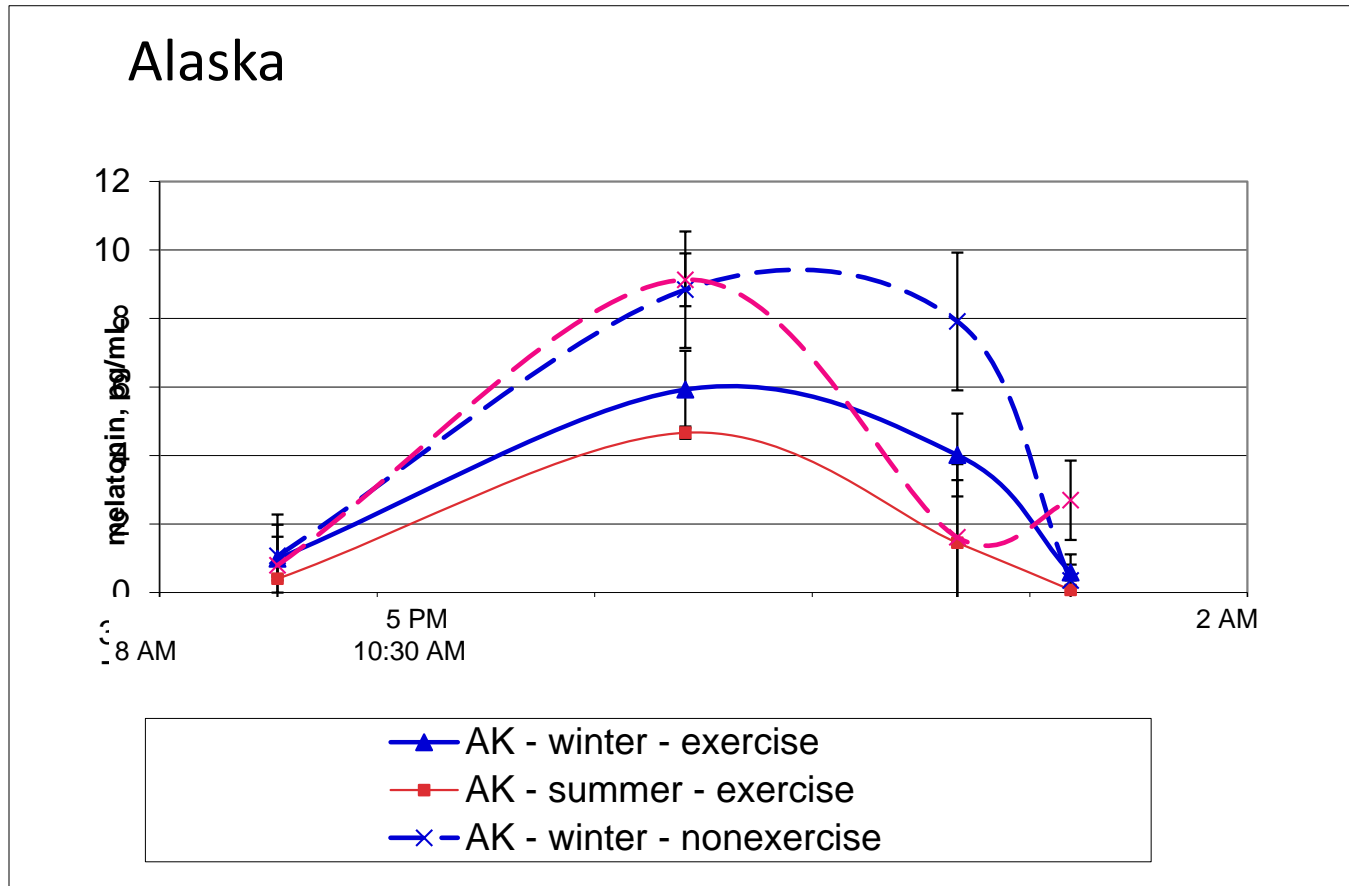
Sci Total Environ.

Are sled dogs that are exposed to extremes of daylight and temperature more susceptible to SAD?



- Season
- Latitude
- Time of Day
- Conditioning

# Melatonin in sled dogs



# Forest Fires in Alaska





# Plasma NOx uM

time	exercise	control	P value exercise = control
7 am	2.5 (2.4 - 3.2)	24.7 (7.2 - 28.5)	P<0.01
7pm	7.9 (6.2 - 9.7)	32 (15.8 - 40)	P<0.01







