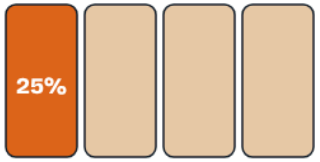
That is why

Why do sea otters use rocks?

A rock opens hard shells that would wear down an otter's teeth, and the smaller females are the more likely tool users.

A A hungry body, a fragile smile

Food needed every day



its own body weight (4 blocks)

1 block of food a day, just to keep its weight

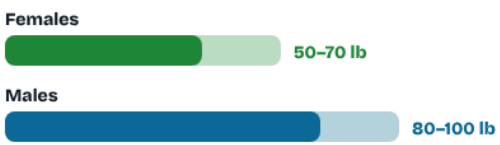
No blubber: it relies on dense fur, more than a million hairs per sq in

Four lower incisors crack urchins and crabs easily.

Hard shells are another story.

Under each forearm: a skin pocket for food and rocks.

Body weight (Alaska)



Smaller body, weaker bite.

How old is the habit? Orphaned pups raised in captivity pound without training. A genetic study of 100+ otters points back millions of years; dolphin sponge use is under 200 years.

B When the easy food runs out

Central California, 196 tagged otters

Abalone and sea urchins
easy to open

↓

Otters eat them down
the easy food dwindles

↓

Crabs, clams, mussels, snails
hard shells

↓

Teeth too worn or damaged
the otter could starve

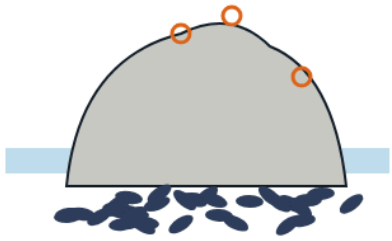
Hardness of prey eaten by tool users



Tool users ate bigger, harder prey and had less tooth damage. Females that used tools most had less damage than females that rarely did.

C Anvils at Bennett Slough

Watched for 10 years (2007–2017)



Worn points and ridges (circled)

Anvils: about 20% of mussels

Midden: up to 132,000 shells

An otter-made signature



Diagonal crack on the right side

When striking, the right paw tended to sit slightly on top: a hint that otters may favor one paw, as we favor one hand (few otters seen).

Teeth wear out. A tool saves them.

Free for learning thatiswhy.com

Free for learning, teaching and research. Please credit: That Is Why, thatiswhy.com

Diagram: https://thatiswhy.com/diagrams/why-sea-otters-use-rocks/ · Full guide: /why-do-sea-otters-use-rocks/